

International ICONTECH SYMPOSIUM-3 on Innovative Surveys in Positive Sciences

28-29 January 2021

Mohammed First University Oujda, Morocco

ABSTRACT BOOK

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ICON||TECH||
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**3. International
ICONTECH SYMPOSIUM
on Innovative Surveys in Positive Sciences**

28-29 January 2021

Mohammed First University

Oujda, Morocco



**Edited by
Prof. D. Bria**

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SYMPOSIUM ID

3. International ICONTECH SYMPOSIUM on Innovative Surveys in
Positive Sciences

DATE-PLACE

28-29 January 2021

Mohammed First University

Oujda, Morocco

EDITOR

Prof. D. Bria

COORDINATOR

Alina AMANZHLOVA

Participant Countries: Turkey, Morocco, Azerbaijan, Colombia, Belgium,
Poland, Pakistan, France, Algeria, Philippines, China

Main Disciplines

Physics Engineering - Mathematics & Computer Sciences

Medical Sciences - Biology & Chemistry

Environmental Sciences & Geology

Total number of papers: 181

The number of papers by from Turkey: 49

Other countries: 132

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PHOTO GALLERY

coordinator: Alina

Co-Host, EL KADMIRI ILYASS

E

Speaker, Prof. Mostafa Ela...

S1 H1 - Tayfur Kerem De...

S-2, h-4, DIMANE

Co-Host, EL KADMIRI ILYASS

Recording 58:01

E	coordinator: Alina	Co-Host, EL KADMIRI ILYASS	S2, H-2, Rachida El Mehdi	S-1, H-1, Youssef Ben-Ali
Speaker, Prof. Mostafa Elachouri	S1-H-1, Moderator - Ozgün K...	Prof. Dr. Ali Bilgili	S-1, H-1, HasanSucu	S-3, H-2 Esra PALABIYIK
S1-H2, CoModerator-YASSINE...	S1H2-Nihan EROÇLU	S1-H1 Hatice ASIL UÇURLU	Co-Host,fatima zahra elamri	S1, H-4, Hilal CAPAR AKYÜZ
S-1, H-2, H-2 Handan UÇUZ	H-2- Ozlem	H2-Ilker Şimşek	co-host, briia driss	S1, H2,moderato:Pr BENZIRAR
Hall 2- Başak Hanedan	S1 H1 - Tayfur Kerem Demird...	Hazim HAROUAK	S1-H3 : EL MOUDEN ABDELAZIZ	S1H1-Esra TUGRUL TUNC
S-1 H-1 Nermin Topaloglu				



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Конференция Zoom

Recording 50:52

Участники (75)

Search

- Speak... (Соорганизатор)
- Co-Host, ... (Соорганизатор)
- Co-Host, A... (Соорганизатор)
- co-host, br... (Соорганизатор)
- Co-Host, E... (Соорганизатор)
- Co-Hos... (Соорганизатор)
- Co-Host,fa... (Соорганизатор)
- Conferenc... (Соорганизатор)
- h-1 Observer (Соорганизатор)
- H-2 Zhuldy... (Соорганизатор)
- S3 H1 Anas HAMDANI
- Ali brraaouan
- ASMA SKOTTA
- Atallah

Пригласить Подробнее

Methodology

Methodology	Number of plant species
Ethnobotanical investigation (1991-2019)	112
Taxonomic correction	103
Pharmacological activities	41
Phytochemistry of natural compounds	32
Clinical Trials	

Speaker, Prof. Mostafa Elachouri

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Конференция Zoom

Recording 50:43

Участники (75)

Search

- Speak... (Соорганизатор)
- Co-Host, ... (Соорганизатор)
- Co-Host, A... (Соорганизатор)
- co-host, br... (Соорганизатор)
- Co-Host, E... (Соорганизатор)
- Co-Hos... (Соорганизатор)
- Co-Host,fa... (Соорганизатор)
- Conferenc... (Соорганизатор)
- h-1 Observer (Соорганизатор)
- H-2 Zhuldy... (Соорганизатор)
- S3 H1 Anas HAMDANI
- Ali brraaouan
- ASMA SKOTTA
- Atallah

Пригласить Подробнее

coordinator: Alina

Speaker, Prof. Mostafa Elach...

Co-Host, EL KADMIRI ILYASS

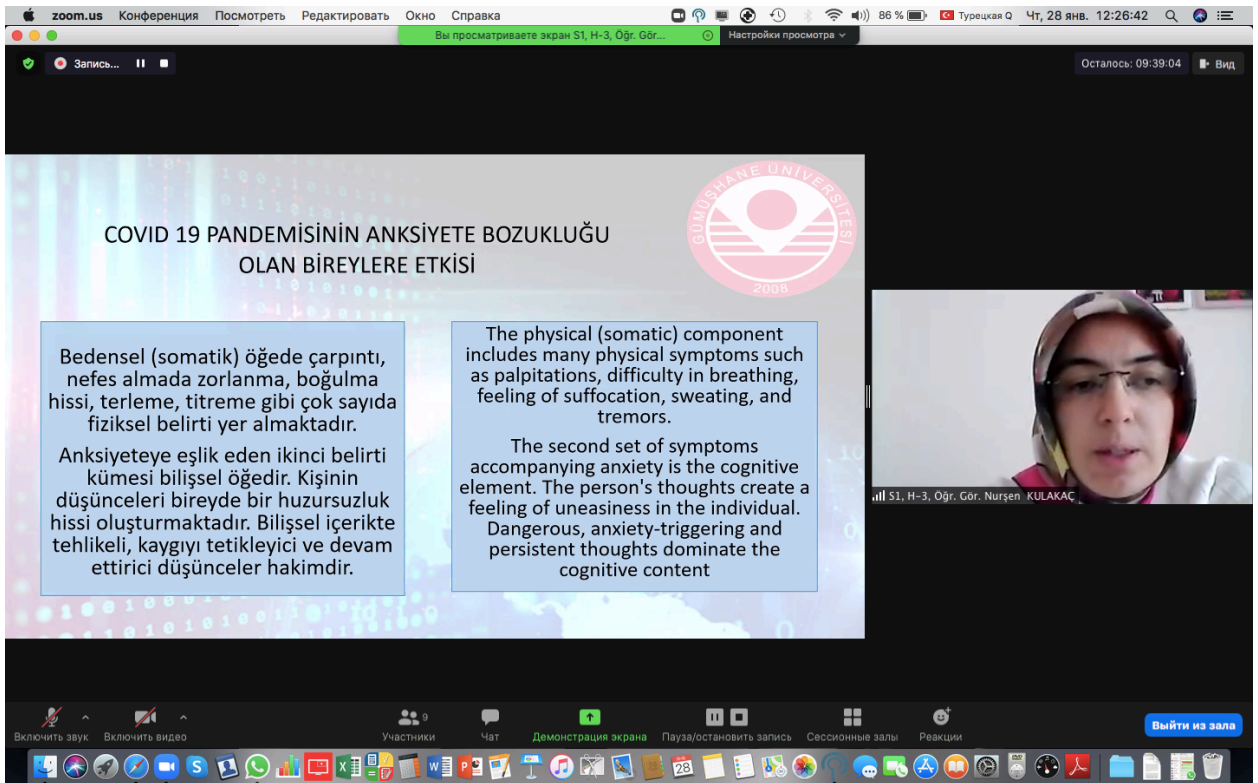
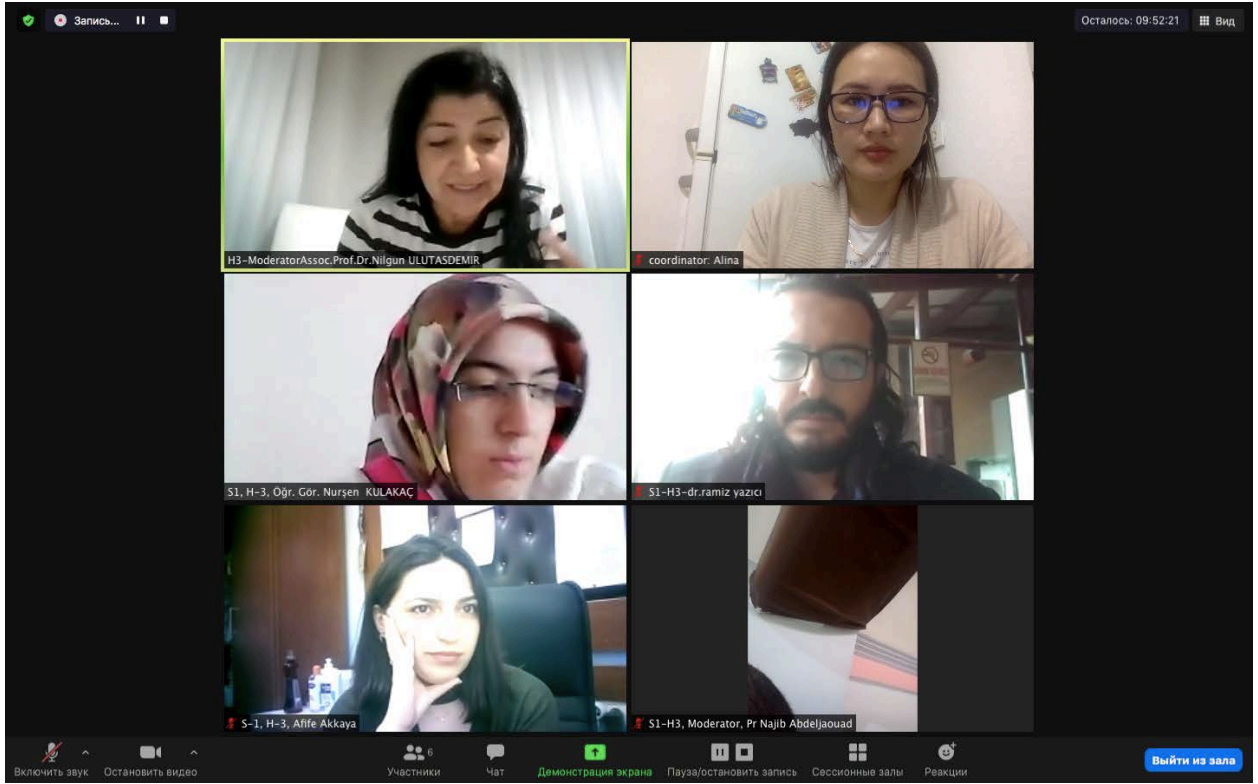
Hali Z- Başak Hanedan

S2, H-2, Rachida El Mehdi

S-1, H-1, Youssef Ben-Ali

Prof. Dr. Ali Bilgili

h-1: Moderator - Ozgün Kor...





Запись... Осталось: 09:22:07

Life Cycle

coordinator: Alina

H3-Moderator Assoc. Prof. Dr. F...

S1, H-3, Öğr. Gör. Nursen...

S1-H3-dr.ramiz yazıcı

S-1, H-3, Afife Akkaya

S1, H-4, Hilal ÇAPAR AKYÜZ

S2-H3-Eslin Ustun Karatop

Seda Beyaz

S1-H3, Moderator, Pr. Najib...

H3 Ükü DEMİRCİ

Ozlem Gök

Вы просматриваете экран S2,H3 ASMA SKOTTA Осталось: 07:13:16 Вид

Introduction Goal Materials and method Result and discussion Conclusion

Purifying power of the bio flocculant for the reduction of heavy metal

1- Copper case

Figure 5 : Reduction of Copper by GGC.

2- Zinc case

Figure 6 : Reduction of Zinc by GGC.

S2-H3, Moderator, Pr. Y...

IKSAD Institute of Econo...

S2- Hall 3 IMGHARN Ab...

S2,H3 ASMA SKOTTA

S2-H3,GhizlaneAZIZI

S2 H3 , CO-Moderato...

S2 H3 Younes errouas

S2-H3, Ilyass El kadmiri

(S2 - H3) othmane da...

S3-H3-LAARAJ NAS...

Включить звук Включить видео Участники 23 Чат Демонстрация экрана Пауза/остановить запись Сессионные залы Реакции Выйти из зала



Вы просматриваете экран S2-H3,GhizlaneAZIZI

Осталось: 07:30:48 Вид

Materials & Methods

Biochemical composition

- Quantitative protein determination was performed by the Kjeldahl method (x 6.25),
- Lipid content was determined gravimetrically after Soxhlet extraction using petroleum .
- Amount of inorganic material was measured by incinerating the samples to ash in a muffle furnace at 550°C for 16h (AOAC, 2014).
- Energy content was measured by combustion with a bomb calorimeter (Henken, Lucas,Tijssen & Machiels, 1986).

S2-H3,GhizlaneAZIZI

Включить звук Включить видео Участники 16 Чат Демонстрация экрана Пауза/остановить запись Сессионные залы Реакции Выйти из зала

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Осталось: 06:47:37 Вид

Участники (25)

IKSA... (Координатор, я) SH S2- Hall 3 IMGHARN Abdela... SM S2-H3, Moderator, Pr. Y. KA... S2-H3: Ghizlane Achagri (S2 - H3) othmane dardari EL HATKA Hicham SH S2 H3 EL AISSOU ABDELL... SH S2 H3 , CO-Moderator , A.O... SH S2 H3 Fatima Zohra charik SH S2 H3 Younes errouas SH S2, H3, Brahim El Merbough S2,H3 ASMA SKOTTA SE S2,H3 EL OUARDI MOHAMED S S2-H3,GhizlaneAZIZI

Включить звук Включить видео Участники 25 Чат Демонстрация экрана Пауза/остановить запись Сессионные залы Реакции Выйти из зала

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Вы просматриваете экран S2-H3: Ghizlane A... Настройки просмотра

Осталось: 06:35:14 Вид

Участники (27)

ИКСА... (Соорганизатор, я)

S2-H3: Ghizlane Achagri

(- (S2 - H3) othmane dardari

EL HATKA Hicham

FE Fatima Ez-Zahra AMRATI

SH S2 H3 EL AISSOUQ ABDELL...

SH S2 H3, CO-Moderator, A.O...

SH S2 H3 Fatima Zohra charik

SH S2 H3 Younes errouas

SH S2, H-3, Abdelouahed EL GH...

SH S2, H3, Brahim El Merbough

Ss S2,H-3, slighoua meryem

S2,H3 ASMA SKOTTA

SE S2,H3 EL OUARDI MOHAMED

Включить звук Включить видео Участники Чат Демонстрация экрана Пауза/остановить запись Сессионные залы Реакции **Выйти из зала** Включить звук для всех Подробнее

Вы просматриваете экран S2-H3: Ghizlane Achagri

3rd INTERNATIONAL ICONECH SYMPOSIUM ON INNOVATIVE SURVEYS IN POSITIVE SCIENCES

Laboratory of Materials, Catalysis & Valorization of Natural Resources
Faculty of Sciences and Techniques Mohammed VI
University Hassan II, Casablanca, Morocco.

A FACILE APPROACH TO SYNTHESIZE MULTIFUNCTIONAL COATED PET TEXTILE FABRIC: CHARACTERIZATION AND APPLICATION

28-29/01/2021

Presented by:
ACHAGRI Ghizlane
achagri.ghizlane@gmail.com

Supervised by:
M.ZAHOUJLY
Co-supervised by:
A.CHAKIR

Вы просматриваете экран S2, H3, Brahim El... Настройки просмотра

Осталось: 05:53:34 Вид

Участники Чат Демонстрация экрана Пауза/остановить запись Сессионные залы Реакции **Выйти из зала**

Вы просматриваете экран S2, H3, Brahim El Merbough

PES de la glycine neutre

Conformation	B3LYP/6-31++G**	AM1	PM3
Ip	0	0	0
Vn	~2.5	~3.5	~2.5
Vp	~6.0	~6.0	~2.5

Figure 4: Comparaison des énergies relatives des minima communs aux méthodes AM1, PM3 et RHF (Jensen, 1991) avec DHF(B3LYP/6-3-1++G**) (Balta, 2000)



zoom.us Конференция Посмотреть Редактировать Окно Справка

Вы просматриваете экран S3 - H-3 AAZIZ JMIAI

coordinator: ALine S3-H3-LAAR... S3 - H-3 AAZI... S3-H3, Moderat... S3,H-3 Salima Tiji S3 H-3 Moha...

Запись... ||

Осталось: 05:00:08

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ISSN 2717-7270

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جامعة محمد السادس
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ÉNERGIE ET ENVIRONNEMENT

LaM_n2E
Laboratoire des Matériaux, Ondes,
Énergie et Environnement

**International ICONTECH SYMPOSIUM-3 on
Innovative Surveys in Positive Sciences**

**Combined experimental and computational
studies on corrosion inhibition of jujube shell
extract for copper in HCl medium**

Présentée par :
Aaziz JMIAI

le 28 Janvier 2021

Участники Чат Демонстрация экрана Пауза/остановить запись Сессионные залы Реакции

Выйти из зала

Finder Файл Правка Вид Переход Окно Справка

Вы просматриваете экран S3 - H-3 AAZIZ JMIAI

S-3, H-3, ziani... S3-H3-Abdall... S3 H1, A.OUA... S3-H3, baidri...

S-3, H-3, Abdel... S3, H-3, EL HAT...

Запись... ||

Осталось: 04:51:22

Introduction Générale Méthodologie Résultats et Discussion Conclusions et Perspectives

MEB ← **Caractérisation de la surface**

5µm Cu avant immersion

28/01/2021 15

Участники (15)

Поиск

- coor... (Соорганизатор, a)
- S- S3 - H-3 AAZIZ JMIAI
- S-3, H-3, Abdelqader El Gue...
- SH S-3, H-3, ziani imane
- SH S3 H-3 Mohamed Bouaissa
- SH S3 H1, A.OUARIACH
- SH S3, H-3, Bouziane Omar
- S3, H-3, EL HATKA Hicham
- S3,H-3 Salima tiji
- SH S3- H3 co-moderator A.BAK...
- s s3-h3
- Sb S3-H3, baidri abdelkader
- a S3-H3, Moderator, abdelha...
- SE S3-H3-Abdallah El-esri

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Выйти из зала

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Участники (17)

С-3, H-3, Abdelqader El Gue...

S3 H-3 Mohamed Bou...

S3, H-3, Bouziane Omar

s3-h3

S3 - H-3 AAZIZ JMIAI

S-3, H-3, ziani imane

S3, H-3, EL HATKA Hicham

S3-H3, Moderator, abdelh...

S3-H3-Abdallah El-asri

S3 H1, A.OUARIACH

S3-H3, baidri abdelkader

S3-H3, Co-host, Hajar...

S3 H3 EL AISSOUQ A...

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zoom.us Конференция Посмотреть Редактировать Окно Справка Вы просматриваете экран S3 H-3 Mohamed B... Настройки просмотра

Участники (17)

S3- H3 co-mo...

S3 H-3 Moha...

S3 - H-3 AAZI...

S3-H3, Moderat...

S3 H3 EL AIS...

Осталось: 04:36:03

MATERIELS ET METHODES

➤ *Echantillonnage*

Une série de prélèvement, effectuée pendant le mois d'avril 2018, a permis de recueillir 96 échantillons d'eaux souterraines, distribuées entre 81 puits et 15 sources, couvrant toute la zone d'étude.

• source d'eau
— Limite de Bokoya

0 2,5 5 10 15 20 Kilometers

Figure 5: localisation des sources étudiées

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Вы просматриваете экран Salah eddine MARRANE

Осталось: 08:32:48 Вид

Acknowledgments

Dr. Mohamed Zahroufi, Dr. Adel Oukh, Dr. Mehrez Amadou, Dr. Souad Essoussi, Dr. Anwar Nenguet, PhD. Salah Mwanne, PhD. Bahi Eddine Cheurouf, PhD. Othmane Durant, PhD. Agoub Eladine, PhD. Othman Akher, PhD. Boukhalil Badi, PhD. Ouss Elhaseni, PhD. Mohamed Maghoub, PhD. Mahabub Sumrathi, PhD. Abdelfattah Elghannem, Session Observer, Hall-3

S1-H3,Moderateur, Rachid To...
S1-H3: EL IDRISSI Ayoub
S1-H3:channab badreddine
S1-H3 co-moderator A.BA...
Salah eddine MARRANE
S1-HAII3-Nour Elhouda Da...
Fatima EN-NAHLI
s1 h3 R EL BRYCHY

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Осталось: 07:57:45 Вид

S2-H3-Moderator-CHALLIOUI Ailal
observer h-3
S2 H3 A. IMJAD
Co_Host,fatima zahra elamri

S-2 H-3 Hamza IGH...
S2-HAII3-Nour Elho...
S3,H-3,SEDDOQI S...

Mimouna BOUABDALLAOUI-SESSION-2...
S1- H3, co-moderat...
krimech fatima zahr...

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Вы просматриваете экран S2-H3-Abdallah El... Настройки просмотра Осталось: 07:12:48 Вид

Скриншоты:

- Скриншот 1: Презентация в Microsoft PowerPoint с заголовком "ICONTECH JOURNAL" и темой "APPLICATION OF IMIDAZOLE DERIVATIVES AS CORROSION INHIBITORS FOR COPPER IN ACIDIC MEDIUM: EXPERIMENTAL AND THEORETICAL STUDIES".
- Скриншот 2: Видеоконференция в Zoom с 16 участниками. Видны участники: S2-H3-Moderator-CHAL..., observer h-3 2010, S2 H3 A. IMJJAD, krimech fatima zahra..., Co_Host, fatima zahra..., Mimouna BOUABDALLA..., S2 H3 Khalid Abbiche, S2-H3-Abdallah El-asri, S2,H3 ASMA SKOTTA, S-2 H-3 Hamza IGHN..., S2-HAI3-Nour Elhou..., s2 h3 MELLAOUI, S-2, H-3, ziani imane, Hanane Afanga S1 H3, S2, H3, Abdelqader El G...

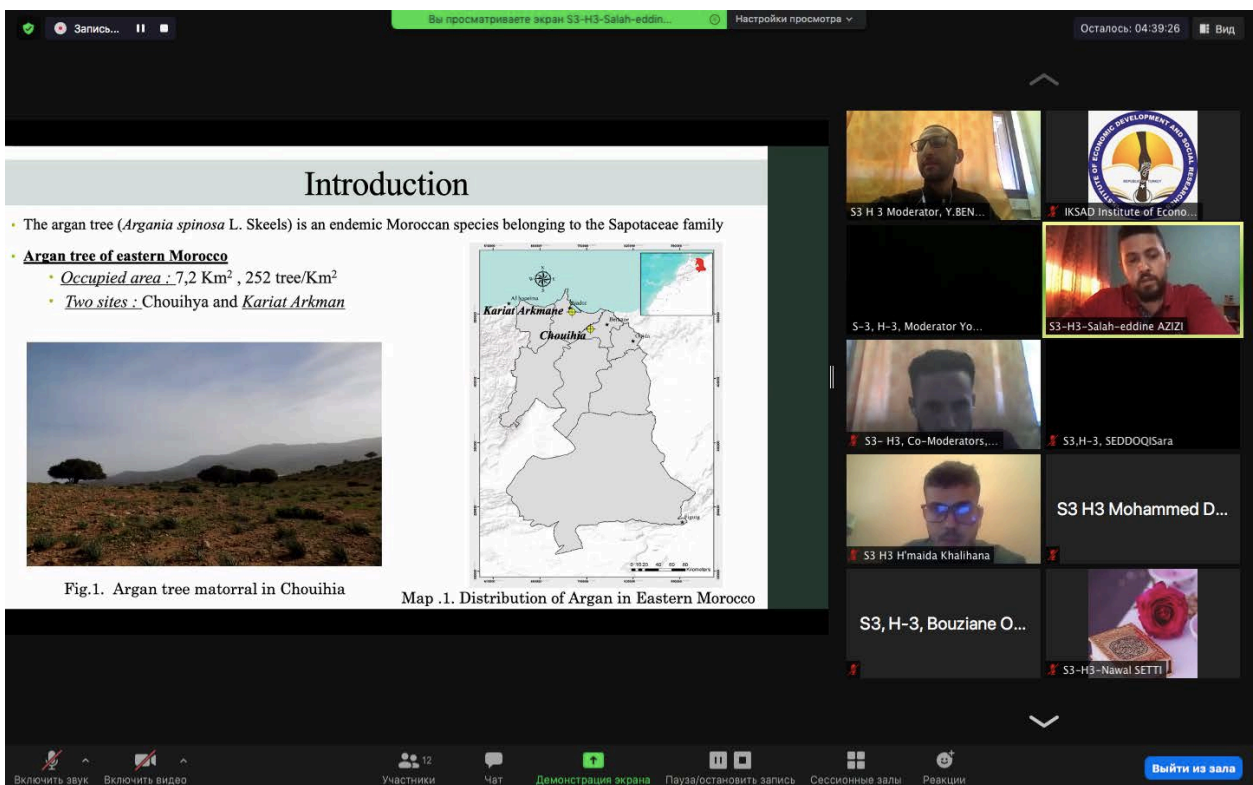
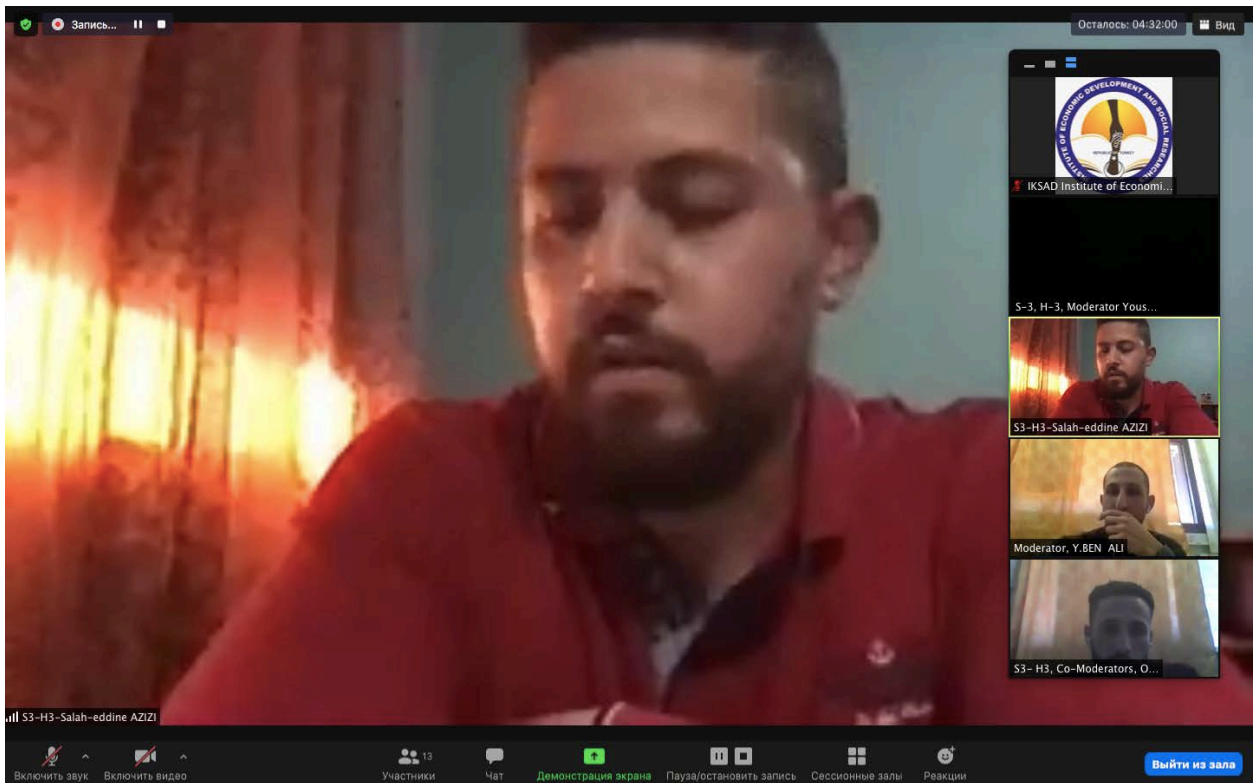
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Осталось: 06:52:31 Вид

Скриншоты:

- Скриншот 1: Крупный план участника S2-H3-Moderator-CHALLAOUI Ailal.
- Скриншот 2: Видеоконференция в Zoom с 20 участниками. Видны участники: observer h-3 2010, S2-H3-Moderator-CHALLAOUI Ailal, S2-H3-SAID EI RHABORI, Co_Host, fatima zahra elamri, S2 H3 A. IMJJAD.

Включить звук Включить видео Участники Чат Демонстрация экрана Пауза/остановить запись Сессионные залы Реакции Выйти из зала





Recording... You are viewing S2:H1:HAJAR SNOUSSI's screen View Options Remaining: 05:49:32

The 3rd International **ICONTECH SYMPOSIUM** on Innovative Surveys in Positive Sciences (ICONTECH-2021)

An embedded system to notify the company about fraud or fuel leakage and make a monthly statistic of fuel consumption

Authors:
H. SNOUSSI , I. BENDAOU, I. NASRI , M. KARROUCHI , A. MESSAOUDI, K. KASSMI.

Presented by: **Hajar SNOUSSI**
h.snoussi@ump.ac.ma

Unmute Start Video Participants 14 Chat Share Screen Pause/Stop Recording Breakout Rooms Reactions Leave Room

Recording... Remaining: 06:30:17

Unmute Start Video Participants 19 Chat Share Screen Pause/Stop Recording Breakout Rooms Reactions Leave Room



Recording... S1-H1 El-Aouni mimoun is talking... Remaining: 08:02:06

Microsoft PowerPoint interface showing a presentation slide. The slide content is as follows:

Laboratoire des Matériaux, Ondes, Energie et Environnement
Faculté des Sciences
Université Mohamed Premier

Modes de défauts induits dans un cristal photonique unidimensionnelle en série de boucle.

M.El-Aouni, L.El Kadmiri, Y.Erouas, Y.Ben-Ali, D.Bria

On the right side of the screen, there is a vertical stack of five video thumbnails showing participants in the meeting.

Recording... You are viewing S1-H1, Co-Host, EL KADMIRI ILYASS's screen View Options Remaining: 09:52:06

01 Introduction

Phonic Crystals are periodic composite materials with spatial modulation of elasticity, mass density, longitudinal and transverse speed of sound.

Zoom meeting interface showing a video feed of the host, EL KADMIRI ILYASS, in the foreground. In the background, a banner for the "International ICONECH SYMPOSIUM-3 on Innovative Surveys in Positive Science" is visible, dated 28-29 January 2021 at Mohammed First University, Oujda, Morocco. The Zoom control bar at the bottom includes Unmute, Start Video, Participants (11), Chat, Share Screen, Pause/Stop Recording, Breakout Rooms, Reactions, and a Leave Room button.



Recording... Remaining : 09:16:03

TECH JOURNAL


Localized states in defective CdTe/CdZnTe MQWs, possible effects on the lasing phenomenon

Abdelouahid Ezzarfi^a, Fatima Zahra Elamri^b, Yassine, Bouchafra^c, Youssef Ben-Ali^{b,d}, Ahmed Sali^a, Driss Briat^b

^a Solid State Physics Laboratory, Faculty of Science, Dhar El Mahraz, Sidi Mohamed Ben Abdellah University, Fez, Morocco
^b Laboratory of Materials, Waves, Energy and Environment, Team of Acoustics, Photonics and Materials, Faculty of Science, Mohamed First University, Oujda, Morocco.
^c PLMC, Faculté des Sciences et Technologie, Université Paris Est (Créteil)
^d Engineering Sciences Laboratory (LSI), Multidisciplinary, Faculty of Taza, Sidi Mohamed Ben Abdellah University, Morocco

January 29, 2021

3rd International ICONTECH SYMPOSIUM on Innovative Surveys in Positive Sciences



Études intégrées 3D-QSAR, docking et la simulation dynamique moléculaire sur des dérivés à base de 1,2,3-triazole pour la conception de nouveaux inhibiteurs de l'acétylcholinestérase pour la maladie d'Alzheimer

Encadré par:
Pr Mohammed Aziz Ajana
Pr Mohammed Bouachrine
Pr Tahar Iakhlifi



Présenté par:
Khalil El Khatabi





UIS FST
FACULTE DES SCIENCES ET TECHNIQUES
DE MOHAMMEDIA
UNIVERSITE HASSAN II DE CASABLANCA

Hassan II University of Casablanca Morocco
Faculty of Sciences and Techniques of Mohammedia
Laboratory of Materials, Membranes and Environment

Sciences Chimiques de Rennes
UNIVERSITÉ DE RENNES

Centre National de la Recherche Scientifique (CNRS), Institut des Sciences Chimiques de Rennes (ISCR) - UMR
6226, University of Rennes, F-35000 Rennes, France

International ICONTECH SYMPOSIUM-3 on Innovative Surveys in Positive Sciences

**PREPARATION AND CHARACTERIZATION OF LOW-COST
NaA ZEOLITE MEMBRANE ON KAOLINITE SUPPORT
FOR DEHYDRATION OF ALCOHOLS**

Presented by: Fatima Zohra CHARIK *Email : fatimazohra.charik-etu@etu.univh2c.ma*

28-29 January 2021

Zoom Meeting - hall 1

You are viewing ugur gurel's screen

View Options

H-1 Zhuldiz Sak...
Hall 1- Bařak Ha...
Mustafa Kemal ...
Prof. Dr. Ali B...
ugur gurel
Mustafa YILMAZ

Recording...
Remaining : 03:51:07

**The Andon System Design for
Factories**

Assistant Professor Uęur GÜREL
Eskişehir Osmangazi University Faculty
of Engineering and Architecture
Computer Engineering Department,

Mute Start Video Participants Chat Share Screen Pause/Stop Recording Breakout Rooms Reactions Leave Room

Aramak için buraya yazın

17:04
29.01.2021



Zoom Meeting - hall 1

Recording... Remaining: 03:35:41 View

Hall 1- Bařak Hanedan

H-1 Zhuldyz Sakhi OBSERVER

Mustafa Kemal Bilici

Prof. Dr. Ali Bilgili

ugur gurel

Mustafa YILMAZ

S3,H-1,TAHIRI MOHAMED

Gunel Bayramli

S3,H-1, SEDDOQ...

Mute Start Video Participants 9 Chat Share Screen Pause/Stop Recording Breakout Rooms Reactions Leave Room

Aramak için buraya yazın

17:19 29.01.2021

Zoom Meeting - Hall-2

Remaining: 05:06:32 View

İsmail teköner

H-2 Zhuldyz Sakhi OBSERVER

Leila Mehdizadeh

Hall 2- Bařak Hanedan

Prof. Dr. Ali Bilgili

Holl2 Lale TAŐ

S-3, H-2, Biřra alıık

Muharrem satılmıő

S3, H2 Denya Deniz KANAN

S3,H2Handan UĐUŐ

S2-H1, Co-Host,fatima zahra ela...

S3-H2, moderat...

Unmute Start Video Participants 12 Chat Share Screen Record Breakout Rooms Reactions Leave Room

Aramak için buraya yazın

16:59 28.01.2021



You are viewing Leila Mehdizadeh's screen

ICONTECH KONGRE SUNUMU_GÜNCEL (1) - PowerPoint

File Home Insert Design Transitions Animations Slide Show Review View Tell me what you want to do... Sign in Share

Clipboard Slides Font Paragraph Drawing

1 2 3 4 5 6

GIDA ALERJENİ β -PARVALBUMİNE ELISA, GENOMİK ve *in silico* SİMÜLASYON İLE ÇOK YÖNLÜ BİR BAKIŞ

A MULTIPERSPECTIVE EVALUATION OF FOOD ALLERGEN β -PARVALBUMINE BY ELISA, GENOMIC and *in silico* SIMULATION

Dr. Öğr. Üyesi İsmail Hakkı TEKİNER,
İstanbul Sabahattin Zaim Üniversitesi, SBF, Beslenme ve Diyetetik ABD

Doç. Dr. Tuğba TASKIN-TOK,
Gaziantep Üniversitesi, Fen Edebiyat Fakültesi, Kimya ABD

Leila MEHDIZADEHTAPEH,
İstanbul Kültür Üniversitesi, LEE, Moleküler Biyoloji ve Genetik ABD

Prof. Dr. Ali BİLGİLİ,
Ankara Üniversitesi, Veteriner Fakültesi, Farmakoloji ve Toksikoloji ABD

H-2 Zhuldyz Sakhi O...
ismail.tekiner
Leila Mehdizadeh
Prof. Dr. Ali Bilgili

Unmute Start Video Participants 12 Chat Share Screen Record Breakout Rooms Reactions Leave Room

Zoom Meeting - Hall-2

You are viewing S-3, H-2, Esra PALARLIYIK's screen

View Options

Recording... Remaining: 04:29:29

1. GİRİŞ (INTRODUCTION)

Anormal bir lipid metabolizması hastalığı olan **hiperkolesterolemi**, koroner kalp hastalığının (KKH) oluşmasında ve gelişmesinde birincil risk faktörüdür. Özellikle, dolaşımdaki düşük yoğunluklu lipoprotein kolesterolün (LDL-K) yüksek konsantrasyonu sıklıkla miyokardiyal enfarktüsün ortaya çıkmasıyla ilişkilendirilir. Hiperlipidemi, lipid metabolizmasının primer bozukluğu şeklinde veya sekonder bozukluklara bağlı olarak görülebilmektedir.

Hypercholesterolemia, an abnormal lipid metabolism disease, is the primary risk factor for the development and development of coronary heart disease (CHD). In particular, high concentrations of circulating low density lipoprotein cholesterol (LDL-C) are often associated with the occurrence of myocardial infarction. Hyperlipidemia can be seen as a primary disorder of lipid metabolism or secondary disorders.

Unmute Start Video Participants 20 Chat Share Screen Pause/Stop Recording Breakout Rooms Reactions Leave Room

Aramak için buraya yazın

17:36 28.01.2021



Zoom Meeting - Hall-2

You are viewing kucukers@gmail.com's screen

Leila Mehdiz... S-3, H-2, Esr... N. Tekin Onder Muhammad ... H2-Lale TAŞ

S3, H2 Derya De...

Recording... Remaining : 02:59:32

Doğru Giriş Ekle Tasarım Geçişler Animasyonlar Slayt Gösterisi Gözden Geçir Görünüm Ne yapmak istediğinizi söyleyin... Oturum Aç Paylaş

14
15
16
17
18
19

ICONTech SYMPOSIUM
on Innovative Surveys in Positive Sciences

Live Body Weigt, g (Şekerli and Küçükersan 2020)

	Control	A Group	B Group	C Group
Starter	43,81	43,05	43,14	43,56
1. Week	167,625	161,984	166,047	167,750
2. Week	475,437	477,344	485,75	482,375
3. Week	994,317 ^b	998,413 ^b	1014,286 ^b	1041,286 ^a
4. Week	1748,072 ^b	1795,833 ^b	1820,636 ^a	1837,630 ^a
5. Week	2931,264 ^c	3005,094 ^b	3014,315 ^b	3047,204 ^a
6. Week	3079,075 ^c	3115,754 ^b	3133,167 ^b	3178,132 ^a

A GROUP: NONİ 150 ml B GROUP:NONİ 150 ml +Spirulina C GROUP: Spirulina

p<0,05.

Unmute Start Video Participants Chat Share Screen Pause/Stop Recording Breakout Rooms Reactions Leave Room

Aramak için buraya yazın

19:06 28.01.2021

Zoom Meeting

Muhammad Sul... S-3, H-2, Esra P... Co-Host fati...

N. Tekin Onder S-3, H-2, Büş... H2-Lale TAŞ

Kedi Köpek Deri SUNUMU 26.01.2021 - PowerPoint

Doğru Giriş Ekle Tasarım Geçişler Animasyonlar Slayt Gösterisi Gözden Geçir Görünüm EndNote X9 Ne yapmak istediğinizi söyleyin... Oturum Aç Paylaş

Yapıştır Kopyala Yeni Slayt Bölüm Biçim Boyacı Pano Düzenle Sırala Metin Yon Metin Hizala SmartArt'a Dönüştür Veri Tablosu Hızlı Stiller Şekil Dolgusu Şekil Anahatı Şekil Ekleme Değiştir Seç Bul

18
19
20
21
22

fhanedan@gmail.com
abilgili61@gmail.com

SAĞLIKLI GÜNLER DİLEĞİYLE TEŞEKKÜR EDERİM
WISHING YOU HEALTHY DAYS, THANK YOU

Not eklemek için tıklayın

Slayt 22 / 22 Tuncçe

Aramak için buraya yazın

18:34 28.01.2021



Zoom Meeting

Recording...

Remaining: 02:26:29

Leila Mehdizadeh

H-2 Zhuldyz Sakhi OBSERVER

Prof. Dr. Ali Bilgili

Hall 2- Başak Hanedan

H2-Lale TAŞ

ismail.tekiner

Muhammad Suleman Na...

S-3, H-2, Esra PALABIYIK

S-3, H-2, Büşra Çalık

Co-Host fatima zahra ela...

Muhammed satılmış

N. Tekin Onder

S3-H2 BOUSSET...

Aramak için buraya yazın

19:39 28.01.2021

Zoom Meeting

Recording...

Remaining: 02:47:37

How to Mitigate the Pandemic Risk from Islamic - Microsoft PowerPoint

File Home Insert Design Transitions Animations Slide Show Review View

Slide 5 of 9

Spiritual Treatment Includes

1- Treatment with prayer:

- Allah Almighty has made repentance, Istighfar, prayer, recitation of the Holy Quran, and supplication as the cure for pandemics. Allah says in the Holy Quran that:
وَاسْتَعِينُوا بِالصَّبْرِ وَالصَّلَاةِ
- "And seek help in patience and prayer." (Al-Qur'an, 2:45)
- 2-Repentance from one's sins and seeking forgiveness from Allah is the spiritual cure for every problem. Narrated by Abdullah ibn Abbas that Prophet Muhammad (SAW) said that;
"Whoever seeks forgiveness frequently, Allah will provide for him a way out of every difficulty and distress, and will provide for him from a place from which he will not have any illusions." (Sunan Abu Daood: 4:1518)

3-Arranging prophetic prayers and dhikr for protection from calamities

- 1- "يسمى الله الذي لا يتضرر مع اسمه شيء في الأرض ولا في السماء وهو السميع العليم"
- 2- "أعوذ بكلمات الله التامة من شر ما خلق"

Click to add notes

Participants (13)

Find a participant

- H-2 Zhuldyz Sa... (Co-host, me)
- Muhammad Suleman Nasir S...
- Co-Host fatima zah... (Co-host)
- Prof. Dr. Ali Bilgili
- H2-Lale TAŞ
- Hall 2- Başak Hanedan
- ismail.tekiner
- Leila Mehdizadeh
- Muhammed satılmış
- N. Tekin Onder
- S-3, H-2, Büşra Çalık
- S-3, H-2, Esra PALABIYIK
- S3-H2 BOUSSETTA REDA

Mute All

Aramak için buraya yazın

19:18 28.01.2021



Zoom Meeting - Hall-2

You are viewing S1H2-Nihan EROGLU's screen

View Options

Recording... AKSARAY UNIVERSITESI... 20201119-115224-27CF 19-11-2020 11:52:24 Remaining: 09:16:14

AP 95.8% MI 0.8 TIS 0.0

Z6 Vet
6C2P
Abdomen
B
F HB.OM
D 6.5
G50
FR 43
DR 120
iClear 3
iBeam

❖ On clinical examination, there was a lobular mass approximately 20 cm in size in the left mandibular region extending from dorsal to ventral. The ultrasound examination of the mass revealed a solid structure with

❖ No metastatic finding was found in the thoracic radiography, and surgery was planned.

Unmute Start Video Participants Chat Share Screen Pause/Stop Recording Breakout Rooms Reactions Leave Room

Aramak için buraya yazın

12:49
28.01.2021

Zoom Meeting - Hall-2

Recording... Remaining: 08:03:01

S1-H2, Co-Hostfa... Hall 2- Başak Ha... H-2 Zhuldyz Sakhi O... H2-Ilker Şimşek S1-H2, CoModer...
H-2, Özlem Prof. Dr. Ali Bilgili S1, H2, Zeynep S... S2-H2-Moderato... S1H2-Nihan ERO...
Havvana Değerli... S1, H2, moderato... kucukers@gmail.com S-1, H-2 Handan ... HALL-2fatma cer...
S2-H2, Moderator, ... S-1, H-2, Esra PA... S2-H4 CHNAFI... S2-H2, Ilyas Ant... S-1, H-2, abdalh...
S-1, H-2, Moha... S1 H2 Salma tji S2-H2, Abderra... Ziani S3 - H-3 AAZIZ...

8 unassigned participants

Mute Start Video Participants Chat Share Screen Pause/Stop Recording Breakout Rooms Reactions Leave Room

Aramak için buraya yazın

14:02
28.01.2021



Zoom Meeting - Hall-2

You are viewing Havvana Değerli S1-H2's screen

View Options

Recording...

Remaining: 08:40:11

Öte yandan, kişilerin aşya karşı tutumları kişilerin demografik özelliklerine göre sınıflandırılarak da incelenmiştir. Buna göre katılımcıların standardize edilmiş eğitim gruplarında Çin, Rus ve Alman aşlarına yönelik birbirine yakın oranlarda her bir aşya sakıncalı gördükleri tespit edilmiştir.

Additionally, the attitudes towards the vaccines were also examined according to the demographic characteristics. Accordingly, it has been detected that the participants in all standardized education groups consider Chinese, Russian, and German originated vaccines are almost equally undesirable.

Undesirableness of Chinese Origin Vaccine

Education Level	Percentage
Lower Than Graduate Level	32%
Graduate Level	33%
Higher Than Graduate Level	35%

Undesirableness of Russian Origin Vaccine

Education Level	Percentage
Lower Than Graduate Level	32%
Graduate Level	33%
Higher Than Graduate Level	35%

Undesirableness of German Origin Vaccine

Education Level	Percentage
Lower Than Graduate Level	27%
Graduate Level	34%
Higher Than Graduate Level	39%

Unmute Start Video

Participants 19 Chat Share Screen Pause/Stop Recording Breakout Rooms Reactions

Leave Room

Aramak için buraya yazın

13:25 28.01.2021

Recording...

You are viewing S2-H2-IDRISSI IDRISI's screen

View Options

Remaining: 05:48:44

Introduction | Contexte | Méthodologie | Résultats et discussion | Conclusion

Introduction

- L'apprentissage en profondeur (DL) a connu des performances exceptionnelles dans divers domaines tels que le traitement d'images médicales, le traitement du langage naturel, la cybersécurité...
- Dans la cybersécurité IoT, la machine s'entraîne sur diverses attaques collectées et étiquetées ainsi que sur le trafic normal, dans un processus d'apprentissage supervisé.
- Ces données sur le trafic avec ou sans attaques proviennent de différents ensembles de données (dataset).
- Cependant, le domaine de la cybersécurité est toujours confronté à de nombreux défis pour la détection d'attaques en perpétuelle évolution.

28/01/2021 14:16:09

Unmute Start Video

Participants 12 Chat Share Screen Pause/Stop Recording Breakout Rooms Reactions

Leave Room

S2-H2, Rachi...

S2-H2, Ilyas A...

S2-H2-IDRISSI (D...

S2-H2, Dr. YASSI...

S2-H2-Moderato...



Recording... Remaining: 07:28:14

S2-H2-Mohammed Boukabous
S2-H2:Moderator-Pr SERRHINI
S2, H-2, Rachida El Mehdi
S2-H2, Moderator, Pr. Aïssa Kerkour El...
S-2, H-2, Youssef Ben-Ali
S2-H2, Dr. YASSINE BOUCHAFRA
S2-H2, Ilyas Antraoui
Imane SALHI_session 2_hall2

Recording... You are viewing S2-H2-IDRISSI IDRISSE' screen View Options Remaining: 05:49:50

جامعة محمد الأول
بوجدة
UNIVERSITÉ MOHAMMED PREMIER Oujda

Université Mohamed Premier
Ecole Supérieure de Technologie d'Oujda
Laboratoire MATSI

SYMPOSIUM
International ICONTECH -3
sur les Enquêtes Innovantes en Sciences Positives

ICONTECH JOURNAL
ISSN 2717-7270

MISE À JOUR DES SYSTÈMES DE DÉTECTION D'INTRUSION POUR IoT PAR APPRENTISSAGE EN PROFONDEUR

Auteurs :
Idriss IDRISSE, Mostafa AZIZI et Omar MOUSSAOUI

28/01/2021
14:15:52
ICONTECH

Unmute Start Video Participants 12 Chat Share Screen Pause/Stop Recording Breakout Rooms 11 Reactions Leave Room



Hall-1 Zoom Meeting

You are viewing S1H1-Esra TUGRUL TUNC's screen

View Options

Switch to Shared Content Unpin Video Recording... Remaining: 08:33:37

S1H1-Esra TUGRUL TUNC

Unmute Start Video Participants 16 Chat Share Screen Pause/Stop Recording Breakout Rooms Reactions Leave Room

13:32 28.1.2021

Hall-1 Zoom Meeting

h-1 Observer

S-1 H-1 Ner... S1H1: Modera... S1H1-Esra TUG... S-1, H-1, Has... S-1, H-1, Hati...

Unpin Video Recording... Remaining: 09:48:09

S-1, H-1, DR. FROILAN MOBO

Unmute Start Video Participants 10 Chat Share Screen Pause/Stop Recording Breakout Rooms Reactions Leave Room

12:17 28.1.2021



Hall-1 Zoom Meeting

You are viewing S-1, H-1, Hatice ASIL UĞURLU's screen

h-1 Observer

Recording...

Sesli sunum - PowerPoint

Doğru Giriş Ekle Tasarım Geçişler Animasyonlar Slayt Göstersi Gözden Geçir Görünüm Acrobat Ne yapınak istediğinizi söyleyin...

Yapıştır Yeni Slayt+ Düzenle Sıfırla Bülüm+ K T A S Δ ∇ A3 A- A+ Metin Yolu Metin Hizalı SmartArt'a Dönüştür Verilebilir Hızlı Stiller Şekli Dolgusu Şekli Anahatlı Şekli Etkileri Bul Değiştir Seç Adobe PDF Okutur ve Paylaş Adobe Acrobat

1 2 3 4

1. **Ti / p-Sİ SCHOTTKY KONTAĞININ ENGEL YÜKSEKLİĞİ VE SERİ DİRENCİ ÜZERİNDE SICAKLIĞIN ETKİSİ**

2. **EFFECT OF TEMPERATURE ON BARRIER HEIGHT AND SERIES RESISTANCE OF Ti / p-Sİ SCHOTTKY CONTACT**

3. **HATİCE ASIL UĞURLU**
Isparta Uygulamalı Bilimler Üniversitesi
haticeasil@isparta.edu.tr

4. **Deneyel Experiment**

Unmute Start Video Participants Chat Share Screen Pause/Stop Recording Breakout Rooms Reactions

TR 12:31 28.1.2021

Hall-1 Zoom Meeting

You are viewing S1 H1 - Tayfur Kerem Demirciag... 's screen

h-1 Observer

Recording...

International ICONECH SYMPOSIUM-3 on Innovative Surveys in Positive Science

28-29 January Mohammed First University, Oujda, Morocco

MATERIALS FOR WIND TURBINE BLADES

- Modern wind turbine blades are manufactured using polymer matrix composites, in a combination of monolithic (single skin) and sandwich composites.
- The aerodynamic shells and the internal stiffeners (shear webs) are typically made of lightweight grid scored and balsa wood cored sandwich composites, whereas the root end and the central blade main laminates (girders) on both the pressure and suction sides are thick-walled monolithic composite laminates.
- Current designs are mainly based on glass

Typical cross section of blade

Unmute Start Video Participants Chat Share Screen Pause/Stop Recording Breakout Rooms Reactions

TR 12:09 28.1.2021



Hall-4 Zoom Meeting

Recording... Remaining: 04:06:39 Speaker View

h-4 Observer

H-4 NILAY ÖZDEMİR

H4-Dr. Safinaz ARSLAN

Eroğlu Ayşegül

ergün hatir

H-4 Mete Türkoğlu

S-8 H-4 Muhammet Tibet Sığirci

Ekrem MUTLU

iPhone

Co-Host, Abir Bria

Unmute Start Video Participants Chat Share Screen Pause/Stop Recording Breakout Rooms Reactions Leave Room

TR 17:59 28.1.2021

Hall-4 Zoom Meeting

You are viewing erdgn hatir's screen

iPhone

h-4 Observer

H-4 NILAY ÖZDEMİR

H4-Dr. Safinaz ARSLAN

ergün hatir

H-4 Mete Türkoğlu

Remaining: 04:06:02

PowerPoint presentation slide:

3.3. Metem eniliktiden kaynaklı kayıp

Şekil 2. Kuzey bölge görünümü

Figure 2. The view of north area.

Şekil 2. Güney bölge görünümü

Figure 2. The view of south area.

3.3. Features induced by material loss

Figure 2. The view of north area.

Figure 2. The view of south area.

Leave Room

Unmute Start Video Participants Chat Share Screen Pause/Stop Recording Breakout Rooms Reactions

TR 17:57 28.1.2021



Hall-1 Zoom Meeting

Recording

Remaining: 09:33:59

S2-H1 HAMOULTI labchen

coordinator@ajna 2019

S2-H1 OMAR OUTEMSAAY

S2-H1 Moderator, Pr Meradi, Abd

Youssef bassir

S1, H-1, TAHIRI...

BOUMAAIZE ZI...

IKSAD Institute of Economic and Social Studies

S2- H1 co-mode...

S2,H1 SAID EL H...

S2-H1, baidri ab...

S2, H1, Falyouni

s3.h-1-DIMANE

s-3. h-1: Rachid...

S3-H1 El-Aouni...

Co-Host, Abir Bria

S2 H1 Mohamm...

5 unassigned participants

Unmute Start Video

Participants 17 Chat Share Screen Record Breakout Rooms Reactions

Leave Room

Hall-4 Zoom Meeting

You are viewing H4-Dr. Safinaz ARSLAN's screen

View Options

h-4 Observer

H-4, NILAY O...

H4-Dr. Safinaz A...

ergün hatir

S-3 H-4 Muh...

secde memmed...

Recording...

Remaining: 04:40:01

Bacillus spp.

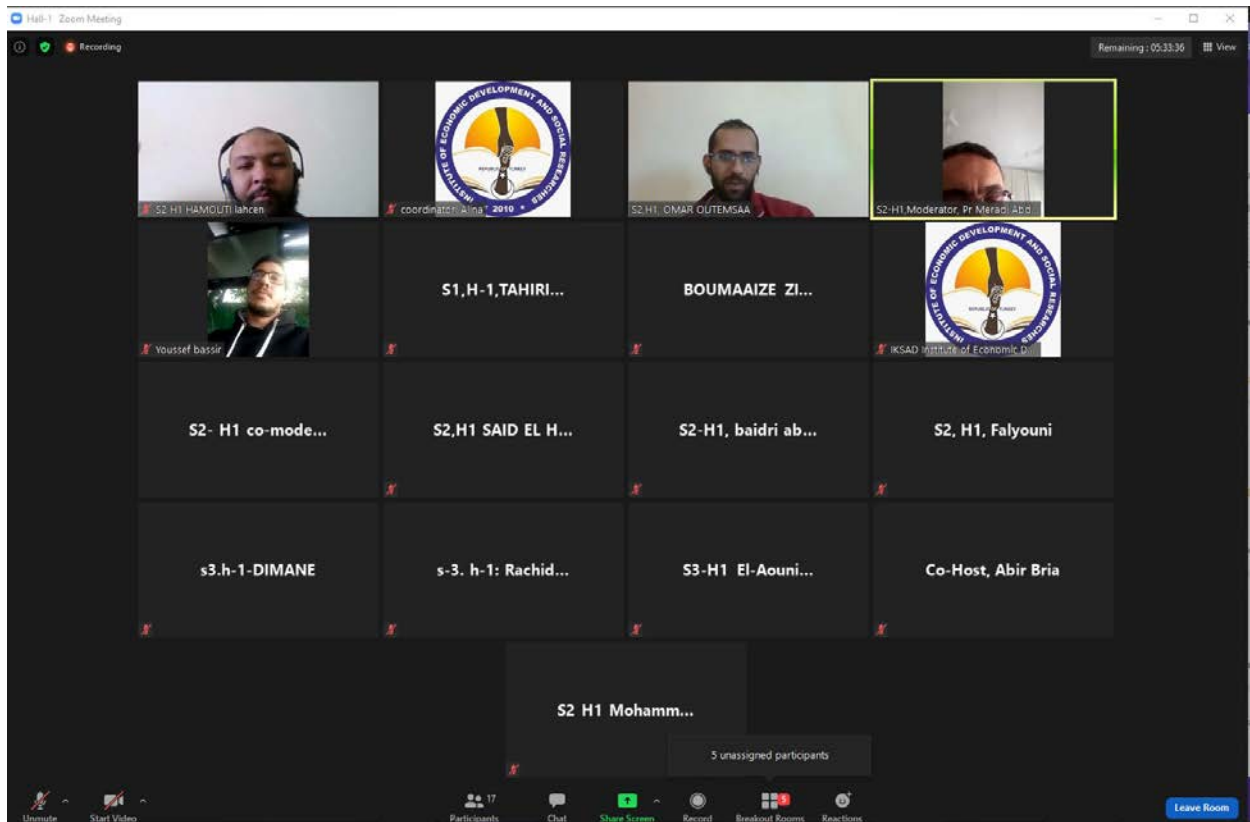
Fungus/Fungi	Bakteri/Bacteria	Virüs /Virus
<i>Bipolaris sorokiniana</i>	<i>Xanthomonas axanopodis</i> pv. <i>vesicatoria</i>	Tomato mottle virus
<i>Rhizoctonia solani</i>	<i>Pseudomonas syringae</i> pv. <i>lachrymans</i>	Cucumber mosaic virus
<i>Sclerotium rolfsii</i>		Tabacco mosaic virus
		Bean common mosaic virus

Unmute Start Video

Participants 10 Chat Share Screen Pause/Stop Recording Breakout Rooms Reactions

Leave Room

TR 17:25 28.1.2021



جامعة محمد الأول بوجدة
UNIVERSITE MOHAMMED PREMIER OUJDA
ⵜⴰⴳⴷⴰⵏⵜ ⵜⴰⵎⴳⴷⴰⵢⵜ ⵜⴰⵏⵓⵔⴷⴰⵢⵜ

S1, H-4 ABROU...

PRINCIPAL COMPONENT ANALYSIS FOR INVESTIGATION OF RELATIONSHIP BETWEEN CHILDREN'S ASTHMA AND AMBIENT AIR POLLUTION

Etude de la Relation entre l'Asthme Pédiatrique et la Pollution de l'Air Ambiant via l'Analyse en Composantes Principales

Younes ABROUKI, Abdelkader ANOUZLA, Hayat LOUKILI

3^{ème} International Symposium ICOTECH sur les enquêtes innovantes en sciences positives
28-29 janvier 2021 Oujda, Maroc

International ICOTECH Symposium -3 on Innovative Surveys in Positive Sciences
28-29 January 2021 - Mohammed First University - Oujda, Morocco



Zoom Meeting

Recording... Remaining: 08:59:34

Analyses Statistiques

- ❖ Indicateurs de pollution.
- ❖ Indicateurs sanitaires.
- ❖ Population cible.

$$X = \begin{pmatrix} x_{11} & \dots & x_{1j} & \dots & x_{1p} \\ \vdots & \ddots & \vdots & \ddots & \vdots \\ x_{i1} & \dots & x_{ij} & \dots & x_{ip} \\ \vdots & \ddots & \vdots & \ddots & \vdots \\ x_{n1} & \dots & x_{nj} & \dots & x_{np} \end{pmatrix}$$

**Étude épidémiologique
de type écologique**

**Analyse en Composantes Principales
ACP**

Participants (12)

- Hall4, Observer (Co-host, me)
- SH S1, H-4 ABROUKI Younes
- SH S1, H4, Fatima Ezzahra TITCHOU
- SC S1-H4 chnafi mohamed
- SD S1-H4, Dr. YBOUCHAFRA
- SP S1-H4-Moderator- Pr.BENKADD...
- OC oussama chedadi
- SH S1 H4 EL AISSOUQ ABDELLAH
- SA S1-H4 Atallah Mihad
- SD S1-H4 Dr. Souhayla Kodad
- SF S1-H4, fadwa
- S-2, H-4 Abdellatif BOUTAGAVOUT

Mute All

Aramak için buraya yazın

TUR 11:56 29.01.2021

Zoom Meeting

Recording... Remaining: 07:18:40

**Laboratoire Matériaux, Catalyse et valorisation des ressources naturelle
(LaMaCaVa) FSTM**

**Centre Valorisation des Ressources Naturelles
(VARENA) Fondation Mascir**

Présentation
Sous le thème:

**Polyuréthane (PU) à base de la lignine et de l'huile végétale comme revêtement
des engrais NPK pour les rendre des engrais NPK à libération contrôlée**

Présenté par :
Abdelouahed EL GHARRAK

Encadré par :
Pr. Mohamed ZAHOUILY

Participants (8)

- Hall4, Observer (Co-host, me)
- SH S2, H-4, Abdelouahed EL GH...
- S-2, H-4 Abdellatif BOUTAGAVOUT
- SH S2 H4, A. OUARIACH
- SD s2,h-4-moderateur, DIMANE
- S2-H4, Hanane AIT HMEID
- SZ S2H4, Ziani
- SE S2-H4: EL IDRISSEI Ayoub

Mute All

Aramak için buraya yazın

TUR 13:36 29.01.2021



Önemli, Dikkatle Okuyunuz Lütfen

- ❖ Kongremizde Yazım Kurallarına uygun gönderilmiş ve bilim kurulundan geçen bildirimler için online (video konferans sistemi üzerinden) sunum imkanı sağlanmıştır.
- ❖ Online sunum yapabilmek için <https://zoom.us/join> sitesi üzerinden giriş yaparak "Meeting ID or Personal Link Name" yerine ID numarasını girerek oturuma katılabilirsiniz.
- ❖ Zoom uygulaması ücretsizdir ve hesap oluşturmaya gerek yoktur.
- ❖ Zoom uygulaması kaydolmadan kullanılabilir.
- ❖ Uygulama tablet, telefon ve PC'lerde çalışıyor.
- ❖ Her oturumdaki sunucular, sunum saatinden 5 dk öncesinde oturuma bağlanmış olmaları gerekmektedir.
- ❖ Tüm kongre katılımcıları canlı bağlanarak tüm oturumları dinleyebilir.
- ❖ Moderatör - oturumdaki sunum ve bilimsel tartışma (soru-cevap) kısmından sorumludur.

Dikkat Edilmesi Gerekenler- TEKNİK BİLGİLER

- ◆ Bilgisayarınızda mikrofon olduğuna ve çalıştığına emin olun.
- ◆ Zoom'da ekran paylaşma özelliğine kullanabilmelisiniz.
- ◆ Kabul edilen bildiri sahiplerinin mail adreslerine Zoom uygulamasında oluşturduğumuz oturuma ait ID numarası gönderilecektir.
- ◆ Katılım belgeleri kongre sonunda tarafınıza pdf olarak gönderilecektir
- ◆ Kongre programında yer ve saat değişikliği gibi talepler dikkate alınmayacaktır

IMPORTANT, PLEASE READ CAREFULLY

- ❖ To be able to attend a meeting online, login via <https://zoom.us/join> site, enter ID "Meeting ID or Personal Link Name" and solidify the session.
- ❖ The Zoom application is free and no need to create an account.
- ❖ The Zoom application can be used without registration.
- ❖ The application works on tablets, phones and PCs.
- ❖ The participant must be connected to the session 5 minutes before the presentation time.
- ❖ All congress participants can connect live and listen to all sessions.
- ❖ Moderator is responsible for the presentation and scientific discussion (question-answer) section of the session.

Points to Take into Consideration - TECHNICAL INFORMATION

- ◆ Make sure your computer has a microphone and is working.
- ◆ You should be able to use screen sharing feature in Zoom.
- ◆ Attendance certificates will be sent to you as pdf at the end of the congress.
- ◆ Requests such as change of place and time will not be taken into consideration in the congress program.
- ◆ Before you login to Zoom please indicate your name surname, session number and hall number, exp. **S1, H-1, HILMI KEMAL ALTUN**

IMPORTANT, VEUILLEZ LIRE ATTENTIVEMENT

- ❖ Pour pouvoir assister à une réunion en ligne, connectez-vous via le lien <https://zoom.us/join>, entrez l'ID "ID de réunion ou le nom de lien personnel" et précisez la session.
- ❖ L'application Zoom est gratuite et pas besoin de créer un compte.
- ❖ L'application Zoom peut être utilisée sans enregistrement.
- ❖ L'application fonctionne sur les tablettes, les téléphones et les PC.
- ❖ Le participant doit être connecté à la session 5 minutes avant l'heure de la présentation.
- ❖ Tous les participants au congrès peuvent se connecter en direct et écouter toutes les sessions.
- ❖ Le modérateur est responsable de la section de présentation et de discussion scientifique (questions-réponses).

Points à prendre en considération - INFORMATIONS TECHNIQUES

- ◆ Assurez-vous que votre ordinateur dispose d'un microphone et qu'il fonctionne.
- ◆ Vous devriez pouvoir utiliser l'outil de partage d'écran dans Zoom.
- ◆ Les certificats de participation vous seront envoyés sous forme de pdf à la fin du congrès.
- ◆ Les demandes telles que le changement de lieu et d'heure ne seront pas prises en compte dans le programme du congrès.
- ◆ Avant de vous connecter à Zoom veuillez indiquer votre nom, prénom, numéro de la session et numéro de salle, exp. **S1, H-1, HILMI KEMAL ALTUN**



Meeting ID: 832 2882 8851/Passcode: 882332

OPENING CEREMONY



Moroccan Time : 09:00 - 10 : 00



Ankara Time : 11 : 00 - 12 : 00

Opening Speeches

Organizing Committee

Honorary President

Professor Dr. Y. Zaghoul - President of Mohammed First University, Oujda, Morocco

Honorary Dean

Professor Dr. S. RADI- Dean of Faculty of Sciences, Mohammed First University, Oujda, Morocco

Chair of Institute

Mustafa Latif Emek

Chair of Scientific Committee

Professor Dr. Ali BILGILI - Ankara University

Coordinator

Professor Dr. D. Bria - Faculty of Sciences, Mohammed First University, Oujda, Morocco



Meeting ID: 832 2882 8851/Passcode: 882332

Plenary Conference

Keynote Speaker



Professor Dr. Mostafa Elachouri - Faculty of Sciences, Mohammed First University, Oujda, Morocco

Moroccan's Ethnobotanical Products: A Potential Source of Novel Bioactive Compounds Showing Cancer Efficacy



Meeting ID: 832 2882 8851/Passcode: 882332

Participant Countries: Turkey, Morocco, Azerbaijan, Colombia, Belgium, Poland, Pakistan, France, Algeria, Philippines, China

Main Disciplines

**Physics Engineering - Mathematics & Computer Sciences
Medical Sciences - Biology & Chemistry
Environmental Sciences & Geology**

Total number of participants: 184

The number of participants by from Turkey: 40

Other countries: 143





Meeting ID: 832 2882 8851/Passcode: 882332

SESSION-1 HALL-1 28.01.2021

Discipline: Physics Engineering - Mathematics & Computer Sciences



Moroccan Time : 10 : 00 - 12 : 00



Ankara Time : 12 : 00 - 14 : 00

Moderator: M. Özgün KORUKÇU

AN EXPERIMENTAL STUDY ON MECHANICAL PROPERTIES OF SANDWICH COMPOSITES USED IN WIND TURBINE BLADES	Fatih Balkoğlu	Engineering Faculty, Department of Mechanical Engineering, Balıkesir University, Balıkesir, Turkey
	Tayfur Kerem Demircioğlu	Engineering Faculty, Department of Mechanical Engineering, Balıkesir University, Balıkesir, Turkey
	Ali Işıktaş	Vocational School, Tekirdağ Namık Kemal University, Hayrabolu, Tekirdağ, Turkey
DEVELOPMENT OF A WEB-BASED FRAMEWORK IN QUEST FOR HIGH IMPACT ONLINE RESEARCH JOURNAL	Phd. FROILAN D. MOBO	Philippine Merchant Marine Academy, Philippines
EFFECT OF TEMPERATURE ON BARRIER HEIGHT AND SERIES RESISTANCE OF Ti / p-Si SCHOTTKY CONTACT	Hatice ASIL UGURLU	Isparta University of Applied Sciences, Isparta, Turkey
DESIGN OF A TEMPERATURE MEASUREMENT SYSTEM FOR PHOTOTHERMAL LASER APPLICATIONS	Ehsan Azizi	İzmir Katip Çelebi Üniversitesi, Mühendislik ve Mimarlık Fakültesi, Biyomedikal Mühendisliği Bölümü
	Dr. Öğr. Üyesi Nermin Topaloğlu Avşar	İzmir Katip Çelebi Üniversitesi, Mühendislik ve Mimarlık Fakültesi, Biyomedikal Mühendisliği Bölümü
DESIGN, SIMULATION AND APPLICATION OF MICROCONTROLLER BASED DC-DC BUCK CONVERTER	Öğr. Grv. Hasan SUCU	Turgut Özal Üniversitesi, Arapgir Meslek Yüksekokulu
	Dr. Öğr. Üyesi. Taner GÖKTAŞ	İnönü Üniversitesi, Mühendislik Fakültesi
	Hicret YETİŞ	İnönü Üniversitesi, Mühendislik Fakültesi
	Prof. Dr. Müslüm ARKAN	İnönü Üniversitesi, Mühendislik Fakültesi
DUAL LEAP MOTION CONTROLLERS FUSION FOR RECOGNITION OF ARABIC SIGN LANGUAGE	MONA AFANGA	University of Electronic Science and Technology of China, School of Information and Software engineering, Laboratory of Intelligent Media and Virtual Reality
	Prof. Dr. RAO YUNBO	University of Electronic Science and Technology of China, School of Information and Software engineering, Laboratory of Intelligent Media and Virtual Reality
VARIATION OF STRESS IN REINFORCEMENT WITH COMPRESSIVE STRENGTH IN HIGH PERFORMANCE LIGHT CONCRETE	Arş. Gör. Dr. Esra TUĞRUL TUNÇ	Fırat Üniversitesi, Mühendislik Fakültesi, İnşaat Mühendisliği Bölümü
	Doç. Dr. Kürşat Esat ALYAMAÇ	Fırat Üniversitesi, Mühendislik Fakültesi, İnşaat Mühendisliği Bölümü
	Prof. Dr. Ragıp İNCE	Fırat Üniversitesi, Mühendislik Fakültesi, İnşaat Mühendisliği Bölümü
	Prof. Dr. Zülfü Çınar ULUCAN	Fırat Üniversitesi, Mühendislik Fakültesi, İnşaat Mühendisliği Bölümü
INVESTIGATION OF THE RELATIONSHIP BETWEEN BOND STRENGTH AND REINFORCEMENT STRENGTH IN HIGH PERFORMANCE LIGHTWEIGHT	Arş. Gör. Dr. Esra TUĞRUL TUNÇ	Fırat Üniversitesi, Mühendislik Fakültesi, İnşaat Mühendisliği Bölümü
	Doç. Dr. Kürşat Esat ALYAMAÇ	Fırat Üniversitesi, Mühendislik Fakültesi, İnşaat Mühendisliği Bölümü



Meeting ID: 832 2882 8851/Passcode: 882332

CONCRETES WITH A NUMERICAL APPROACH	Prof. Dr. Ragıp İNCE	Fırat Üniversitesi, Mühendislik Fakültesi, İnşaat Mühendisliği Bölümü
	Prof. Dr. Zülfü Çınar ULUCAN	Fırat Üniversitesi, Mühendislik Fakültesi, İnşaat Mühendisliği Bölümü
GRAPHICAL USER INTERFACE APPLICATION FOR CALCULATING ADIABATIC FLAME TEMPERATURES OF COMMON FUELS	M. Özgün KORUKÇU	Department of Mechanical Engineering, University of Bursa Uludağ, Gorukle 16059, Bursa, Turkey



Meeting ID: 832 2882 8851/Passcode: 882332

SESSION-1 HALL-2

28.01.2021

Discipline: Medical Sciences - Biology & Chemistry



Moroccan Time : 10 : 00 - 12 : 00



Ankara Time : 12 : 00 - 14 : 00

Moderator: Prof. Dr. Ali BİLGİLİ & Prof. Dr. Adnane Benzirar

INVESTIGATION OF THE EFFECT OF COVID-19 ON OLFACTOR MUCOSA	Dr. Öğr. Üyesi Özlem ÖZGÜL ABUÇ	Erzincan Binali Yıldırım Üniversitesi, Tıp Fakültesi
	Dr. Öğr. Üyesi Nurhan ERKAYA	Aksaray Üniversitesi, Tıp Fakültesi
THE PROTECTIVE EFFECT OF DIFFERENT FLAVONOID COMPOUNDS ON RADIOTHERAPY-SPRAGUE DAWLEY RATS AS A BIOCHEMICAL INVESTIGATION	Arş. Gör. Handan UĞUZ	Atatürk Üniversitesi, Ziraat Fakültesi
	Prof. Dr. Hakan AŞKIN	Atatürk Üniversitesi, Fen Fakültesi
	Dr. Öğr. Üyesi Seda Aşkın	Atatürk Üniversitesi, Sağlık Hizmetleri Meslek Yüksekokulu
	Dr. Öğr. Üyesi Hilal KIZILTUNÇ ÖZMEN	Atatürk Üniversitesi, Tıp Fakültesi
	Esra PALABIYIK	Atatürk Üniversitesi, Fen Bilimleri Enstitüsü
PHARMACOKINETICS OF MELOXICAM, CARPROFEN AND TOLFENAMIC ACID AFTER INTRAMUSCULAR AND ORAL ADMINISTRATION IN JAPANESE QUAILS (COTURNIX COTURNIX JAPONICA)	Erdoğan TURK	Department of Pharmacology and Toxicology, Faculty of Veterinary Medicine, University of Hatay Mustafa Kemal, 31060, Hatay, Turkey
	Ibrahim Ozan TEKELI	Department of Pharmacology and Toxicology, Faculty of Veterinary Medicine, University of Hatay Mustafa Kemal, 31060, Hatay, Turkey
	Orhan CORUM	Department of Pharmacology and Toxicology, Faculty of Veterinary Medicine, University of Kastamonu, Kastamonu, Turkey
	Duygu Durna CORUM	Department of Pharmacology and Toxicology, Faculty of Veterinary Medicine, University of Kastamonu, Kastamonu, Turkey
	Fatma Ceren KIRGIZ	Department of Pharmacology and Toxicology, Faculty of Veterinary Medicine, University of Kastamonu, Kastamonu, Turkey
	Gul CETIN	Department of Pharmacology and Toxicology, Faculty of Veterinary Medicine, University of Kastamonu, Kastamonu, Turkey
	Dilek ARSLAN ATESSAHIN	Department of Biology, Faculty of Science, University of Cankiri Karatekin, Turkey
	Kamil UNEY	Department of Pharmacology and Toxicology, Faculty of Veterinary Medicine, University of Kastamonu, Kastamonu, Turkey
THYROID CARCINOMA IN A DOG	Arş. Gör. Nihan EROĞLU	Aksaray Üniversitesi, Veteriner Fakültesi Fakültesi
	Arş. Gör. Fehmiye GÜMÜŞ	Aksaray Üniversitesi, Veteriner Fakültesi Fakültesi
	Dr. Öğr. Üy. Başak BOZTOK ÖZGERMEN	Aksaray Üniversitesi, Veteriner Fakültesi Fakültesi
	Doç. Dr. Orhan YAVUZ	Aksaray Üniversitesi, Veteriner Fakültesi Fakültesi
BLOOD AND COMPUTED TOMOGRAPHY FINDINGS IN A DOG WITH METASTATIC LUNG TUMOR	Pelin Fatoş POLAT DİNÇER	Dokuz Eylül University, Faculty of Veterinary Medicine, Department of Internal Medicine, Izmir, Turkey
	Kadri KULUALP	Dokuz Eylül University, Faculty of Veterinary Medicine, Department of Internal Medicine, Izmir, Turkey



Meeting ID: 832 2882 8851/Passcode: 882332

	Zeynep Tuğçe SERTKAYA	Dokuz Eylül University, Faculty of Veterinary Medicine, Department of Internal Medicine, Izmir, Turkey
	Özge YILDIRIM	HS Veterinary Clinic, Ankara, Turkey
PROBIOTICS IN VETERINARY MEDICINE	Dr. Öğretim Üyesi İlker ŞİMŞEK	Çankırı Karatekin Üniversitesi, Eldivan Sağlık Hizmetleri Meslek Yüksekokulu, Tıbbi Hizmetler ve Teknikler Bölümü
	Dr. Öğretim Üyesi Müge FIRAT	Çankırı Karatekin Üniversitesi, Eldivan Sağlık Hizmetleri Meslek Yüksekokulu, Veterinerlik Bölümü
	Doç. Dr. Özgür KUZUKIRAN	Çankırı Karatekin Üniversitesi, Eldivan Sağlık Hizmetleri Meslek Yüksekokulu, Veterinerlik Bölümü
ATTITUDES TOWARDS COVID-19 VACCINES IN TURKISH POPULATION	Dr. Öğr. Üyesi Hasan Giray ANKARA	Sağlık Bilimleri Üniversitesi, Sağlık Bilimleri Enstitüsü
	Öğr. Gör. Hakan DEĞERLİ	Bilecik Şeyh Edebali Üniversitesi, Sağlık Hizmetleri Meslek Yüksekokulu
	Havvana DEĞERLİ	Sağlık Bilimleri Üniversitesi, Sağlık Bilimleri Enstitüsü
THE EFFECT OF USING NATURAL HERBAL EXTRACT (BROFIT 710®) IN BROILER RATIONS	Dicle ORHAN	Ankara Üniversitesi Veteriner Fakültesi
	Prof. Dr. M. Kemal KÜÇÜKERSAN	Ankara Üniversitesi Veteriner Fakültesi




Meeting ID: 832 2882 8851/Passcode: 882332

SESSION-1 HALL-3

28.01.2021

Discipline: Medical Sciences – Biology & Chemistry

 Moroccan Time :10 : 00 - 12 : 00

 Ankara Time : 12 : 00 - 14 : 00

Moderator: Assoc. Prof. Dr. Nilgun ULUTASDEMIR & Prof. Dr. Najib Abdeljaouad

DEMOGRAPHIC CHARACTERISTICS OF PATIENTS WHO TRANSFERRED IN THE SURGICAL CLINICS FROM THE EMERGENCY SERVICE IN 2019-2020	Dr. Ramiz Yazıcı	Hitit Üniversitesi Çorum Erol Olçok Eğitim ve Araştırma Hastanesi
	Dr. Bensu Bulut	Yozgat Sorgun Devlet Hastanesi
	Dr. Dilek Atik	Bozok Üniversitesi Tıp Fakültesi Acil Tıp
DEVELOPMENT OF VACCINE IN MICROPARTICULATE FORMS AGAINST TOXOPLASMA GONDII AND INVESTIGATION OF ANTIBODY RESPONSES	Eslin ÜSTÜN KARATOP	Ottawa Üniversitesi, Elektrik ve Bilgisayar Mühendisliği Bölümü
	Rabia YILMAZ	Yıldız Teknik Üniversitesi, Biyomühendislik Bölümü
	Arş. Gör. Hilal ÇALIK	Yıldız Teknik Üniversitesi, Biyomühendislik Bölümü
	Doç. Dr. Rabia ÇAKIR KOÇ	Yıldız Teknik Üniversitesi, Biyomühendislik Bölümü
EFFECT OF COVID-19 PANDEMIA ON INDIVIDUALS WITH ANXIETY	Lecturer Nursen ULAKAC	Gümüşhane University, Faculty of Health Science
	Research Asist. Sevda UZUN	Gümüşhane University, Faculty of Health Science
	Assoc. Prof. Dr. Nilgun ULUTASDEMIR	Gümüşhane University, Faculty of Health Science
EFFECT OF STRESS LEVEL ON PATIENT SATISFACTION IN PATIENTS WITH ENDOSCOPY	Lecturer Nursen ULAKAC	Gümüşhane University, Faculty of Health Science
	Research Asist. Sevda UZUN	Gümüşhane University, Faculty of Health Science
	Assoc. Prof. Dr. Nilgun ULUTASDEMIR	Gümüşhane University, Faculty of Health Science
STUDY ON NATURAL AND ARTIFICIAL RADIOACTIVITY LEVEL OF SOME EDIBLE MUSHROOMS IN THE REGION OF KONYA (TURKEY)	Afife AKKAYA	Selçuk Üniversitesi, Fen Fakültesi, Biyoloji Bölümü, Selçuklu/KONYA
	Doç.Dr.Sinan AKTAŞ	Selçuk Üniversitesi, Fen Fakültesi, Biyoloji Bölümü, Selçuklu/KONYA
	Prof.Dr. Mehmet ERDOĞAN	Selçuk Üniversitesi, Fen Fakültesi, Biyoloji Bölümü, Selçuklu/KONYA
EATING BEHAVIORS OF CHILDREN WITH SPECIAL NEEDS: A PILOT STUDY	Dr. Öğr. Üyesi Ülkü Demirci	Istanbul Beykent University, Faculty of Health Sciences, Nutrition and Dietetics, Istanbul, Turkey
	Penbe Merve Korkmaz	Istanbul Gedik University, Faculty of Health Sciences Nutrition and Dietetics, Istanbul, Turkey
	Hayrettin Mutlu	Istanbul Health and Technology University, Faculty of Health Sciences, Nutrition and Dietetics, Istanbul, Turkey
THE EFFECT OF ROYAL JELLY ON SOME PROTEIN SIGNALING PATHWAYS AGAINST FLUORIDE-INDUCED KIDNEY DAMAGE IN RATS	Seda Beyaz	Firat University, Faculty of Science, Department of Biology, Elazig, Turkey
	Res. Assist. Ozlem Gok	Firat University, Faculty of Science, Department of Biology, Elazig, Turkey
	Gozde Parlak	Firat University, Faculty of Science, Department of Biology, Elazig, Turkey
	Res. Assist. Muhammed Ismail Can	Firat University, Faculty of Science, Department of Biology, Elazig, Turkey
	Assoc. Prof. Abdullah Aslan	Firat University, Faculty of Science, Department of Biology- Molecular Biology and Genetics Program, Elazig, Turkey





Meeting ID: 832 2882 8851/Passcode: 882332

SESSION-1 HALL-4

28.01.2021

Discipline: Environmental Sciences & Geology

	Moroccan Time : 10 : 00 - 12 : 00
	Ankara Time : 12 : 00 - 14 : 00

Moderator: Prof. Dr. Aissam Khaled

LIQUID DIGESTATE FROM ANAEROBIC DIGESTION OF SOURCE-SEPARATED HOUSEHOLD WASTE AS FERTILIZER TO CROPS	Hassan ERRAJI	Laboratory of Bioresources, Biotechnology, Ethnopharmacology and Health, Faculty of Sciences, Mohamed First University, Oujda Morocco
	Mohamed Amine AFILAL	Laboratory of Bioresources, Biotechnology, Ethnopharmacology and Health, Faculty of Sciences, Mohamed First University, Oujda Morocco
EXPLORATION VIA AN ETHNOBOTANICAL STUDY OF ANACYCLUS PYRETHRUM L. POTENTIALS TO TREAT ORAL DISORDERS IN MOROCCO	Hazim HAROUAK	Environment and Valorization of Microbial and Vegetable Resources Unit, Faculty of Sciences, Moulay Ismail University of Meknes, 50 000, Morocco
	Jamal IBIJBIJEN	Environment and Valorization of Microbial and Vegetable Resources Unit, Faculty of Sciences, Moulay Ismail University of Meknes, 50 000, Morocco
	Laila NASSIRI	Environment and Valorization of Microbial and Vegetable Resources Unit, Faculty of Sciences, Moulay Ismail University of Meknes, 50 000, Morocco
ÉTUDE DU CYCLE DE REPRODUCTION CHEZ UNE POPULATION DE SCROBICULARIA PLANA DE L'ESTUAIRE DE L'OUED SOUSS	Abir CHAHOURI	Laboratoire des systèmes aquatiques : environnement marin et continental ; Equipe : "Biologie, Ecologie et Valorisation des Ressources Marines", Département de Biologie, Faculté des Sciences, Université Ibn Zohr. BP : 8106, 80000 Agadir, Maroc
	Ali BANAOUI	Laboratoire des systèmes aquatiques : environnement marin et continental ; Equipe : "Biologie, Ecologie et Valorisation des Ressources Marines", Département de Biologie, Faculté des Sciences, Université Ibn Zohr. BP : 8106, 80000 Agadir, Maroc
	Bouchra YACOUBI	Laboratoire des systèmes aquatiques : environnement marin et continental ; Equipe : "Biologie, Ecologie et Valorisation des Ressources Marines", Département de Biologie, Faculté des Sciences, Université Ibn Zohr. BP : 8106, 80000 Agadir, Maroc
	Abdellatif MOUKRIM	Laboratoire des systèmes aquatiques : environnement marin et continental ; Equipe : "Biologie, Ecologie et Valorisation des Ressources Marines", Département de Biologie, Faculté des Sciences, Université Ibn Zohr. BP : 8106, 80000 Agadir, Maroc
REMOVAL OF HEAVY METALS: CU (II), PB (II) AND ZN (II) IONS FROM AQUEOUS SOLUTION USING SUPERB DATE STONES	ABDELAZIZ EL MOUDEN	Team Laboratoire de Chimie Appliquée et Environnement, Faculty of Sciences, Ibn Zohr University, BP 806 Dakhla, Agadir, Morocco
	LACHERAI Abdellah	Team Laboratoire de Chimie Appliquée et Environnement, Faculty of Sciences, Ibn Zohr University, BP 806 Dakhla, Agadir, Morocco
EFFECT OF SEVERE WATER DEFICIT ON YIELD AND PHYSIOLOGICAL TRAITS OF VARIOUS PLUM (PRUNUS DOMESTICA L.) CULTIVARS	HAMDANI Anas	National Agricultural Research Institute, BP 578, Meknes, Morocco Laboratory of Biotechnology and Valorization of Plant Genetic Resources, Faculty of Sciences and Techniques, University of Sultan Moulay Slimane, BP 523, Beni Mellal, Morocco
	CHARAFI Jamal	National Agricultural Research Institute, BP 578, Meknes, Morocco
	BOUDA Said	Laboratory of Biotechnology and Valorization of Plant Genetic Resources, Faculty of Sciences and Techniques, University of Sultan Moulay Slimane, BP 523, Beni Mellal, Morocco
	Adiba Atman	National Agricultural Research Institute, BP 578, Meknes, Morocco



	RAZOUK Rachid	National Agricultural Research Institute, BP 578, Meknes, Morocco
METHANE ENERGY RECOVERY FROM THE LEACHATE OF CONTROLLED LANDFILL OF GREATER AGADIR BY USING ANAEROBIC DIGESTION	S. FARSAD	Laboratory of Materials and Environment, Ibn Zohr University, Agadir 80000, Morocco
	Z. ANFAR	Laboratory of Materials and Environment, Ibn Zohr University, Agadir 80000, Morocco
	S. HANAFI	Laboratory of Materials and Environment, Ibn Zohr University, Agadir 80000, Morocco
	A. AIT ELFAKIR	Laboratory of Materials and Environment, Ibn Zohr University, Agadir 80000, Morocco
	A. AMJLEF	Laboratory of Materials and Environment, Ibn Zohr University, Agadir 80000, Morocco
	N. ELALEM	Laboratory of Materials and Environment, Ibn Zohr University, Agadir 80000, Morocco
TRAITEMENT DES EFFLUENTS TEXTILE PAR DES PROCÉDÉS ÉLECTROCHIMIQUES COMBINÉS	Hanane Afanga	Université Ibn Zohr, Faculté des Sciences, Equipe de Chimie Physique et Environnement
	Dr. Hicham Zazou	Université Ibn Zohr, Faculté des Sciences, Equipe de Chimie Physique et Environnement
	Fatima Ezzahra Titchou	Université Ibn Zohr, Faculté des Sciences, Equipe de Chimie Physique et Environnement
	Jamila El Gaayda	Université Ibn Zohr, Faculté des Sciences, Equipe de Chimie Physique et Environnement
	Prof. Dr. Rachid Ait Akbour	Université Ibn Zohr, Faculté des Sciences, Equipe de Chimie Physique et Environnement
	Prof. Dr. Mohamed Hamdani	Université Ibn Zohr, Faculté des Sciences, Equipe de Chimie Physique et Environnement
ÉVALUATION IN VIVO DE LA PATHOGENICITE CAUSE PAR PHYTHOPYTHIUM VEXANS CHEZ LE MALUS DOMESTICA	Salma Jabiri	Department of Plant Protection, Phytopathology Unit, Ecole Nationale d'Agriculture de Meknès, BPS 40, Meknès, Morocco Faculté des Sciences Dhar El Mahraz, Université Sidi Mohamed Ben Abdellah, B.P. 1796, Fès-Atlas, Fès, Morocco
	Rachid Lahlali	Department of Plant Protection, Phytopathology Unit, Ecole Nationale d'Agriculture de Meknès, BPS 40, Meknès, Morocco
	Mohammed Bendriss Amraoui	Faculté des Sciences Dhar El Mahraz, Université Sidi Mohamed Ben Abdellah, B.P. 1796, Fès-Atlas, Fès, Morocco



SESSION-2 HALL-1

28.01.2021

Discipline: Physics Engineering - Mathematics & Computer Sciences



Moroccan Time : 12 : 30 - 14 : 30



Ankara Time : 14 : 30 - 16 : 30

Moderator: Prof. Dr. Abdelhamid Kerkour El Miad & Prof. Dr. Fatima Tayeboun

NONLINEAR DYNAMIC RESPONSE OF A SIMPLY SUPPORTED HIGH SPEED RAILWAY BRIDGES UNDER MOVING LOADS	MOHAMED TAHIRI	Department of Physics, Mechanical and Civil Engineering Laboratory, Faculty of Sciences and Technology, University Abdelmalek Essaadi, Tangier, Morocco
	A. KHAMLICH	Department STIC, Communication Systems and Detection Laboratory, National School of Applied Sciences, University Abdelmalek Essaadi, Tetouan, Morocco
	M. BEZZAZI	Department of Physics, Mechanical and Civil Engineering Laboratory, Faculty of Sciences and Technology, University Abdelmalek Essaadi, Tangier, Morocco
3D NUMERICAL SIMULATION OF SOUND WAVE PROPAGATION IN AIR	Dr. Jaouad Benhamou	Laboratoire de Mécanique & Energétique, Faculté des Sciences, Université Mohammed Premier, 60000 Oujda, Morocco
	Prof. Dr. Mohammed Jami	Laboratoire de Mécanique & Energétique, Faculté des Sciences, Université Mohammed Premier, 60000 Oujda, Morocco
	Prof. Dr. Ahmed Mezrhab	Laboratoire de Mécanique & Energétique, Faculté des Sciences, Université Mohammed Premier, 60000 Oujda, Morocco
MECHANICAL AND STATIC STUDY OF A SPREADER USING FINITE ELEMENT MODELING METHOD	Hamza MALAHAKCH	Laboratory of Engineering of Industrial Management and Innovation, Faculty of Sciences and Technics, university Hassan I, Settat, Morocco
	Dr. Aziz HRAIBA	Laboratory of Engineering of Industrial Management and Innovation, Faculty of science & Technics, university Hassan I, Settat, Morocco
	Prof. Moha AROUCH	Laboratory of Engineering of Industrial Management and Innovation Professor at the Faculty of sciences & Technics, university Hassan I, Settat, Morocco Director of the University Incubator, Centre for Research and Innovation, Settat, Morocco
EFFET DU PARAMÈTRE A SUR L'ÉVOLUTION DES SYSTÈMES DES GLISSEMENTS ACTIVÉ SOUS CHARGEMENT DE TRACTION MONOTONE	R. BOUSSETTA	Laboratoire des Matériaux, Ondes, Energie et Environnement, UMP, Oujda, Maroc
	Prof. Dr. A. Kerkour El Miad	Ecole Supérieure de Technologie, UMP, Oujda, Maroc
PREDICTION DES EFFORTS DE COUPE, LA TEMPERATURE D'USINAGE, ET L'ÉPAISSEUR DE COPEAU A L'AIDE DE LA THEORIE PREDICTIVE D'OXLEY ET LE RESEAU DES NEURONES (BNN)	Outemsaa Omar	Ecole Nationale des Sciences Appliquées – Université Ibn Zohr – Agadir - Maroc
	Bouhamza Abdelkader	Ecole Nationale des Sciences Appliquées – Université Ibn Zohr – Agadir - Maroc
	EL Farissi Omar	Ecole Nationale des Sciences Appliquées – Université Ibn Zohr – Agadir - Maroc
	Hilali Elmokkhtar	Ecole Nationale des Sciences Appliquées – Université Ibn Zohr – Agadir - Maroc
FATIGUE ANALYSIS TO A TUBE OF EXCHANGER HEAT	PhD. Student. OTMANE ABOULHASSANE	Département Mécanique, FST, Université Sidi Mohammed ben Abdellah de Fès
	Prof. Dr. ABDELHADI EL HAKIMI	Département Mécanique, FST, Université Sidi Mohammed ben Abdellah de Fès



	Prof. Dr. ABDERRAHIM CHAMAT	Département Mécanique, FST, Université Sidi Mohammed ben Abdellah de Fès
	Prof. Dr. ABDELHAMID TOUACHE	Département Mécanique, FST, Université Sidi Mohammed ben Abdellah de Fès
CONTRIBUTION À L'OPTIMISATION DES PARAMÈTRES DES PROCESSUS DE LA FABRICATION ADDITIVE PAR L'UTILISATION DES OUTILS DE L'INTELLIGENCE ARTIFICIELLE	Prof. HAMOUTI Lahcen	Ecole Nationale des Sciences Appliquées – Université Ibn Zohr – Agadir - Maroc
	Prof. Dr EL FARISSI Omar	Ecole Nationale des Sciences Appliquées – Université Ibn Zohr – Agadir - Maroc
	Prof. OUTEMSAA Omar	Ecole Nationale des Sciences Appliquées – Université Ibn Zohr – Agadir - Maroc
	Prof. Dr HILALI Elmokkhtar	Ecole Nationale des Sciences Appliquées – Université Ibn Zohr – Agadir - Maroc
OPTICAL ABSORPTION AND THE REFRACTIVE INDEX CHANGES OF EXCITON TRANSITIONS $1s - sb$ IN A QUANTUM DOT UNDER THE INFLUENCE OF HYDROSTATIC PRESSURE AND TEMPERATURE	M. Hbib	OAPM group, Laboratory of Materials, Waves, Energy and Environment, Department of Physics, Faculty of Sciences, University Mohamed I, 60000 Oujda, Morocco
	O. Mommadi	OAPM group, Laboratory of Materials, Waves, Energy and Environment, Department of Physics, Faculty of Sciences, University Mohamed I, 60000 Oujda, Morocco
	L. Belamkadem	OAPM group, Laboratory of Materials, Waves, Energy and Environment, Department of Physics, Faculty of Sciences, University Mohamed I, 60000 Oujda, Morocco
	M. Chnafi	OAPM group, Laboratory of Materials, Waves, Energy and Environment, Department of Physics, Faculty of Sciences, University Mohamed I, 60000 Oujda, Morocco
	M. El Hadi	OAPM group, Laboratory of Materials, Waves, Energy and Environment, Department of Physics, Faculty of Sciences, University Mohamed I, 60000 Oujda, Morocco
	A. Vinasco	Grupo de Materia Condensada-UdeA, Instituto de Física, Facultad de Ciencias Exactas y Naturales, Universidad de Antioquia UdeA, Calle 70 No. 52-21, Medellín, Colombia
	A. El Moussaouy	OAPM group, Laboratory of Materials, Waves, Energy and Environment, Department of Physics, Faculty of Sciences, University Mohamed I, 60000 Oujda, Morocco / The Regional Centre for the Professions of Education and Training, Oujda, 60000, Morocco
	F. Falyouni	OAPM group, Laboratory of Materials, Waves, Energy and Environment, Department of Physics, Faculty of Sciences, University Mohamed I, 60000 Oujda, Morocco
	C. A. Duque	Grupo de Materia Condensada-UdeA, Instituto de Física, Facultad de Ciencias Exactas y Naturales, Universidad de Antioquia UdeA, Calle 70 No. 52-21, Medellín, Colombia
THE ACADEMIC BURNOUT AMONG CRMEF TRAINEE TEACHERS	Zineb BOUMAAIZE	Laboratory of Informatics Systems and Optimization, Faculty of science, Ibn Tofail University, Kénitra, Morocco
	Youssef EL MADHI	Research Laboratory: Education, Environment & Health (EES) at CRMEF Rabat / Salé / Kenitra
	Bouazza EL WAHBI	Laboratory of Analysis, Geometry and Applications, Faculty of science, Ibn Tofail University, Kénitra, Morocco
	Hanan EL FAYLALI	Laboratory of Informatics Systems and Optimization, Faculty of science, Ibn Tofail, University, Kénitra, Morocco




Meeting ID: 832 2882 8851/Passcode: 882332

SESSION-2 HALL-2

28.01.2021

Discipline: Physics Engineering - Mathematics & Computer Sciences

 Moroccan Time : 12 : 30 - 14 : 30

 Ankara Time : 14 : 30 - 16 : 30

Moderator: Prof. Dr. Mohamed Serhini & Prof. Dr. Aissa Kerkour El Miad

ÉTUDE COMPARATIVE DES MODÈLES D'APPRENTISSAGE AUTOMATIQUE DES REPRÉSENTATIONS LINGUISTIQUES	Mohammed BOUKABOUS	Laboratoire de recherche MATSI, ESTO, Université Mohamed Premier, Oujda, Maroc
	Mostafa AZIZI	Laboratoire de recherche MATSI, ESTO, Université Mohamed Premier, Oujda, Maroc
MISE À JOUR DES SYSTÈMES DE DÉTECTION D'INTRUSION POUR IoT PAR APPRENTISSAGE EN PROFONDEUR	Idriss Idrissi	Laboratoire de recherche MATSI, ESTO, Université Mohamed Premier, Oujda, Maroc
	Mostafa Azizi	Laboratoire de recherche MATSI, ESTO, Université Mohamed Premier, Oujda, Maroc
	Omar Moussaoui	Laboratoire de recherche MATSI, ESTO, Université Mohamed Premier, Oujda, Maroc
AUGMENTED BINARY MULTI-LABELED CNN POUR LA CLASSIFICATION PRATIQUE DES ATTRIBUTS FACIAUX	Mohammed BERRAHAL	Laboratoire de recherche MATSI, ESTO, Université Mohamed Premier, Oujda, Maroc
	Mostafa AZIZI	Laboratoire de recherche MATSI, ESTO, Université Mohamed Premier, Oujda, Maroc
THE STRONG CONSISTENCY OF QUASI-MAXIMUM LIKELIHOOD ESTIMATORS FOR P-ORDER RANDOM COEFFICIENT AUTOREGRESSIVE (RCA) MODELS	BENMOUMEN Mohammed	LaMSD, Department of Mathematics, Faculty of Sciences Mohammed Premier University, Oujda, Morocco
	SALHI Imane	LaMSD, Department of Mathematics, Faculty of Sciences Mohammed Premier University, Oujda, Morocco
FRACTALS IN MUSICAL NOTATION FOR AUDIO ENCRYPTION	Ilias CHERKAOUI	Faculty of Sciences, Mohammed V University in Rabat
ON GENERALIZATIONS OF HOPFIAN MODULES	Abderrahim El Moussaouy	Mohammed First University, Faculty of Sciences, Oujda, Morocco
POSITIVE SKEWNESS IN PANEL DATA STOCHASTIC FRONTIER ANALYSIS	Prof. Dr. Rachida El Mehdi	Mohammed First University, National School of Applied Sciences
	Prof. Dr. Christian Hafner	Institute of Statistics, Biostatistics and Actuarial Sciences, Catholic University of Louvain



SESSION-2 HALL-3

28.01.2021

Discipline: Medical Sciences – Biology & Chemistry

 Moroccan Time : 12 : 30 - 14 : 30

 Ankara Time : 14 : 30 - 16 : 30

Moderator: Prof. Dr. Yasser Karzazi

SEASONAL VARIATIONS IN THE MEAT YIELD, CONDITION INDEX AND BIOCHEMICAL COMPOSITION OF THE MUSSEL (<i>MYTILUS GALLOPROVINCIALIS</i> L.) FROM MOROCCAN MEDITERRANEAN COASTAL AREAS	Azizi Ghizlane	Laboratory Observatory of the Marchica Lagoon of Nador and Limiting Regions (OLMAN-RL), Multidisciplinary Faculty of Nador, Mohamed 1st University, 60700 Nador, Morocco
	Dr. Mostafa Layachi	Centre Régional de l'INRH-Nador-, 13 Boulevard Zerktouni BP: 493, Nador, Maroc
	Prof. Dr. Mustapha Akodad	Laboratory Observatory of the Marchica Lagoon of Nador and Limiting Regions (OLMAN-RL), Multidisciplinary Faculty of Nador, Mohamed 1st University, 60700 Nador, Morocco
	Prof. Dr. Mourad Baghour	Laboratory Observatory of the Marchica Lagoon of Nador and Limiting Regions (OLMAN-RL), Multidisciplinary Faculty of Nador, Mohamed 1st University, 60700 Nador, Morocco
	Prof. Dr. Ali Skalli	Laboratory Observatory of the Marchica Lagoon of Nador and Limiting Regions (OLMAN-RL), Multidisciplinary Faculty of Nador, Mohamed 1st University, 60700 Nador, Morocco
	Hanan AIT HMEID	Laboratory Observatory of the Marchica Lagoon of Nador and Limiting Regions (OLMAN-RL), Multidisciplinary Faculty of Nador, Mohamed 1st University, 60700 Nador, Morocco
	Prof. Dr. Abdelmajid Moumen	Laboratory Observatory of the Marchica Lagoon of Nador and Limiting Regions (OLMAN-RL), Multidisciplinary Faculty of Nador, Mohamed 1st University, 60700 Nador, Morocco
VALORIZATION OF A NEW BIO FLOCCULENT IN THE FLOCCULATION COAGULATION PROCESS OF WATER LADEN WITH COPPER, ZINC AND SUSPENDED MATTER	A.SKOTTA	Chimie Fondamentale et Appliquée, Laboratoire de Chimie Physique et Environnement, Faculté des sciences Agadir, université Ibn Zohr, Agadir, Maroc
	N.RAZAN	Chimie Fondamentale et Appliquée, Laboratoire de Chimie Physique et Environnement, Faculté des sciences Agadir, université Ibn Zohr, Agadir, Maroc
	A.IMJAD	Chimie Fondamentale et Appliquée, Laboratoire de Chimie Physique et Environnement, Faculté des sciences Agadir, université Ibn Zohr, Agadir, Maroc
	A.EL ASRI	Chimie Fondamentale et Appliquée, Laboratoire de Chimie Physique et Environnement, Faculté des sciences Agadir, université Ibn Zohr, Agadir, Maroc
	H.ZEJLI	Chimie Fondamentale et Appliquée, Laboratoire de Chimie Physique et Environnement, Faculté des sciences Agadir, université Ibn Zohr, Agadir, Maroc
	K.ABBICH	Chimie Fondamentale et Appliquée, Laboratoire de Chimie Physique et Environnement, Faculté des sciences Agadir, université Ibn Zohr, Agadir, Maroc
	M.HILALI	Chimie Fondamentale et Appliquée, Laboratoire de Chimie Physique et Environnement, Faculté des sciences Agadir, université Ibn Zohr, Agadir, Maroc
	S.EL ISSAMI	Chimie Fondamentale et Appliquée, Laboratoire de Chimie Physique et Environnement, Faculté des sciences Agadir, université Ibn Zohr, Agadir, Maroc



	L. BAZZI	Chimie Fondamentale et Appliquée, Laboratoire de Chimie Physique et Environnement, Faculté des sciences Agadir, université Ibn Zohr, Agadir, Maroc
SYNTHESIS AND CHARACTERIZATION OF PANI@WALNUT SHELL BIOCOMPOSITE AND ITS APPLICATION FOR EFFECTIVE REMOVAL OF ORANGE G DYE USING ADSORPTION IN DYNAMIC REGIME	A. IMGHARN	Laboratory of Materials and Environment, Department of Chemistry, Ibn Zohr University, Agadir 80000, Morocco
	A. HSINI	Laboratory of Materials and Environment, Department of Chemistry, Ibn Zohr University, Agadir 80000, Morocco
	Y. NACIRI	Laboratory of Materials and Environment, Department of Chemistry, Ibn Zohr University, Agadir 80000, Morocco
	M. LAABD	Laboratory of Materials and Environment, Department of Chemistry, Ibn Zohr University, Agadir 80000, Morocco
	A. ALBOURINE	Laboratory of Materials and Environment, Department of Chemistry, Ibn Zohr University, Agadir 80000, Morocco
A FACILE APPROACH TO SYNTHESIZE MULTIFUNCTIONAL COATED PET TEXTILE FABRIC: CHARACTERIZATION AND APPLICATION	Ghizlane ACHAGRI	Laboratory of materials catalysis and valorization of natural resources, Faculty of sciences and techniques, Chemistry department, Mohammedia, Morocco
	Prof. Achraf CHAKIR	Laboratory of materials catalysis and valorization of natural resources, Faculty of sciences and techniques, Chemistry department, Mohammedia, Morocco
	Prof. Mohamed ZAHOUILY	Laboratory of materials catalysis and valorization of natural resources, Faculty of sciences and techniques, Chemistry department, Mohammedia, Morocco MaScIR Foundation, INANOTECH, VARENA Center, Rabat Morocco
MANGANESE PHOSPHATE ELECTRODES FOR HIGH ELECTROCATALYTIC AND PHOTOELECTROCATALYTIC DEGRADATION OF RHODAMINE B	M. EL OUARDI	Materials Applied Chemistry Laboratory (LCAM), Faculty of Sciences, University Mohammed-V Rabat 10000, Morocco
	EL. AMATERZ	Materials and Environment (LME) Laboratory, Faculty of Sciences, University Ibn Zohr, B.P 8106, City Dakhla, Agadir, Morocco
	A. EL AZRAK	Materials and Environment (LME) Laboratory, Faculty of Sciences, University Ibn Zohr, B.P 8106, City Dakhla, Agadir, Morocco
	O. AIT LAYACHI	Laboratory of Physical Chemistry and Bio-organic Chemistry (LCPCB), University Hassan II Casablanca, Casablanca, 20000, Morocco
	A. EL IDRISSE	Laboratory of Materials, Catalysis & Valorization of Natural Resources (LaMaCaVa), Sciences & Techniques Faculty Mohammedia, University of Hassan II, Casablanca, 20000, Morocco
	A. TAOUFYQ	Materials and Environment (LME) Laboratory, Faculty of Sciences, University Ibn Zohr, B.P 8106, City Dakhla, Agadir, Morocco
	A. BENLLACHEMI	Materials and Environment (LME) Laboratory, Faculty of Sciences, University Ibn Zohr, B.P 8106, City Dakhla, Agadir, Morocco
GROWTH OF THINS FILMS COMPOSITES SEMICONDUCTORS MATERIALS: $Cu_2Co_xZn_{(1-x)}SnS_4$ and $(Ag_xCu_{(1-x)})_2ZnSnS_4$ VIA SINGLE STEP FREE SULFURIZATION ON TRANSPARENT CONDUCTIVE OXIDES BY ELECTRODEPOSITION FOR PHOTOVOLTAIC APPLICATION	H. AIT AHSAINI	Materials Applied Chemistry Laboratory (LCAM), Faculty of Sciences, University Mohammed-V Rabat 10000, Morocco
	O. AIT LAYACHI	Laboratory of Physical Chemistry and Bioorganic, University Hassan II, 20000, Casablanca, Morocco
	S. AZMI	Laboratory of Physical Chemistry and Bioorganic, University Hassan II, 20000, Casablanca, Morocco
	M. EL OUARDI	Laboratory Applied Materials Chemistry, University Mohammed V, Rabat 10010, Morocco
	A. MOUJIB	Laboratory of Physical Chemistry and Bioorganic, University Hassan II, 20000, Casablanca, Morocco
	EL. KHOUMRI	Laboratory of Physical Chemistry and Bioorganic, University Hassan II, 20000, Casablanca, Morocco



<p>MODÉLISATION DE LA SURFACE D'ÉNERGIE POTENTIELLE DE LA GLYCINE NEUTRE ET PROTONÉE PAR L'ALGORITHME GÉNÉTIQUE MULTI-NICHE CROWDING</p>	<p>Mr. Brahim El Merbouh</p>	<p>Université Ibn Zohr, BP 8106, 80 000 Agadir Maroc</p>
<p>ACTIVE INTELLIGENT PACKAGING FILM BASED ON CHITOSANE/PVP NANOCOMPOSITE CONTAINING EXTRACTED ANTHOCYANIN, REINFORCED WITH SULFUR NANOPARTICLES</p>	<p>Prof. Dr. Abderrahman El Gridani</p>	<p>Université Ibn Zohr, BP 8106, 80 000 Agadir Maroc</p>
	<p>O.DARDARI</p>	<p>Laboratory of Materials, Catalysis & Valorization of Natural Resources, Faculty of Sciences and Techniques Mohammedia, University Hassan II, Casablanca, Morocco MAScIR Foundation, INANOTECH, VARENA Center, Rabat Design, Rue Mohamed El Jazouli, Madinat El Irfane 10100-Rabat, Morocco</p>
	<p>O.AMADINE</p>	<p>MAScIR Foundation, INANOTECH, VARENA Center, Rabat Design, Rue Mohamed El Jazouli, Madinat El Irfane 10100-Rabat, Morocco</p>
<p>M. ZAHOUILY</p>	<p>Laboratory of Materials, Catalysis & Valorization of Natural Resources, Faculty of Sciences and Techniques Mohammedia, University Hassan II, Casablanca, Morocco MAScIR Foundation, INANOTECH, VARENA Center, Rabat Design, Rue Mohamed El Jazouli, Madinat El Irfane 10100-Rabat, Morocco</p>	




SESSION-2 HALL-4

28.01.2021

Discipline: Environmental Sciences & Geolog

 Moroccan Time : 12 : 30 - 14 : 30

 Ankara Time : 14 : 30 - 16 : 30

Moderator: Prof. Dr. Said Bengamra

MINERALOGIE ET CARACTERISTIQUES DE CUISSON DES MATERIAUX ARGILEUX A BASE DE LAITIER D'ACIER	RAHOU Jihad	Laboratoire de Géologie appliquée, Département de géologie, Faculté des sciences, Université Mohamed Premier BP524, 60 000 Oujda, Maroc UR Argile, Géochimie et Environnement sédimentaires (AGEs), Département de Géologie, Quartier Agora, Bâtiment B18, Allée du six Août, 14, Sart-Tilman, Université de Liège, B-4000, Belgique
	REZQI Halima	Laboratoire de Géologie appliquée, Département de géologie, Faculté des sciences, Université Mohamed Premier BP524, 60 000 Oujda, Maroc
	EL OUAHABI Meriem	UR Argile, Géochimie et Environnement sédimentaires (AGEs), Département de Géologie, Quartier Agora, Bâtiment B18, Allée du six Août, 14, Sart-Tilman, Université de Liège, B-4000, Belgique
	NATHALIE Fagel	UR Argile, Géochimie et Environnement sédimentaires (AGEs), Département de Géologie, Quartier Agora, Bâtiment B18, Allée du six Août, 14, Sart-Tilman, Université de Liège, B-4000, Belgique
ALPHA-LINOLENIC ACID (ALA): IN AN H2SO4 AGGRESSIVE MEDIUM, THE INHIBITOR (ALA) CURES THE PROBLEM OF CORROSION OF THE REINFORCEMENTS	C.Merimi	Laboratory of Applied Analytical Chemistry, Materials and Environment (LC2AME), Faculty of Sciences, University Mohammed First, Oujda, Morocco
	B.Hammouti	Laboratory of Applied Analytical Chemistry, Materials and Environment (LC2AME), Faculty of Sciences, University Mohammed First, Oujda, Morocco
	K.Zaidi	Laboratory of Applied Analytical Chemistry, Materials and Environment (LC2AME), Faculty of Sciences, University Mohammed First, Oujda, Morocco
	I.Merimia	Laboratory of Applied Analytical Chemistry, Materials and Environment (LC2AME), Faculty of Sciences, University Mohammed First, Oujda, Morocco \ Laboratory of Electrochemistry and Environment Materials, Faculty of Science, Kénitra, Morocco
	H.elmsellem	Laboratory of Applied Analytical Chemistry, Materials and Environment (LC2AME), Faculty of Sciences, University Mohammed First, Oujda, Morocco
	R.Touzani	Laboratory of Applied Analytical Chemistry, Materials and Environment (LC2AME), Faculty of Sciences, University Mohammed First, Oujda, Morocco
	A.Aouiniti	Laboratory of Applied Analytical Chemistry, Materials and Environment (LC2AME), Faculty of Sciences, University Mohammed First, Oujda, Morocco
	T.Szumiatat	University of Technology and Humanities Department of Physics, Faculty of Mechanical Engineering, Radom, Poland
MINERALOGIE ET CARACTERISTIQUES DE CUISSON DES MATERIAUX ARGILEUX A BASE DE LAITIER D'ACIER	RAHOU Jihad	Laboratoire de Géologie appliquée, Département de géologie, Faculté des sciences, Université Mohamed Premier BP524, 60 000 Oujda, Maroc UR Argile, Géochimie et Environnement sédimentaires (AGEs), Département de Géologie, Quartier Agora, Bâtiment B18, Allée du six Août, 14, Sart-Tilman, Université de Liège, B-4000, Belgique



	REZQI Halima	Laboratoire de Géologie appliquée, Département de géologie, Faculté des sciences, Université Mohamed Premier BP524, 60 000 Oujda, Maroc
	EL OUAHABI Meriem	UR Argile, Géochimie et Environnement sédimentaires (AGEs), Département de Géologie, Quartier Agora, Bâtiment B18, Allée du six Août, 14, Sart-Tilman, Université de Liège, B-4000, Belgique
	NATHALIE Fagel	UR Argile, Géochimie et Environnement sédimentaires (AGEs), Département de Géologie, Quartier Agora, Bâtiment B18, Allée du six Août, 14, Sart-Tilman, Université de Liège, B-4000, Belgique
LES PETITS VERTEBRES QUATERNAIRE DE LA GROTTTE DE GUENFOUDA (JERADA, MAROC ORIENTAL)	Hicham MHAMDI	Université Mohammed 1er, Faculté des Sciences, Laboratoire des Géosciences Appliquées, Département de Géologie, BP 717 60000 ,Oujda, Morocco
	Hassan AOURAGHE	Université Mohammed 1er, Faculté des Sciences, Laboratoire des Géosciences Appliquées, Département de Géologie, BP 717 60000 ,Oujda, Morocco
MOULOUYA POTATO WEEDS: DIVERSITY-DISTRIBUTION AND THREAT IN THE CULTURE	Dr. Karima Alaoui	Laboratory of Biochemistry and Biotechnology, Faculty of Science, University Mohamed Premier, 60000 Oujda, Morocco
	Dr. Hassan Barkaoui	Laboratory of Biochemistry and Biotechnology, Faculty of Science, University Mohamed Premier, 60000 Oujda, Morocco
	Prof. Dr. Zouheir Chafik	Institute of Agricultural Technicians in Zraibe, 633000 Berkane, Morocco
	Prof. Dr. Ez-Zahra Kharmach	Laboratory of Biochemistry and Biotechnology, Faculty of Science, University Mohamed Premier, 60000 Oujda, Morocco



SESSION-3 HALL-1

28.01.2021

Discipline: Physics Engineering - Mathematics & Computer Sciences

 Moroccan Time : 15 : 00 - 17 : 00

 Ankara Time : 17 : 00 - 19 : 00

Moderator: Prof. Dr. Kamal Kassmi & Prof. Dr. Faouaz Jeffali

INNOVATION IN NANOSCIENCE AND NANOTECHNOLOGY: CASE OF NANOPARTICLES (QUANTUM DOTS)	Sara SABRI	MEER/LETSER – Faculté des Sciences d’Oujda (FSO) – Université Mohammed Premier – Oujda/Maroc
	Abdelilah FARAJI	MEER/LETSER – Faculté des Sciences d’Oujda (FSO) – Université Mohammed Premier – Oujda/Maroc
	Rachid MALEK	MEER/LETSER – Faculté des Sciences d’Oujda (FSO) – Université Mohammed Premier – Oujda/Maroc Ecole Nationale des Sciences Appliquées d’Oujda (ENSAO)
	Khalil KASSMI	MEER/LETSER – Faculté des Sciences d’Oujda (FSO) – Université Mohammed Premier – Oujda/Maroc
TRAFFIC SIGNS RECOGNITION BASED ON DEEP NEURAL NETWORKS TECHNIQUES	Ismail NASRI	Electrical Engineering and Maintenance laboratory, High School of Technology BP. 473, Mohammed First University, Oujda, Morocco
	Mohammed KARROUCHI	Electrical Engineering and Maintenance laboratory, High School of Technology BP. 473, Mohammed First University, Oujda, Morocco
	Hajar SNOUSSI	Electrical Engineering and Maintenance laboratory, High School of Technology BP. 473, Mohammed First University, Oujda, Morocco
	Prof. Dr. Kamal KASSMI	Electrical Engineering and Maintenance laboratory, High School of Technology BP. 473, Mohammed First University, Oujda, Morocco
	Prof. Dr. Abdelhafid MESSAOUDI	Energy, Embedded Systems and Information Processing laboratory, National School of Applied Sciences, Mohammed First University, Oujda, Morocco
A NEW POWER TRACKING ALGORITHM BASED ON IMPROVED INCREMENTAL CONDUCTANCE ACROSS NEURAL NETWORKS FOR A WIND ENERGY CONVERSION SYSTEM	EL AISSAOUI Hayat (PhD student)	Electronics and Systems Laboratory- LES- Faculty of Sciences Team of Embedded Systems, Renewable Energy and Artificial Intelligence – National School of Applied Sciences, Mohammed First University Oujda, Morocco
	Prof. EL OUGLI Abdelghani	Computer Science, Signal, Automation and Cognitivism Laboratory (LISAC), Faculty of Science Dhar El Mahraz, Sidi Mohamed Ben Abdellah University, Fez, Morocco
	Prof. TIDHAF Belkassem	Electronics and Systems Laboratory- LES- Faculty of Sciences Team of Embedded Systems, Renewable Energy and Artificial Intelligence – National School of Applied Sciences, Mohammed First University Oujda, Morocco
DEMONSTRATION AND APPLICATION AN ATTACK TECHNIQUE ON THE VEHICLE’S ELECTRICAL SYSTEM TO CONTROL THE COMPUTER VIA THE CAN BUS	Doc. Dr. KARROUCHI Mohammed	Electrical Engineering and Maintenance laboratory, High School of Technology BP. 473, Mohammed first University, Oujda, Morocco
	NASRI Ismail	Electrical Engineering and Maintenance laboratory, High School of Technology BP. 473, Mohammed first University, Oujda, Morocco
	SNOUSSI Hajar	Electrical Engineering and Maintenance laboratory, High School of Technology BP. 473, Mohammed first University, Oujda, Morocco
	MESSAOUDI Abdelhafid	Electrical Engineering and Maintenance laboratory, High School of Technology BP. 473, Mohammed first University, Oujda, Morocco



	KASSMI Kamal	Electrical Engineering and Maintenance laboratory, High School of Technology BP. 473, Mohammed first University, Oujda, Morocco
A NEW ADAPTIVE MPPT FOR A STANDALONE PHOTOVOLTAIC GENERATION SYSTEM	ZEROUALI Mohammed	Electronics and Systems Laboratory- LES- Faculty of Sciences Team of Embedded Systems, Renewable Energy and Artificial Intelligence – National School of Applied Sciences, Mohammed First University Oujda, Morocco
	Prof. EL OUGLI Abdelghani	Computer Science, Signal, Automation and Cognitivism Laboratory (LISAC), Faculty of Science Sidi Mohamed Ben Abdellah University, Fez, Morocco
	Prof. TIDHAF Belkassem	Electronics and Systems Laboratory- LES- Faculty of Sciences Team of Embedded Systems, Renewable Energy and Artificial Intelligence – National School of Applied Sciences, Mohammed First University Oujda, Morocco
EXTRACTION OF PHOTOVOLTAIC PARAMETERS UNDER DIFFERENT LEVELS OF IRRADIATION	HALI AISSA	Laboratory of Renewable Energy, Embedded Systems and Data Processing, National School of Applied Sciences, Mohammed First University, Oujda, Morocco
	KHLIFI YAMINA	Laboratory of Renewable Energy, Embedded Systems and Data Processing, National School of Applied Sciences, Mohammed First University, Oujda, Morocco
REGULATION NUMERIQUE DE LA PUISSANCE D'UN SYSTÈME PHOTOVOLTAIQUE PAR UNE CARTE DSPACE	Prof. Dr. LAHFAOUI Badreddine	Laboratoire de Génie Electrique et Maintenance (LGEM), Ecole Supérieure de Technologie (ESTO), Université Med 1ere, Oujda, Maroc
STUDY OF THE DEGRADATION OF A FLEXIBLE PAVEMENT BY THE TECHNIQUES OF ROAD INSPECTION. APPLICATION IN A SECTION OF A MOROCCAN NATIONAL ROAD NUMBER 06	Mohammed Amine MEHDI	Civil Engineering, Hydraulics and Environment Laboratory, Mohammadia School of Engineers, Rabat 10090, Morocco National Center For a Road Studies, Ministry of Equipment, Transport, Logistics and Water, Rabat 10100, Morocco
	Taoufiq CHERRADI	Civil Engineering, Hydraulics and Environment Laboratory, Mohammadia School of Engineers, Rabat 10090, Morocco
	Mohamed QACHAR	National Center For a Road Studies, Ministry of Equipment, Transport, Logistics and Water, Rabat 10100, Morocco
	Ahmed CHIGR	National Center For a Road Studies, Ministry of Equipment, Transport, Logistics and Water, Rabat 10100, Morocco
CONSTRUCTION OF AN EDUCATIONAL DEVICE FOR REAL TIME DATA ACQUISITION BASED ON ARDUINO FOR A CALORIMETRIC STUDY	R ESSAADAOU	OAPM group, Laboratory of Materials, Waves, Energy and Environment, Department of Physics, Faculty of Sciences, Mohammed I University, Oujda 60000, Morocco
	A EL MOUSSAOUY	OAPM group, Laboratory of Materials, Waves, Energy and Environment, Department of Physics, Faculty of Sciences, Mohammed I University, Oujda 60000, Morocco The Regional Center for the Professions of Education and Training, Oujda 60000, Morocco
	M EL HADI	OAPM group, Laboratory of Materials, Waves, Energy and Environment, Department of Physics, Faculty of Sciences, Mohammed I University, Oujda 60000, Morocco
	A OUARIACH	OAPM group, Laboratory of Materials, Waves, Energy and Environment, Department of Physics, Faculty of Sciences, Mohammed I University, Oujda 60000, Morocco
	O MOMMADI	OAPM group, Laboratory of Materials, Waves, Energy and Environment, Department of Physics, Faculty of Sciences, Mohammed I University, Oujda 60000, Morocco



Meeting ID: 832 2882 8851/Passcode: 882332

SESSION-3 HALL-2

28.01.2021

Discipline: Medical Sciences – Biology & Chemistry



Moroccan Time : 15 : 00 - 17 : 00



Ankara Time : 17 : 00 - 19 : 00

Moderator: Prof. Dr. Ali BİLGİLİ & Prof. Dr. Madani Hamid

A MULTIPERSPECTIVE EVALUATION of FOOD ALLERGEN β -PARVALBUMINE BY ELISA, GENOMIC and in silico SIMULATION	İsmail Hakkı TEKİNER	İstanbul Sabahattin Zaim University, Nutrition and Dietetics Department, Turkey İstanbul Sabahattin Zaim University, Food and Nutrition Department, Turkey
	Tugba TASKİN-TOK	Gaziantep University, Faculty of Arts and Sciences, Chemistry Department, Turkey Gaziantep University, Institute of Health Sciences, Bioinformatics and Computational Biology
	Leila MEHDİZADEHTAPEH	İstanbul Kültür University, Molecular Biology and Genetics Department, Turkey
	Ali BİLGİLİ	Ankara Üniversitesi, Veterinary Faculty, Pharmacology and Toxicology Department, Turkey
EVALUATING DIETITANS' SOCIAL MEDIA SITES BASED ON VISIBILITY AND SCIENTIFIC RELIABILITY PERSPECTIVES	Büşra ÇALIK	İstanbul Sabahattin Zaim University, Nutrition and Dietetics Department, Turkey
	Hend HAWA	İstanbul Sabahattin Zaim University, Nutrition and Dietetics Department, Turkey
	Dana ALHAFFAR	İstanbul Sabahattin Zaim University, Nutrition and Dietetics Department, Turkey
	Ebaa SATLEH	İstanbul Sabahattin Zaim University, Nutrition and Dietetics Department, Turkey
	İsmail Hakkı TEKİNER	İstanbul Sabahattin Zaim University, Nutrition and Dietetics Department, Turkey İstanbul Sabahattin Zaim University, Food and Nutrition Department, Turkey
HOW TO MITIGATE THE PANDEMIC RISK FROM ISLAMIC PERSPECTIVE IN THE CURRENT SITUATION	MUHAMMAD SULEMAN NASIR	Department of Islamic Studies and Arabic, Gomal University, Dera Ismail Khan, KPK, Pakistan
EMERGING ROLES OF EXOSOMES IN CANCER RADIOTHERAPY	Leyla Şahin	Çukurova University, Health Sciences Institute, Department of Medical Physics
	Dr. Derya Deniz Kanan	Niğde Ömer Halisdemir University, Medical School, Department of Physiology
	Assoc.Prof.Dr. Oktay Özkan	Niğde Ömer Halisdemir University, Medical School, Department of Medical Pharmacology
	Prof.Dr. Fazilet Aksu	Çukurova University, Medical School, Department of Medical Pharmacology
HISTOPATOLOGICAL INVESTIGATION OF THE PROTECTIVE EFFECTS OF <i>Centranthus longiflorus</i> and β -SITOSTEROL IN RATS INDUCED WITH TRITON WR-1339	Esra PALABIYIK	Atatürk Üniversitesi, Fen Fakültesi
	Arş. Gör. Handan UĞUZ	Atatürk Üniversitesi, Ziraat Fakültesi
	Prof. Dr. Hakan AŞKIN	Atatürk Üniversitesi, Fen Fakültesi
	Dr. Öğr. Üyesi Seda AŞKIN	Atatürk Üniversitesi, Sağlık Hizmetleri Meslek Yüksekokulu
	Meryem ÇOŞKUN	Atatürk Üniversitesi, Fen Fakültesi



Meeting ID: 832 2882 8851/Passcode: 882332

	Dr. Öğr. Üyesi İlknur ÇALIK	Fırat Üniversitesi, Tıp Fakültesi
THE EFFECT OF REPEATED APPLICATION OF PROGESTERONE SOURCE (CIDR) ON ESTRUS FINDINGS AND PREGNANCY IN CATTLES	Dr. N. Tekin Onder	Department of Reproduction and Artificial Insemination, Faculty of Veterinary Medicine, Uludag University, Gorukle/Bursa, 16059, Turkey
	Doç. Dr. Selim ALÇAY	Department of Reproduction and Artificial Insemination, Faculty of Veterinary Medicine, Uludag University, Gorukle/Bursa, 16059, Turkey
COMPARATIVE ANALYSIS OF HERD TRACKING SYSTEM APPLICATION IN ANIMAL FEEDING AREA	Murat SARAÇ	Ankara Üniversitesi Veteriner Fakültesi
	Prof. Dr. M. Kemal KÜÇÜKERSAN	Ankara Üniversitesi Veteriner Fakültesi
ANTIMICROBIAL TREATMENT OPTIONS FOR BACTERIAL SKIN DISEASES IN CATS AND DOGS	Doç. Dr. Başak Hanedan	Atatürk Üniversitesi Veteriner Fakültesi, İç Hastalıkları Anabilim Dalı
	Prof. Dr. Ali Bilgili	Ankara Üniversitesi Veteriner Fakültesi, Farmakoloji ve Toksikoloji Anabilim Dalı
THE EFFECT OF PLANT EXTRACT AND SPURILINA PLATENSIS ON BROILER RATIONS	Ferhat ŞEKERCİ	Ankara Üniversitesi Veteriner Fakültesi
	Prof. Dr. M. Kemal KÜÇÜKERSAN	Ankara Üniversitesi Veteriner Fakültesi
EFFECTS OF ERYTHROPOIETIN ON IN VITRO EMBRYO DEVELOPMENT AND OXIDATIVE STRESS	Dr. Öğretim Üyesi Muharrem SATILMIŞ	Bakırçay Üniversitesi Menemen Meslek Yüksek Okulu, İzmir, Türkiye
	Prof. Dr. Ali Bilgili	Ankara Üniversitesi Veteriner Fakültesi, Farmakoloji ve Toksikoloji Anabilim Dalı
THE CURRENT STATUS OF ORGANIC ANIMAL HUSBANDRY PRODUCTION IN TURKEY	Lale TAŞ	GAP Agricultural Research Institute, Şanlıurfa, TURKEY



SESSION-3 HALL-3

28.01.2021

Discipline: Medical Sciences – Biology & Chemistry

 Moroccan Time : 15 : 00 - 17 : 00

 Ankara Time : 17 : 00 - 19 : 00

Moderator: Prof. Dr. Abdelkader Nasser

COMBINED EXPERIMENTAL AND COMPUTATIONAL STUDIES ON CORROSION INHIBITION OF JUJUBE SHELL EXTRACT FOR COPPER IN HCL MEDIUM	A. JMIAI	Applied Physical Chemistry And Environment Team, Faculty of Sciences, University of IBN ZOHR, Agadir. Morocco
	A. EL ASSRI	Applied Physical Chemistry And Environment Team, Faculty of Sciences, University of IBN ZOHR, Agadir. Morocco
	A. TARA	Laboratory of Engineering and Materials Science, University of Reims, Reims, France
	S. EL ISSAMI	Applied Physical Chemistry And Environment Team, Faculty of Sciences, University of IBN ZOHR, Agadir. Morocco
	M. HILALI	Applied Physical Chemistry And Environment Team, Faculty of Sciences, University of IBN ZOHR, Agadir. Morocco
	O. JBARA	Laboratory of Engineering and Materials Science, University of Reims, Reims, France
IDENTIFICATION DE L'ORIGINE DE LA SALINISATION DES EAUX SOUTERRAINES DU MASSIF DE BOKOYA (RIF CENTRAL, MAROC) PAR L'UTILISATION DES OUTILS HYDROCHIMIQUE ET GEOCHIMIQUE	Doctorant. BOUAISSA Mohamed	Laboratoire de Chimie du solide minéral et analytique (LCSMA), Faculté des sciences d'Oujda, Oujda, Maroc
	Prof. GHARIBI Elkhadir	Laboratoire de Chimie du solide minéral et analytique (LCSMA), Faculté des sciences d'Oujda, Oujda, Maroc
	Dr. GHALIT Mohammad	Laboratoire de Chimie du solide minéral et analytique (LCSMA), Faculté des sciences d'Oujda, Oujda, Maroc
	Prof. TAUPIN Jean Denis	Hydrosciences, UMR 5569 (IRD, CNRS, UM), Montpellier, France
	Prof. EL KHATTABI Jamal	Laboratoire de génie civil et de géo-environnement (LGCgE), Université de Lille, Lille, France
PROPRIETES ANXIOLYTIQUES, ANTIDEPRESSIVES ET IMPACT SUR LA MEMOIRE DE L'EXTRAIT HYDRO-ETHANOLIQUE DE L'ORGANUM MAJORANA L. SUR LES SOURIS	Amal Amaghnouje	Laboratoire de Biotechnologie, Environnement, Agroalimentaire et Santé, Université de Sidi Mohamed Ben Abdellah, FSDM BP 1796-ATLAS, 30050 Fès, Maroc
	Imane Es-saf	Laboratoire de Biotechnologie, Environnement, Agroalimentaire et Santé, Université de Sidi Mohamed Ben Abdellah, FSDM BP 1796-ATLAS, 30050 Fès, Maroc
	Hamza Mechchate	Laboratoire de Biotechnologie, Environnement, Agroalimentaire et Santé, Université de Sidi Mohamed Ben Abdellah, FSDM BP 1796-ATLAS, 30050 Fès, Maroc
	Dalila Boustia	Laboratoire de Biotechnologie, Environnement, Agroalimentaire et Santé, Université de Sidi Mohamed Ben Abdellah, FSDM BP 1796-ATLAS, 30050 Fès, Maroc
COMPOSTING OF DATE PALM (PHOENIX DACTYLIFERA L.) BY-PRODUCTS: EVOLUTION OF PHYSICO-CHEMICAL AND MICROBIOLOGICAL PROPERTIES	Bouziane O	Laboratoire de Bioressources, Biotechnologie, Ethnopharmacologie et Santé (LBBES), Faculté des Sciences de l'Université Mohammed I
	Gagou E	Laboratoire de Bioressources, Biotechnologie, Ethnopharmacologie et Santé (LBBES), Faculté des Sciences de l'Université Mohammed I
	Abbas M	Station d'Expérimentation en Milieu Oasien, Figuig
	Bouakka M	Laboratoire de Bioressources, Biotechnologie, Ethnopharmacologie et Santé (LBBES), Faculté des Sciences de l'Université Mohammed I
	Massart S	Laboratoire de Phytopathologie Université de Liège Gembloux
	Lamkami T	Plateforme Analytique, Faculté de Pharmacie, Université Libre de Bruxelles



	El Jaziri M	Plateforme Analytique, Faculté de Pharmacie, Université Libre de Bruxelles
	Hakkou A	Laboratoire de Bioressources, Biotechnologie, Ethnopharmacologie et Santé (LBBES), Faculté des Sciences de l'Université Mohammed I
ÉTUDE DE LA MOUSSE FLEXIBLE DE POLYURÉTHANE PAR IRTF ET DRX	Mr. EL HATKA Hicham	Equipe de Chimie Moléculaire et Matériaux Organiques (CMMO), Faculté des Sciences, Université Moulay Ismaïl, Meknès, Maroc
	Mr. HAFIDI Youssef	Equipe de Chimie Moléculaire et Matériaux Organiques (CMMO), Faculté des sciences, Université Moulay Ismaïl, Meknès, Maroc
	Prof. Dr. ITTOBANE Najim	Equipe de Chimie Moléculaire et Matériaux Organiques (CMMO), Faculté des Sciences, Université Moulay Ismaïl, Meknès, Maroc
TRANSFERT DE MESURE IOT A PARTIR DE NODE MCU VERS LE CLOUD BASE SUR MQTT : SUPERVISION DU SpO2 DES PATIENTS COVID-19	Mounir Grari	Laboratoire de recherche MATSI, ESTO, Université Mohamed Premier, Oujda, Maroc
	Mimoun Moussaoui	Laboratoire de recherche MATSI, ESTO, Université Mohamed Premier, Oujda, Maroc
	and Omar Moussaoui	Laboratoire de recherche MATSI, ESTO, Université Mohamed Premier, Oujda, Maroc
GC-MS ANALYSIS, ANTIOXIDANT AND ANTI-A-GLUCOSIDASE ACTIVITIES OF POMEGRANATE PEEL HEXANE EXTRACT	Nassima LAARAJ	Université Mohamed Premier (UMP) Faculté des Sciences Oujda (FSO) Laboratoire de Chimie des Matériaux (LCM) BP 717, Oujda 60000
	Mostafa MIMOUNI	Université Mohamed Premier (UMP) Faculté des Sciences Oujda (FSO) Laboratoire de Chimie des Matériaux (LCM) BP 717, Oujda 60000
	Mohamed BOUHRIM	Université Mohamed Premier (UMP) Faculté des Sciences Oujda (FSO) Laboratoire de Chimie des Matériaux (LCM) BP 717, Oujda 60000
	Mohamed BNOUHAM	Université Mohamed Premier (UMP) Faculté des Sciences Oujda (FSO) Laboratoire de Chimie des Matériaux (LCM) BP 717, Oujda 60000
PHYTOPYTHIUM VEXANS CAUSING DIEBACK DISEASE AND NEW DISCOVERING RELATED TO APPLE TREES IN MOROCCO	Salma Jabiri	Department of Plant Protection, Phytopathology Unit, Ecole Nationale d'Agriculture de Meknès, BPS 40, Meknès, Morocco Faculté des Sciences Dhar El Mahraz, Université Sidi Mohamed Ben Abdellah, B.P. 1796, Fès-Atlas, Fès, Morocco
	Rachid Lahlali	Department of Plant Protection, Phytopathology Unit, Ecole Nationale d'Agriculture de Meknès, BPS 40, Meknès, Morocco
	Mohammed Bendriss Amraoui	Faculté des Sciences Dhar El Mahraz, Université Sidi Mohamed Ben Abdellah, B.P. 1796, Fès-Atlas, Fès, Morocco



Meeting ID: 832 2882 8851/Passcode: 882332

SESSION-3 HALL-4

28.01.2021

Discipline: Environmental Sciences & Geolog



Moroccan Time : 15 : 00 - 17 : 00



Ankara Time : 17 : 00 - 19 : 00

Moderator: Assist. Prof. Dr. Nilay ÖZDEMİR

OPTIMIZATION OF FABRIC DRYING AND CUTTING IN STENTER MACHINES USED IN TEXTILE INDUSTRY	Muhammet Tibet Sığircı	Ilsan Tekstil San. ve Tic. A.Ş., Ar-Ge Departmanı
	Dr. Öğr. Üyesi Ahmet Erdoğan	İnönü Üniversitesi, Mühendislik Fakültesi
	Dr. Öğr. Üyesi Erkan Bahçe	İnönü Üniversitesi, Mühendislik Fakültesi
THE IMPORTANCE AND USE OF PLANT GROWTH-PROMOTING RHIZOBACTERIA TO CONTROL PLANT DISEASES	Dr. Safnaz ARSLAN	İl Gıda Tarım ve Hayvancılık Müdürlüğü, Antalya/Türkiye
EFFECT OF STUBBLE BURNING ON SOIL PRODUCTIVITY AND EROSION	Mete TÜRKOĞLU	Ziraat Mühendisi, Doğa Koruma ve Milli Parklar Iğdır İl Şube Müdürlüğü, Iğdır/ TÜRKİYE
	Verdiyeva Vəfa Qaçay qızı	Aqrar elmləri üzrə fəlsəfə doktoru, ADAU, Azərbaycan, Gəncə şəhəri
EVALUATION OF ALTERNATIVE PRODUCT POTENTIAL OF WEED NETTLE	Assist. Prof. Dr. Nilay ÖZDEMİR	Ege University Ödemiş Vocational Training School, Ödemiş, İZMİR
SOCIO-PSYCHOLOGICAL CAUSES AND CONSEQUENCES OF DOMESTIC VIOLENCE	Səcdə MƏMMƏDOVA	Magistr, Azərbaycan Universiteti, Sosial iş ixtisası; Bakı şəhəri
WEATHERING TYPES OF STONES USED IN ABDÜLMÜMIN MASJID (KONYA, TURKEY)	M. Ergün HATIR	Necmettin Erbakan University, Department of Interior Architecture and Environmental
	İsmail INCE	Konya Technical University, Department of Geological Engineering, Konya
INVESTIGATION OF THERMAL COMFORT PROPERTIES OF MATTRESS TICKING WOVEN FABRICS	Ayşegül EROĞLU	Bursa Uludağ Üniversitesi, Fen Bilimleri Enstitüsü, Tekstil Mühendisliği Ana Bilim Dalı
	Doç.Dr. Gülecan SÜLE	Bursa Uludağ Üniversitesi, Fen Bilimleri Enstitüsü, Tekstil Mühendisliği Ana Bilim Dalı
WEATHERING TYPES OF STONES USED IN ABDÜLMÜMIN MASJID (KONYA, TURKEY)	M. Ergün HATIR	Necmettin Erbakan University, Department of Interior Architecture and Environmental
	İsmail INCE	Konya Technical University, Department of Geological Engineering, Konya



SESSION-1 HALL-1

29.01.2021

Discipline: Physics Engineering - Mathematics & Computer Sciences

	Moroccan Time : 9 : 00 - 11 : 00
	Ankara Time : 11 : 00 - 13 : 00

Moderator: Prof. Dr. Farid Falyouni & Prof. Dr. Abdelaziz El Moussaouy

MULTI-CHANNEL FILTERS BASED ON DEFECT MODES IN ONE-DIMENSIONAL SERIAL ASYMMETRIC LOOPS AND COMB-LIKE PHONONIC SYSTEMS	Ilyass El kadmiri	Laboratory of Materials, Waves, Energy and Environment, team of Waves, Acoustic, Photonic and Materials. Faculty of Sciences, Mohamed First University, Oujda, Morocco
	Younes Errouas	Laboratory of Materials, Waves, Energy and Environment, team of Waves, Acoustic, Photonic and Materials. Faculty of Sciences, Mohamed First University, Oujda, Morocco
	Youssef Ben-Ali	Laboratory of Materials, Waves, Energy and Environment, team of Waves, Acoustic, Photonic and Materials. Faculty of Sciences, Mohamed First University, Oujda, Morocco Engineering Sciences Laboratory, Multidisciplinary Faculty of Taza, Sidi Mohamed Ben Abdellah University, B.P. 1223, Taza Gare, Morocco
	Jamal Barkani	Engineering Sciences Laboratory, Multidisciplinary Faculty of Taza, Sidi Mohamed Ben Abdellah University, B.P. 1223, Taza Gare, Morocco
	Aissam Khaled	Laboratory of Materials, Waves, Energy and Environment, team of Waves, Acoustic, Photonic and Materials. Faculty of Sciences, Mohamed First University, Oujda, Morocco Laboratory of Applied Sciences, National School of Applied Sciences, Al Hoceima, Morocco
	Driss Bria	Laboratory of Materials, Waves, Energy and Environment, team of Waves, Acoustic, Photonic and Materials. Faculty of Sciences, Mohamed First University, Oujda, Morocco
DIDACTIC SIMULATION OF INTERFERENCE PHENOMENA ON SMARTPHONES	A. Zerrouki	OAPM group, Laboratory of Materials, Waves, Energy and Environment, Department of Physics, Faculty of Sciences, University Mohamed I,60000 Oujda, Morocco
	O. Mommadi	OAPM group, Laboratory of Materials, Waves, Energy and Environment, Department of Physics, Faculty of Sciences, University Mohamed I,60000 Oujda, Morocco
	M. El Hadi	OAPM group, Laboratory of Materials, Waves, Energy and Environment, Department of Physics, Faculty of Sciences, University Mohamed I,60000 Oujda, Morocco
	A. Ouariach	OAPM group, Laboratory of Materials, Waves, Energy and Environment, Department of Physics, Faculty of Sciences, University Mohamed I,60000 Oujda, Morocco
	A. Hachmi	OAPM group, Laboratory of Materials, Waves, Energy and Environment, Department of Physics, Faculty of Sciences, University Mohamed I,60000 Oujda, Morocco
	R. Essaadaoui	OAPM group, Laboratory of Materials, Waves, Energy and Environment, Department of Physics, Faculty of Sciences, University Mohamed I,60000 Oujda, Morocco
	A. El Moussaouy	OAPM group, Laboratory of Materials, Waves, Energy and Environment, Department of Physics, Faculty of Sciences, University Mohamed I,60000 Oujda, Morocco The Regional Centre for the Professions of Education and Training, Oujda, 60000, Morocco



	M. Khlifi	OAPM group, Laboratory of Materials, Waves, Energy and Environment, Department of Physics, Faculty of Sciences, University Mohamed I, 60000 Oujda, Morocco
LOCALIZED STATES IN DEFECTIVE CDTE/CDZNT MQWS, POSSIBLE EFFECTS ON THE LASING PHENOMENON	Abdelouahid Ezzarfi	Solid State Physics Laboratory, Faculty of Science, Dhar El Mahraz, Sidi Mohamed Ben Abdellah University, Fez, Morocco
	Fatima Zahra Elamri	Laboratory of Materials, Waves, Energy and Environment, Team of Acoustics, Photonics and Materials, Faculty of Science, Mohamed First University, Oujda, Morocco
	Yassine Bouchafra	PLMC, Faculté des Sciences et Technologie, Université Paris Est (Créteil), France
	Youssef Ben-Ali	Laboratory of Materials, Waves, Energy and Environment, Team of Acoustics, Photonics and Materials, Faculty of Science, Mohamed First University, Oujda, Morocco Engineering Sciences Laboratory (LSI), Multidisciplinary, Faculty of Taza, Sidi Mohamed Ben Abdellah University, B.P. 1223, Taza Gare, Morocco
	Ahmed Sali	Solid State Physics Laboratory, Faculty of Science, Dhar El Mahraz, Sidi Mohamed Ben Abdellah University, Fez, Morocco
	Driss Bria	Laboratory of Materials, Waves, Energy and Environment, Team of Acoustics, Photonics and Materials, Faculty of Science, Mohamed First University, Oujda, Morocco
THIN PASS BANDS IN PHOTONIC STAR WAVEGUIDES STRUCTURE BASED ON FIBONACCI SEQUENCE OF GRAFTED RESONATORS	Younes Errouas	Laboratory of Materials, Waves, Energy and Environment, team of Acoustics, Photonics and Materials, Faculty of Sciences, University Mohamed First Oujda, Morocco
	Ilyass El kadmiri	Laboratory of Materials, Waves, Energy and Environment, team of Acoustics, Photonics and Materials, Faculty of Sciences, University Mohamed First Oujda, Morocco
	Youssef Ben-Ali	Laboratory of Materials, Waves, Energy and Environment, team of Acoustics, Photonics and Materials, Faculty of Sciences, University Mohamed First Oujda, Morocco. Engineering Sciences Laboratory (LSI), Multidisciplinary Faculty of Taza, Sidi Mohamed Ben Abdellah University, Taza, Morocco
	Mimoun El-Aouni	Laboratory of Materials, Waves, Energy and Environment, team of Acoustics, Photonics and Materials, Faculty of Sciences, University Mohamed First Oujda, Morocco
	Driss Bria	Laboratory of Materials, Waves, Energy and Environment, team of Acoustics, Photonics and Materials, Faculty of Sciences, University Mohamed First Oujda, Morocco
LOCALIZED STATES IN GaAs/GaAlAs MULTI-QUANTUM WELLS WITH A GEO-MATERIAL AND MATERIAL DEFECT	F. Z. Elamri	Laboratoire des Matériaux, Ondes, Energie et Environnement Equipe : Ondes, Acoustique, Photonique et Matériaux
	F. Falyouni	Laboratoire des Matériaux, Ondes, Energie et Environnement Equipe : Ondes, Acoustique, Photonique et Matériaux
	D. Bria	Laboratoire des Matériaux, Ondes, Energie et Environnement Equipe : Ondes, Acoustique, Photonique et Matériaux
LES ETATS LOCALISES DANS LES MULTI PUIITS QUANTIQUES GAAS/GAALAS CONTENANT DEUX DEFAUTS GEOMETRIQUE	A. Baidri	Laboratoire des Matériaux, Ondes, Energie et Environnement Equipe : Ondes, Acoustique, Photonique et Matériaux
	F. Z. Elamri	Laboratoire des Matériaux, Ondes, Energie et Environnement Equipe : Ondes, Acoustique, Photonique et Matériaux
	F. Falyouni	Laboratoire des Matériaux, Ondes, Energie et Environnement Equipe : Ondes, Acoustique, Photonique et Matériaux
	D. Bria	Laboratoire des Matériaux, Ondes, Energie et Environnement Equipe : Ondes, Acoustique, Photonique et Matériaux
ELECTROMAGNETIC FILTERS BASED ON DEFECT MODES IN ONE-DIMENSIONAL PHOTONIC STAR WAVEGUIDES	Youssef Ben-Ali	Laboratory of Materials, Waves, Energy and Environment, Team of Acoustics, Photonics and Materials, Faculty of Sciences, Mohamed First University, Oujda, Morocco
	Ilyas El Kadmiri	Laboratory of Materials, Waves, Energy and Environment, Team of Acoustics, Photonics and Materials, Faculty of Sciences,



STRUCTURE		Mohamed First University, Oujda, Morocco
	Younes Errouas	Laboratory of Materials, Waves, Energy and Environment, Team of Acoustics, Photonics and Materials, Faculty of Sciences, Mohamed First University, Oujda, Morocco
	Abdelouahed Essahlaoui	Engineering Sciences Laboratory (LSI), Multidisciplinary Faculty of Taza, Sidi Mohamed Ben Abdellah University, B.P. 1223, Taza Gare, Morocco
	Driss Bria	Laboratory of Materials, Waves, Energy and Environment, Team of Acoustics, Photonics and Materials, Faculty of Sciences, Mohamed First University, Oujda, Morocco
INDUCED DEFECT MODES IN A ONE-DIMENSIONAL SERIAL LOOP PHOTONIC CRYSTAL	M. El-Aouni	Laboratory of Materials, Waves, Energy and Environment, Team of Waves, Acoustic, Photonic and Materials, Faculty of Sciences, Mohamed Frist University, Oujda, Morocco
	I. El Kadmiri	Laboratory of Materials, Waves, Energy and Environment, Team of Waves, Acoustic, Photonic and Materials, Faculty of Sciences, Mohamed Frist University, Oujda, Morocco
	Y. Errouas	Laboratory of Materials, Waves, Energy and Environment, Team of Waves, Acoustic, Photonic and Materials, Faculty of Sciences, Mohamed Frist University, Oujda, Morocco
	Y. Ben-Ali	Laboratory of Materials, Waves, Energy and Environment, Team of Waves, Acoustic, Photonic and Materials, Faculty of Sciences, Mohamed Frist University, Oujda, Morocco Engineering Sciences Laboratory (LSI), Multidisciplinary Faculty of Taza, Morocco
	D. Bria	Laboratory of Materials, Waves, Energy and Environment, Team of Waves, Acoustic, Photonic and Materials, Faculty of Sciences, Mohamed Frist University, Oujda, Morocco



Meeting ID: 832 2882 8851/Passcode: 882332

SESSION-1 HALL-2

29.01.2021

Discipline: Medical Sciences – Biology & Chemistry

	Moroccan Time : 9 : 00 - 11 : 00
	Ankara Time : 11 : 00 - 13 : 00

Moderator: Prof. Dr. Mounsef Annafa

PREPARATION AND CHARACTERIZATION OF LOW-COST CERAMIC-ZEOLITE MEMBRANE FOR DEHYDRATION OF ALCOHOLS	Fatima Zohra Charik	Laboratory of Materials, Membranes and Environment, Faculty of Science and Techniques of Mohammedia, Hassan II University of Casablanca, Morocco
	Abdessamad Belgada	Laboratory of Materials, Membranes and Environment, Faculty of Science and Techniques of Mohammedia, Hassan II University of Casablanca, Morocco
	Brahim Achiou	Laboratory of Materials, Membranes and Environment, Faculty of Science and Techniques of Mohammedia, Hassan II University of Casablanca, Morocco Department of Chemical & Biochemical Science, Mohamed VI Polytechnic University, Ben Guerir, Morocco
	Saad Alami Younssi	Laboratory of Materials, Membranes and Environment, Faculty of Science and Techniques of Mohammedia, Hassan II University of Casablanca, Morocco
	Mohamed Ouammou	Laboratory of Materials, Membranes and Environment, Faculty of Science and Techniques of Mohammedia, Hassan II University of Casablanca, Morocco
INHIBITORY EFFECT OF COCUS SATIVUS STAMENS ON A-GLUCOSIDASE IN VITRO AND IN VIVO	Dr. Samira MAMRI	Laboratory of Bioresources, Biotechnology, Ethnopharmacology and Health Faculty of Sciences, University Mohamed First
	Dr. Nour Elhouda DAOUD	Laboratory of Bioresources, Biotechnology, Ethnopharmacology and Health Faculty of Sciences, University Mohamed First
	Dr. Sabir OUAHHOUD	Laboratory of Bioresources, Biotechnology, Ethnopharmacology and Health Faculty of Sciences, University Mohamed First
	Dr. Amine KHOULATI	Laboratory of Bioresources, Biotechnology, Ethnopharmacology and Health Faculty of Sciences, University Mohamed First
	Prof. Dr. Mohamed Bnouham	Laboratory of Bioresources, Biotechnology, Ethnopharmacology and Health Faculty of Sciences, University Mohamed First
	Prof. Dr. Ennouamane SAALAOUI	Laboratory of Bioresources, Biotechnology, Ethnopharmacology and Health Faculty of Sciences, University Mohamed First
ANTIMICROBIAL ACTIVITY OF NIGELLA SATIVA L ESSENTIAL OIL IN THE EASTERN REGION OF MOROCCO	TIJI Salima	Laboratory of Electrochemistry, University Mohammed first, BP 717, 60000, Oujda, Morocco
	ROKNI Yahya	Laboratory of Biochemistry and Biotechnology, University Mohammed first, BP 717, 60000, Oujda, Morocco
	ASAHRAOU	Laboratory of Biochemistry and Biotechnology, University Mohammed first, BP 717, 60000, Oujda, Morocco
	MIMOUNI Mostafa	Laboratory of Electrochemistry, University Mohammed first, BP 717, 60000, Oujda, Morocco
ETUDE DE L'INHIBITION DE LA CORROSION DU CUIVRE EN MILIEU ACIDE SULFURIQUE PAR L'ACIDE 4-AMINOBENZOÏQUE	H.ZEDDI	Etudiant à la Faculté des Sciences, Agadir
	N. RHAZZANE	Doctorante à la Faculté des Sciences, Agadir
	A.Skotta	Doctorante à la Faculté des Sciences, Agadir
	H.ZEJLI	Professeur à la Faculté des Sciences, Agadir
	M.Hilali	Professeur à la Faculté des Sciences, Agadir



DISCOVERY NEW 3, 5-DISUBSTITUTED INDOLE DERIBATIVES AS HEMATOLOGICAL ANTICANCER AGENTS, USING 3D-QSAR, MOLECULAR DOCKING AND DRUG-LIKENESS STUDIES	Mr. Reda EL-Mernissi	MCNSL, Faculty of Science.University Moulay Ismail.Meknes, Morocco
	Mr. Khalil EL Khatabi	MCNSL, Faculty of Science.University Moulay Ismail.Meknes, Morocco
	Mr. Ayoub Khaldan	MCNSL, Faculty of Science.University Moulay Ismail.Meknes, Morocco
	Mr. Larbi EIMchichi	MCNSL, Faculty of Science.University Moulay Ismail.Meknes, Morocco
	Prof. Dr. Mohammed Aziz Ajana	MCNSL, Faculty of Science.University Moulay Ismail.Meknes, Morocco
	Prof. Dr. Tahar Lakhlifi	MCNSL, Faculty of Science.University Moulay Ismail.Meknes, Morocco
	Prof. Dr. Mohammed Bouachrine	MCNSL, Faculty of Science.University Moulay Ismail.Meknes, Morocco
ASSESSMENT OF DROUGHT TOLERANCE IN ELEVEN POMEGRANATE CULTIVARS UNDER FIELD CONDITIONS	Atman ADIBA	National Agricultural Research Institute, BP 578, Meknes, Morocco Laboratory of Biotechnology and Valorisation of Plant Genetic Resources, Faculty of Sciences and Techniques, University of Sultan Moulay Slimane, BP 523, Beni Mellal, Morocco
	Jamal CHARAFI	National Agricultural Research Institute, BP 578, Meknes, Morocco
	Abdelmajid HADDIOUI	Laboratory of Biotechnology and Valorisation of Plant Genetic Resources, Faculty of Sciences and Techniques, University of Sultan Moulay Slimane, BP 523, Beni Mellal, Morocco
	Mohamed ALGHOUM	National Agricultural Research Institute, BP 578, Meknes, Morocco
	Anas HAMDANI	National Agricultural Research Institute, BP 578, Meknes, Morocco
	Rachid RAZOUK	National Agricultural Research Institute, BP 578, Meknes, Morocco
ASSESSMENT OF SUB-ACUTE TOXICITY AND ESTROGENIC EFFECT OF LAVANDULA OFFICINALIS USED IN TRADITIONAL TREATMENT OF FEMALE INFERTILITY	Meryem Slighoua	Laboratory of Biotechnology, Environment, Agri-Food, and Health (LBEAS), Faculty of Sciences, University Sidi-Mohamed-Ben-Abdellah (USMBA)Fez, Fez 30050, Morocco
	Fatima ez-zahra Amrati	Laboratory of Biotechnology, Environment, Agri-Food, and Health (LBEAS), Faculty of Sciences, University Sidi-Mohamed-Ben-Abdellah (USMBA)Fez, Fez 30050, Morocco
	Francesca Di Cristo	Elleva Pharma S.R.L via PietroCastellino, 111-CNR Research area Naples 1, 80131, Naples- Italy
	Nabil Boucetta	Medical Laboratory Specialized in Medical Biology, Fez, Morocco
	Dalila Bousta	Laboratory of Biotechnology, Environment, Agri-Food, and Health (LBEAS), Faculty of Sciences, University Sidi-Mohamed-Ben-Abdellah (USMBA)Fez, Fez 30050, Morocco
SYNTHESIS, CHARACTERIZATION AND PHOTOCATALYTIC ACTIVITY ASSESS OF METAL IONS-DOPED-ZNO NANOMATERIALS	Y. AMCHAYD	Materials and Applied Catalysis (MCA), CBAE Laboratory, Faculty of Sciences, of Moulay Ismail University, 11201, Meknès, Morocco
	A. EL MRAGUI	Materials and Applied Catalysis (MCA), CBAE Laboratory, Faculty of Sciences, of Moulay Ismail University, 11201, Meknès, Morocco
	I. AADNAN	Materials and Applied Catalysis (MCA), CBAE Laboratory, Faculty of Sciences, of Moulay Ismail University, 11201, Meknès, Morocco
	O. ZEGAOUI	Materials and Applied Catalysis (MCA), CBAE Laboratory, Faculty of Sciences, of Moulay Ismail University, 11201, Meknès, Morocco



SESSION-1 HALL-3

29.01.2021

Discipline: Medical Sciences – Biology & Chemistry

	Moroccan Time : 9 : 00 - 11 : 00
	Ankara Time : 11 : 00 - 13 : 00

Moderator: Prof. Dr. Rachid Touzani

KINETIC AND ISOTHERM STUDIES OF THE REMOVAL OF METHYLEN BLUE FROM AQUEOUS SOLUTION BY THE MORROCAN NATURAL CLAY	Fadwa LARGO	Physical Chemistry and Environment Team, Department of Chemistry, Faculty of Science, Ibn Zohr University, Agadir, MOROCCO
	Redouane HAOUNATI	Physical Chemistry and Environment Team, Department of Chemistry, Faculty of Science, Ibn Zohr University, Agadir, MOROCCO
	Hassan OUACHTAK	Faculté des Sciences Appliquées, Ait Melloul, Université Ibn Zohr, Agadir, Maroc
	Naima HAFID	Centre Régional des Métiers de l'Education et de la Formation Sous Massa
	Abdelaziz AIT ADDI	Physical Chemistry and Environment Team, Department of Chemistry, Faculty of Science, Ibn Zohr University, Agadir, MOROCCO
NOVEL ENVIRONMENTALLY FRIENDLY SUPERABSORBENT HYDROGELS BASED ON SODIUM ALGINATE REINFORCED WITH CARBOXYLATED CELLULOSE NANOCRYSTALS: SYNTHESIS, CHARACTERIZATION AND STUDY OF THE SWELLING PROPERTIES	A.EL IDRISSI	Laboratory of Materials, Catalysis & Valorization of Natural Resources, Faculty of Sciences and Techniques Mohammedia, University Hassan II, Casablanca, Morocco MASCeIR Foundation, INANOTECH, VARENA Center, Rabat Design, Rue Mohamed El Jazouli, Madinat El Irfane 10100-Rabat, Morocco
	Y.ESSAMLALI	MASCeIR Foundation, INANOTECH, VARENA Center, Rabat Design, Rue Mohamed El Jazouli, Madinat El Irfane 10100-Rabat, Morocco
	M. ZAHOUILY	Laboratory of Materials, Catalysis & Valorization of Natural Resources, Faculty of Sciences and Techniques Mohammedia, University Hassan II, Casablanca, Morocco MASCeIR Foundation, INANOTECH, VARENA Center, Rabat Design, Rue Mohamed El Jazouli, Madinat El Irfane 10100-Rabat, Morocco
FABRICATION AND CHARACTERIZATION OF CITRIC ACID CROSS-LINKED CHITOSAN, POLYVINYLPIRROLIDONE BIO-NANOCOMPOSITE FILMS FOR FOOD PACKAGING APPLICATION	B.CHANNAB	Laboratory of Materials, Catalysis & Valorization of Natural Resources, Faculty of Sciences and Techniques Mohammedia, University Hassan II, Casablanca, Morocco
	O.AMADINE	MASCeIR Foundation, INANOTECH, VARENA Center, Rabat Design, Rue Mohamed El Jazouli, Madinat El Irfane 10100-Rabat, Morocco
	A.CHAKIR	Laboratory of Materials, Catalysis & Valorization of Natural Resources, Faculty of Sciences and Techniques Mohammedia, University Hassan II, Casablanca, Morocco
	M. ZAHOUILY	Laboratory of Materials, Catalysis & Valorization of Natural Resources, Faculty of Sciences and Techniques Mohammedia, University Hassan II, Casablanca, Morocco MASCeIR Foundation, INANOTECH, VARENA Center, Rabat Design, Rue Mohamed El Jazouli, Madinat El Irfane 10100-Rabat, Morocco
ISOXAZOLINE-CONTAINING PODOPHYLLOTOXIN/2'(2',6')-(DI) HALOGENOPODO - PHYLLOTOXIN DERIVATIVES AS ACARICIDAL ACTIVITIES AGAINST TETRANYCHUS CINNABARINUS. 2D-QSAR STUDY BY USING MOLECULAR	Fatima En-nahli	MCNS Laboratory, Faculty of Science, Moulay Ismail University, Meknes, Morocco
	Hanane Zaki	MCNS Laboratory, Faculty of Science, Moulay Ismail University, Meknes, Morocco
	Abdellah EL AISSOUQ	LPME Laboratory of Processes, Materials and Environment, Faculty of Science and Technology, Sidi Mohamed Ben Abdellah University,



OPERATING ENVIRONMENT (MOE)		Fez, Morocco
	Halima HAJJI	MCNS Laboratory, Faculty of Science, Moulay Ismail University, Meknes, Morocco
	Fouad KHALIL	LPME Laboratory of Processes, Materials and Environment, Faculty of Science and Technology, Sidi Mohamed Ben Abdellah University, Fez, Morocco
	Tahar Lakhlifi	MCNS Laboratory, Faculty of Science, Moulay Ismail University, Meknes, Morocco
	Mohammed Bouachrine	MCNS Laboratory, Faculty of Science, Moulay Ismail University, Meknes, Morocco EST Khenifra, Sultan Moulay Slimane University, Morocco
IN SILICO STUDY OF 2,4,5-TRISUBSTITUTED THIAZOLES AS INHIBITORS OF TUBERCULOSIS USING 3D-QSAR AND MOLECULAR DOCKING SIMULATION	Ayoub Khaldan	Molecular Chemistry and Natural Substances Laboratory, Faculty of Science, Moulay Ismail University of Meknes, Morocco
	Soukaina Bouamrane	Molecular Chemistry and Natural Substances Laboratory, Faculty of Science, Moulay Ismail University of Meknes, Morocco
	Reda El-mernissi	Molecular Chemistry and Natural Substances Laboratory, Faculty of Science, Moulay Ismail University of Meknes, Morocco
	Hamid Maghat	Molecular Chemistry and Natural Substances Laboratory, Faculty of Science, Moulay Ismail University of Meknes, Morocco
	Mohammed Aziz Ajana	Molecular Chemistry and Natural Substances Laboratory, Faculty of Science, Moulay Ismail University of Meknes, Morocco
	Abdelouahid Sbai	Molecular Chemistry and Natural Substances Laboratory, Faculty of Science, Moulay Ismail University of Meknes, Morocco
	Mohammed Bouachrine	Molecular Chemistry and Natural Substances Laboratory, Faculty of Science, Moulay Ismail University of Meknes, Morocco EST Khenifra, Sultan Moulay Sliman University, Benimellal, Morocco
	Tahar Lakhlifi	Molecular Chemistry and Natural Substances Laboratory, Faculty of Science, Moulay Ismail University of Meknes, Morocco
REMOVAL OF METHYLENE BLUE FROM AQUEOUS SOLUTIONS ON ALGINATE ENCAPSULATED KAOLIN HYDROGEL MICROSPHERES IN A BATCH ADSORPTION SYSTEM	S.MARRANE	Laboratory of Materials, Catalysis & Valorization of Natural Resources, Faculty of Sciences and Techniques Mohammedia, University Hassan II, Casablanca, Morocco
	D.ALLOUSS	Laboratory of Materials, Catalysis & Valorization of Natural Resources, Faculty of Sciences and Techniques Mohammedia, University Hassan II, Casablanca, Morocco
	K.DAANOUN	MAScIR Foundation, INANOTECH, VARENA Center, Rabat Design, Rue Mohamed El Jazouli, Madinat El Irfane 10100-Rabat, Morocco
	A.RHIHIL	Laboratory of Materials, Catalysis & Valorization of Natural Resources, Faculty of Sciences and Techniques Mohammedia, University Hassan II, Casablanca, Morocco
	M. ZAHOUILY	Laboratory of Materials, Catalysis & Valorization of Natural Resources, Faculty of Sciences and Techniques Mohammedia, University Hassan II, Casablanca, Morocco MAScIR Foundation, INANOTECH, VARENA Center, Rabat Design, Rue Mohamed El Jazouli, Madinat El Irfane 10100-Rabat, Morocco
ELECTROCHEMICAL DEGRADATION OF CRYSTAL VIOLET BY SnO ₂	R. El Bychy	(a) Team of Chemistry Physic, Faculty of Sciences, Ibn Zohr University, Agadir, Morocco
	M. Rguiti	(a) Team of Chemistry Physic, Faculty of Sciences, Ibn Zohr University, Agadir, Morocco
	L.Bazzi	(a) Team of Chemistry Physic, Faculty of Sciences, Ibn Zohr University, Agadir, Morocco
	H.Zejli	(a) Team of Chemistry Physic, Faculty of Sciences, Ibn Zohr University, Agadir, Morocco
	M.Hilali	(a) Team of Chemistry Physic, Faculty of Sciences, Ibn Zohr University, Agadir, Morocco
	S.Elissami	(a) Team of Chemistry Physic, Faculty of Sciences, Ibn Zohr University, Agadir, Morocco



Meeting ID: 832 2882 8851/Passcode: 882332

DIELECTRIC, PIEZOELECTRIC, ELECTRICAL CONDUCTIVITY AND IMPEDANCE SPECTROSCOPIC STUDIES OF $Ba_{1-x}Li_xTi_{1+x/4}O_3$ CERAMICS	Fatima Zahra Krimech	LBGIM, University Hassan II, ENS - Casablanca, Casablanca, Morocco LPTA, Faculté des Sciences, BP 1976 Fès-Atlas, Fès, Morocco
	Salaheddine Sayouri	LPTA, Faculté des Sciences, BP 1976 Fès-Atlas, Fès, Morocco



SESSION-1 HALL-4

29.01.2021

Discipline: Environmental Sciences & Geolog

	Moroccan Time : 9 : 00 - 11 : 00
	Ankara Time : 11 : 00 - 13 : 00

Moderator: Prof. Dr. Rachid Benkaddour

CHARACTERIZATION AND TREATMENT OF TEXTILE WASTEWATER	Dr. ANOUZLA Abdelkader	University of Hassan II - Casablanca, FSTM Mohammedia, Morocco
	Prof. ABROUKI Younes	Mohammed V University in Rabat, Faculty of Sciences of Rabat, Rabat, Morocco
	Prof. SOUABI Salah	University of Hassan II - Casablanca, FSTM Mohammedia, Morocco
DISCOVERY OF NEW GLYCOGEN SYNTHASE KINASE-3 BETA (GSK-3B) INHIBITORS THROUGH STRUCTURE-BASED VIRTUAL SCREENING	Doc. Abdellah El Aissouq	Laboratory of Processes, Materials and Environment (LPME), Faculty of Science and Technology, Sidi Mohamed Ben Abdellah University, Fez, Morocco
	Doc. Oussama Chedadi	LIMOME Laboratory, Faculty of Sciences Dhar El Mahraz, Sidi Mohamed Ben Abdellah University, Fes, Morocco
	Pr. Mohammed Bouachrine	MCNS Laboratory, Faculty of sciences, Moulay Ismail University, Meknes, Morocco
	Pr. Abdelkrim Ouammou	LIMOME Laboratory, Faculty of Sciences Dhar El Mahraz, Sidi Mohamed Ben Abdellah University, Fes, Morocco
	Pr. Fouad Khalil	Laboratory of Processes, Materials and Environment (LPME), Faculty of Science and Technology, Sidi Mohamed Ben Abdellah University, Fez, Morocco
ISOLATION AND IN VITRO STUDY OF 1-8, CINEOLE AGAINST THREE VIRULENT FUNGI RESPONSIBLE FOR POST-HARVEST CITRUS DISEASES	Nour El Houda Tahiri	Laboratory of Botany, Biotechnology and Plant Protection, Faculty of Sciences, Ibn Tofail University, Kenetra , Morocco Laboratory of Physiology, Pharmacology and Environmental Health, Faculty of Sciences Dhar El Mahraz, P.O.Box 1796 Atlas, Sidi Mohamad Ben Abdellah University, Fez 30000, Morocco
	Hamza Saghrouchni	Department of Biotechnology, Institute of natural and applied sciences, Çukurova University, Adana, Turkey
	Noureddine Hamamouch	Laboratory of Physiology, Pharmacology and Environmental Health, Faculty of Sciences Dhar El Mahraz, P.O.Box 1796 Atlas, Sidi Mohamad Ben Abdellah University, Fez 30000, Morocco
	Lrhorfi Lalla Aicha	Laboratory of Botany, Biotechnology and Plant Protection, Faculty of Sciences, Ibn Tofail University, Kenetra , Morocco
	Lyoussi Badiaa	Laboratory of Physiology, Pharmacology and Environmental Health, Faculty of Sciences Dhar El Mahraz, P.O.Box 1796 Atlas, Sidi Mohamad Ben Abdellah University, Fez 30000, Morocco
ETUDE DE L'EFFET COMBINE DE L'HUILE ESSENTIELLE DE THYMUS SATUREIODES, L'ACTIVITE DE L'EAU ET LA TEMPERATURE SUR LA CROISSANCE FONGIQUE ET LA PRODUCTION DE L'OCHRATOXINE A PAR LA SOUCHE ASPERGILLUS.S2	TOURABI Meryem	laboratoire des Substances Naturelles, Pharmacologie, Environnement, Modélisation, Santé & Qualité de Vie (SNAMOPEQ). Faculté des Sciences Dhar Mahraz, Université sidi Mohammed ben Abdellah, Fès, Maroc
	NOUIOURA Ghizlane	laboratoire des Substances Naturelles, Pharmacologie, Environnement, Modélisation, Santé & Qualité de Vie (SNAMOPEQ). Faculté des Sciences Dhar Mahraz, Université sidi Mohammed ben Abdellah, Fès, Maroc
	HAJJAJI Abdelouahed	Laboratoire d'Agroalimentaire et Sécurité Sanitaire des Aliments, Faculté des Sciences Dhar Mahraz, Université sidi Mohammed ben Abdellah, Fès, Maroc
	HALOTI Said	Laboratoire de L'écologie Fonctionnelle et Environnement, Faculté des Sciences et Techniques, Université sidi Mohammed ben Abdellah, Fès, Maroc
	DERWICH El Houssine	laboratoire des Substances Naturelles, Pharmacologie, Environnement, Modélisation, Santé & Qualité de Vie (SNAMOPEQ). Faculté des Sciences Dhar Mahraz, Université sidi Mohammed ben Abdellah, Fès, Maroc



SELECTION ET DOMESTICATION DES PLANTES SPONTANNEES DE LA REGION DE L'ORIENTAL EN VUE DE LEUR INTEGRATION DANS LE CORTEGE DE PLANTES D'ORNEMENT	Dr ATALLAH Mihad	Département de biologie-laboratoire biologie des plantes et microorganismes, Université Mohammed premier, Oujda, Morocco
	KOUDANE Noureddine	Département de biologie-laboratoire biologie des plantes et microorganismes, Université Mohammed premier, Oujda, Morocco
DIVERSITY OF "BELDI" ALMOND FROM MOROCCAN SEEDLINGS TREES: FRUIT PHYSICAL TRAITS AND OIL QUALITY	Dr. Souhayla Kodad	Laboratory of Agricultural Production Improvement, Biotechnology and Environment LAPABE, Faculty of Sciences, Mohammed Premier University, Oujda, Morocco
	Dr. Reda Melhaoui	Laboratory of Agricultural Production Improvement, Biotechnology and Environment LAPABE, Faculty of Sciences, Mohammed Premier University, Oujda, Morocco
	Dr. Nadia Houmy	Laboratory of Agricultural Production Improvement, Biotechnology and Environment LAPABE, Faculty of Sciences, Mohammed Premier University, Oujda, Morocco
	Prof. Dr Hana Serghini-Caid	Laboratory of Agricultural Production Improvement, Biotechnology and Environment LAPABE, Faculty of Sciences, Mohammed Premier University, Oujda, Morocco
	Prof. Dr. Ahmed Elamrani	Laboratory of Agricultural Production Improvement, Biotechnology and Environment LAPABE, Faculty of Sciences, Mohammed Premier University, Oujda, Morocco
	Prof. Dr. Malika Abid	Laboratory of Agricultural Production Improvement, Biotechnology and Environment LAPABE, Faculty of Sciences, Mohammed Premier University, Oujda, Morocco
	Prof. Dr. Aatika Mihamou	Laboratory of Agricultural Production Improvement, Biotechnology and Environment LAPABE, Faculty of Sciences, Mohammed Premier University, Oujda, Morocco
ELECTROCHEMICAL DEGRADATION OF AN ANIONIC DYE SOLUTION BY ANODIC OXIDATION PROCESS	Fatima Ezzahra Titchou	Physical Chemistry and Environment Team, Faculty of Science, Ibn Zohr University, PO 8106 - Dakhla District, Agadir, Morocco
	Dr. Hicham Zazou	Physical Chemistry and Environment Team, Faculty of Science, Ibn Zohr University, PO 8106 - Dakhla District, Agadir, Morocco
	Hanane Afanga	Physical Chemistry and Environment Team, Faculty of Science, Ibn Zohr University, PO 8106 - Dakhla District, Agadir, Morocco
	Jamila El Gaayda	Physical Chemistry and Environment Team, Faculty of Science, Ibn Zohr University, PO 8106 - Dakhla District, Agadir, Morocco
	Prof. Dr. Rachid Ait Akbour	Physical Chemistry and Environment Team, Faculty of Science, Ibn Zohr University, PO 8106 - Dakhla District, Agadir, Morocco
	Prof. Dr. Mohamed Hamdani	Physical Chemistry and Environment Team, Faculty of Science, Ibn Zohr University, PO 8106 - Dakhla District, Agadir, Morocco
PRINCIPL COMPONENT ANALYSIS FOR INVESTIGATION OF RELATIONSHIP BETWEEN CHILDREN'S ASTHMA AND AMBIENT AIR POLLUTION	Prof. ABROUKI Younes	Mohammed V University in Rabat, Faculty of Sciences of Rabat, Rabat, Morocco
	Dr. ANOUZLA Abdelkader	University of Hassan II - Casablanca, FSTM Mohammedia, Morocco
	Prof. LOUKIL Hayat	University of Hassan II - Casablanca, FSTM Mohammedia, Morocco



SESSION-2 HALL-1

29.01.2021

Discipline: Physics Engineering - Mathematics & Computer Sciences

	Moroccan Time : 11 : 30 - 13 : 30
	Ankara Time : 13 : 30 - 15 : 30

Moderator: Prof. Dr. Hicham Bouali & Prof. Dr. Kada A. Meradi

MODELISATION DE L'INCERTITUDE DE POSITION DU TERMINAL D'UN SYSTEME ARTICULE AVEC JEU, FORME DE DEUX SEGMENTS	Bouhamza Abdelkader	Ecole Nationale des Sciences Appliquées – Université Ibn Zohr – Agadir - Maroc
	Outemsa Omar	Ecole Nationale des Sciences Appliquées – Université Ibn Zohr – Agadir - Maroc
	EL Farissi Omar	Ecole Nationale des Sciences Appliquées – Université Ibn Zohr – Agadir - Maroc
	EL Minor Hassan	Ecole Nationale des Sciences Appliquées – Université Ibn Zohr – Agadir - Maroc
AIR COOLING OF PHOTOVOLTAIC PANELS USING HEAT SINKS	A. Bria	Mohammed First University -Faculty of Science-Mechanical & Energetics Laboratory -Oujda
	D. Chaatouf	Mohammed First University -Faculty of Science-Mechanical & Energetics Laboratory -Oujda
	M. Salhi	Mohammed First University -Faculty of Science-Mechanical & Energetics Laboratory -Oujda
	B. Raillani	Mohammed First University -Faculty of Science-Mechanical & Energetics Laboratory -Oujda
	S. Amraqui	Mohammed First University -Faculty of Science-Mechanical & Energetics Laboratory -Oujda
	A. Mezrhab	Mohammed First University -Faculty of Science-Mechanical & Energetics Laboratory -Oujda
NEW APPROACH FOR THE EVALUATION OF THE RELIABILITY AND DAMAGE OF THE LIFTING WIRE ROPE	Doc. Dr. BASSIR Youssef	Hassan II University, Condensed Matter Physics Laboratory, Faculty of Sciences Ben M'Sik
	Prof. Dr. Achraf Wahid	Hassan II University, Condensed Matter Physics Laboratory, Faculty of Sciences Ben M'Sik
	Prof. Dr. Abdelkarim Kartouni	Hassan II University, Condensed Matter Physics Laboratory, Faculty of Sciences Ben M'Sik
	Prof. Dr. Mohamed Elghorba	Hassan II University, aLaboratory of Control and Mechanical Characterization of Materials and Structures, National Higher School of Electricity and Mechanics
TRANSPORT PHENOMENA IN AMORPHOUS THIN FILMS AT VERY LOW TEMPERATURES	Abdellatif el oujdi	Laboratory of Energetic Engineering and Materials, Faculty of Sciences Ibn Tofail, Kenitra, Morocco
	Abdelhamid El kaaouachi	MPAC group, Faculty of Sciences, BP 8106, 80000, Agadir, Morocco
	Adil Echchelh	Laboratory of Energetic Engineering and Materials, Faculty of Sciences Ibn Tofail, Kenitra, Morocco
THE APPLICATION OF A NEW NUMERICAL METHODOLOGY TO ASSESS PIPELINE FAILURES	S. MONTASSIR	Department of Mechanical Engineering, Faculty of Science and Technology, USMBA, Fez, Morocco
	Prof. H. Moustabchir	Laboratory of Systems Engineering and Applications, National School of Applied Sciences of Fez, USMBA, Fez, Morocco
	Prof. A.Elkhalfi	Department of Mechanical Engineering, Faculty of Science and Technology, USMBA, Fez, Morocco
CONCEPTION D'UN CAPTEUR DE GAZ HAUTEMENT SENSIBLE BASE SUR L'ETAT DE TMM DANS UN CRISTAL	A. Guerinik	Département de Physique, Faculté des Sciences Exactes, Université Djillali Liabes, Sidi Bel Abbes, 22000 Algérie
	F. Tayeboun	Université Djillali Liabes, Sidi Bel Abbes, 22000 Algérie



PHOTONIQUE UNIDIMENSIONNEL	K.A. Meradi	Institut des Sciences et de Technologie, Université d'Ain Temouchent, BP 284 RP 46000, Algérie
RESONANCE AND CANCELLATION PHENOMENA OF SIMPLY SUPPORTED PARTIALLY CLAMPED BEAMS: APPLICATION TO BRIDGES WITH BALLASTED TRACK	S. EL hankari	Faculty of Science and Technology at Tangier, Department of Physics, Box 416, 90 000 Tangier, Morocco
	R. Dkiouak	Faculty of Science and Technology at Tangier, Department of Physics, Box 416, 90 000 Tangier, Morocco
	K. Roky	Faculty of Science and Technology at Tangier, Department of Physics, Box 416, 90 000 Tangier, Morocco
AN EMBEDDED SYSTEM TO NOTIFY THE COMPANY ABOUT FRAUD OR FUEL LEAKAGE AND MAKE A MONTHLY STATISTIC OF FUEL CONSUMPTION	Hajar SNOUSSI	Electrical Engineering and Maintenance laboratory, High School of Technology BP. 473, Mohammed First University, Oujda, Morocco
	Ilham BENDAOU	Electrical Engineering laboratory, National Institute of Applied Sciences Hauts the France
	Ismail NASRI	Electrical Engineering and Maintenance laboratory, High School of Technology BP. 473, Mohammed First University, Oujda, Morocco
	Mohammed KARROUCHI	Electrical Engineering and Maintenance laboratory, High School of Technology BP. 473, Mohammed First University, Oujda, Morocco
	Prof. Dr. Kamal KASSMI	Electrical Engineering and Maintenance laboratory, High School of Technology BP. 473, Mohammed First University, Oujda, Morocco
	Prof. Dr. Abdelhafid MESSAOUDI	Energy, Embedded Systems and Information Processing laboratory, National School of Applied Sciences, Mohammed First University, Oujda, Morocco



Meeting ID: 832 2882 8851/Passcode: 882332

SESSION-2 HALL-2

29.01.2021

Discipline: Medical Sciences – Biology & Chemistry



Moroccan Time : 11 : 30 - 13 : 30



Ankara Time : 13 : 30 - 15 : 30

Moderator: Prof. Dr. Ali Berraouan

ÉTUDES INTÉGRÉES 3D-QSAR, DOCKING MOLÉCULAIRE ET DE SIMULATION DE LA DYNAMIQUE MOLÉCULAIRE SUR DES DÉRIVÉS À BASE DE 1,2,3-TRIAZOLE POUR LA CONCEPTION DE NOUVEAUX INHIBITEURS DE L'ACÉTYLCHOLINESTÉRISE POUR LA MALADIE D'ALZHEIMER	Mr. Khalil El Khatabi	Laboratoire de chimie moléculaire et de substances naturelles, Faculté des sciences, Université Moulay Ismail, Meknès, Maroc
	Prof. Dr. Mohammed Aziz Ajana	laboratoire de chimie moléculaire et de substances naturelles, Faculté des sciences, Université Moulay Ismail, Meknès, Maroc
MISE À JOUR DES SYSTÈMES DE DÉTECTION D'INTRUSION POUR IoT PAR APPRENTISSAGE EN PROFONDEUR	Idriss Idrissi	Laboratoire de recherche MATSI, ESTO, Université Mohamed Premier, Oujda, Maroc
THE IN VITRO AND IN VIVO INHIBITORY ACTIVITY OF MOROCCAN NIGELLA SATIVA EXTRACTS ON PANCREATIC α -AMYLASE	DALLI Mohammed	Laboratoire de Bio-ressources, Biotechnologie, Ethnopharmacologie et santé, Equipe de physiologie et Ethnopharmacologie, Université Mohamed Premier, Faculté des Sciences, Bloc de recherche, 1ème étage, 60 000 Oujda –Maroc
	DAOUDI Nour Elhouda	Laboratoire de Bio-ressources, Biotechnologie, Ethnopharmacologie et santé, Equipe de physiologie et Ethnopharmacologie, Université Mohamed Premier, Faculté des Sciences, Bloc de recherche, 1ème étage, 60 000 Oujda –Maroc
	AZIZI Salah-eddine	Laboratoire de Bio-ressources, Biotechnologie, Ethnopharmacologie et santé, Equipe de physiologie et Ethnopharmacologie, Université Mohamed Premier, Faculté des Sciences, Bloc de recherche, 1ème étage, 60 000 Oujda –Maroc
	KANDSI Fahd	Laboratoire de Bio-ressources, Biotechnologie, Ethnopharmacologie et santé, Equipe de physiologie et Ethnopharmacologie, Université Mohamed Premier, Faculté des Sciences, Bloc de recherche, 1ème étage, 60 000 Oujda –Maroc
	Bnouham Mohammed	Laboratoire de Bio-ressources, Biotechnologie, Ethnopharmacologie et santé, Equipe de physiologie et Ethnopharmacologie, Université Mohamed Premier, Faculté des Sciences, Bloc de recherche, 1ème étage, 60 000 Oujda –Maroc
	Gseyra Nadia	Laboratoire de Bio-ressources, Biotechnologie, Ethnopharmacologie et santé, Equipe de physiologie et Ethnopharmacologie, Université Mohamed Premier, Faculté des Sciences, Bloc de recherche, 1ème étage, 60 000 Oujda –Maroc
	COMPOSITION PHYTOCHIMIQUE, TOXICITE AIGÛE ET EFFET ANTIOXYDANT DES DIFFERENTS EXTRAITS DE DYSPHANIA AMBROSIOIDESE L.	KANDSI Fahd
DALLI Mohammed		Laboratoire de Bio-ressources, Biotechnologie, Ethnopharmacologie et santé, Equipe de physiologie et Ethnopharmacologie, Université Mohamed Premier, Faculté des Sciences, Bloc de recherche, 1ème étage, 60 000 Oujda –Maroc



	LAFDIL Fatima Zahra	Laboratoire de Bio-ressources, Biotechnologie, Ethnopharmacologie et santé, Equipe de physiologie et Ethnopharmacologie, Université Mohamed Premier, Faculté des Sciences, Bloc de recherche, 1ème étage, 60 000 Oujda –Maroc
	SEDDOQI Sara	Laboratoire de Bio-ressources, Biotechnologie, Ethnopharmacologie et santé, Equipe de physiologie et Ethnopharmacologie, Université Mohamed Premier, Faculté des Sciences, Bloc de recherche, 1ème étage, 60 000 Oujda –Maroc
	AZIZI Salah-Eddine	Laboratoire de Bio-ressources, Biotechnologie, Ethnopharmacologie et santé, Equipe de physiologie et Ethnopharmacologie, Université Mohamed Premier, Faculté des Sciences, Bloc de recherche, 1ème étage, 60 000 Oujda –Maroc
	GSEYRA Nadia	Laboratoire de Bio-ressources, Biotechnologie, Ethnopharmacologie et santé, Equipe de physiologie et Ethnopharmacologie, Université Mohamed Premier, Faculté des Sciences, Bloc de recherche, 1ème étage, 60 000 Oujda –Maroc
Conception d'un bio-capteur à plasmon de surface des cellules cancéreuses	K.A.Meradi	Institute of Technology University of Ain Temouchent, 46000, Algeria / Laboratory of Study of Materials & Optical Instrumentations (LEMIO) University Djillali Liabes, Sidi-Bel-Abbes 22000, Algeria
	F. Tayeboun	University Djillali Liabes Sidi-Bel-Abbes 22000, Algeria
	A.Guerinik	University Djillali Liabes Sidi-Bel-Abbes 22000, Algeria
COMPARATIVE GENOMICS AND HIV ORIGINS	Pr. Moheddine MOUMNI	Université Moulay Ismail, Faculté des Sciences, Biologie
	M.Sc. Salsabil FELLOUSSI	Université Moulay Ismail, Faculté des Sciences, Bioinformatique
EFFET DE L'ARTEMISIA HERBA-ALBA ET THYMUS SSP SUR PSEUDOMONAS AERUGINOSA RESISTANT A LA CEFTAZIDIME	AZGHAR Ali	Laboratoire de Microbiologie, centre hospitalier universitaire, Université Mohamed premier, Faculté des sciences, Oujda, Maroc
	DALLI Mohammed	Laboratoire de Bioressources, Biotechnologie, Ethnopharmacologie et santé, Equipe de physiologie et Ethnopharmacologie, Université Mohamed premier, Faculté des sciences, Oujda, Maroc
	TAHRI Maroua	Laboratoire de Microbiologie, centre hospitalier universitaire, Université Mohamed premier, Faculté des sciences, Oujda, Maroc
	MALEB Adil	Laboratoire de Microbiologie, centre hospitalier universitaire, Université Mohamed premier, Faculté des sciences, Oujda, Maroc



Meeting ID: 832 2882 8851/Passcode: 882332

SESSION-2 HALL-3

29.01.2021

Discipline: Medical Sciences – Biology & Chemistry



Moroccan Time : 11 : 30 - 13 : 30



Ankara Time : 13 : 30 - 15 : 30

Moderator: Prof. Dr. Allal Challioui

THEORETICAL STUDY OF NEUROTRANSMITTERS (DOPAMINE AND ITS DERIVATIVES) INCLUDED IN PARKINSON'S AND ALZHEIMER'S DISEASES: STRUCTURAL OPTIMISATION AND REACTIVITY STUDY	Abdallah Imjjad	Chemistry-Physics & environment team (ECPE), Ibn Zohr University, Faculty of Science, Department of Chemistry, DAKHLA BP 8106, Agadir, Morocco
	Khalid Abbiche	Chemistry-Physics & environment team (ECPE), Ibn Zohr University, Faculty of Science, Department of Chemistry, DAKHLA BP 8106, Agadir, Morocco Polydisciplinary Faculty of Taroudant, Ibn Zohr University, Hay El Mohammadi (Lastah), BP. 271, 83000, Taroudant, Morocco
	Asma Skotta	Chemistry-Physics & environment team (ECPE), Ibn Zohr University, Faculty of Science, Department of Chemistry, DAKHLA BP 8106, Agadir, Morocco
	Abdallah El Assri	Chemistry-Physics & environment team (ECPE), Ibn Zohr University, Faculty of Science, Department of Chemistry, DAKHLA BP 8106, Agadir, Morocco
	Mustapha Hilali	Chemistry-Physics & environment team (ECPE), Ibn Zohr University, Faculty of Science, Department of Chemistry, DAKHLA BP 8106, Agadir, Morocco
APPLICATION OF IMIDAZOLE DERIVATIVES AS CORROSION INHIBITORS FOR COPPER IN ACIDIC MEDIUM: EXPERIMENTAL AND THEORETICAL STUDIES	A. EL-ASRI	Applied Chemistry-Physics Team, Faculty of Sciences, IBN ZOHR University, B.P.8106, Cite Dakhla, Agadir, Morocco
	M. RGUI TI	Applied Chemistry-Physics Team, Faculty of Sciences, IBN ZOHR University, B.P.8106, Cite Dakhla, Agadir, Morocco
	R. OUKHRIB	Applied Chemistry-Physics Team, Faculty of Sciences, IBN ZOHR University, B.P.8106, Cite Dakhla, Agadir, Morocco
	A. JMIAI	Applied Chemistry-Physics Team, Faculty of Sciences, IBN ZOHR University, B.P.8106, Cite Dakhla, Agadir, Morocco
	A. SKOUTTA	Applied Chemistry-Physics Team, Faculty of Sciences, IBN ZOHR University, B.P.8106, Cite Dakhla, Agadir, Morocco
	A. IMJAD	Applied Chemistry-Physics Team, Faculty of Sciences, IBN ZOHR University, B.P.8106, Cite Dakhla, Agadir, Morocco
	M. HILALI	Applied Chemistry-Physics Team, Faculty of Sciences, IBN ZOHR University, B.P.8106, Cite Dakhla, Agadir, Morocco
	L. BAZI	Industrial and logistic laboratory, Sup MTI, Rabat, Morocco
	H. BOURZI	Applied Chemistry-Physics Team, Faculty of Sciences, IBN ZOHR University, B.P.8106, Cite Dakhla, Agadir, Morocco
S. EL ISSAMI	Applied Chemistry-Physics Team, Faculty of Sciences, IBN ZOHR University, B.P.8106, Cite Dakhla, Agadir, Morocco	
STUDY OF THE CATALYTIC ACTIVITY OF THE COMPOUNDS HYDROTALCITE TREATED BY MICROWAVE IN THE SELF-CONDENSATION OF ACETONE	Jamal Houssaini	LCBAE, Laboratory of Chemistry and Biology Applied to the Environment, Research Team "Materials and Applied Catalysis", Chemistry Department, Moulay Ismail University, Meknes, BP. 11201 Zitoune, Meknes-50000, Morocco
	Hamid Ziyat	LCBAE, Laboratory of Chemistry and Biology Applied to the Environment, Research Team "Materials and Applied Catalysis", Chemistry Department, Moulay Ismail University, Meknes, BP. 11201 Zitoune, Meknes-50000, Morocco
	Mohammed Naciri Bennani	LCBAE, Laboratory of Chemistry and Biology Applied to the Environment, Research Team "Materials and Applied Catalysis", Chemistry Department, Moulay Ismail University, Meknes, BP. 11201 Zitoune, Meknes-50000, Morocco
DERMINATION OF THE CHEMICAL PROFILE OF	Imane ZIANI	LCAE Laboratory, Physical Chemistry of the Natural Resources and Environment Team, University Mohammed Premier, BP 717, 60000,





<p>ROSMARY EXTRACTS FROM THE TWO FOREST ZEKKARA AND AIN KERMA IN THE EASTERN REGION OF MOROCCO</p>		Oujda, Morocco
	Hamza BOUAKLINE	LCAE Laboratory, Physical Chemistry of the Natural Resources and Environment Team, University Mohammed Premier, BP 717, 60000, Oujda, Morocco
	Mohamed TABIBI	LCAE Laboratory, Physical Chemistry of the Natural Resources and Environment Team, University Mohammed Premier, BP 717, 60000, Oujda, Morocco
	Abdesselam TAHANI	LCAE Laboratory, Physical Chemistry of the Natural Resources and Environment Team, University Mohammed Premier, BP 717, 60000, Oujda, Morocco
	Ali EL BACHIRI	LCAE Laboratory, Physical Chemistry of the Natural Resources and Environment Team, University Mohammed Premier, BP 717, 60000, Oujda, Morocco
<p>QSAR ANALYSIS OF NOVEL TRIAZOLE DERIVATIVES AS ANTIFUNGAL AGENTS USING COMFA, COMSIA AND MOLECULAR DOCKING METHODS</p>	Soukaina Bouamrane	Molecular Chemistry and Natural Substances Laboratory, Faculty of Science, Moulay Ismail University of Meknes, Morocco
	Ayoub Khaldan	Molecular Chemistry and Natural Substances Laboratory, Faculty of Science, Moulay Ismail University of Meknes, Morocco
	Hamid Maghat	Molecular Chemistry and Natural Substances Laboratory, Faculty of Science, Moulay Ismail University of Meknes, Morocco
	Mohammed Aziz Ajana	Molecular Chemistry and Natural Substances Laboratory, Faculty of Science, Moulay Ismail University of Meknes, Morocco
	Mohammed Bouachrine	Molecular Chemistry and Natural Substances Laboratory, Faculty of Science, Moulay Ismail University of Meknes, Morocco EST Khenifra, Sultan Moulay Sliman University, Benimellal, Morocco
	Tahar Lakhlifi	Molecular Chemistry and Natural Substances Laboratory, Faculty of Science, Moulay Ismail University of Meknes, Morocco
<p>ELECTROSYNTHESIS OF STRICTLY α-α' POLYTHIOPHENE CHAINS ON OXIDIZABLE METALS IN AQUEOUS MEDIA OF CONCENTRATED ACIDS</p>	Dr. M. Bouabdallaoui	LCM Laboratory, Faculty of Sciences, Mohammed 1st University, Oujda, Morocco
	Dr. Z. Aouzal	LCM Laboratory, Faculty of Sciences, Mohammed 1st University, Oujda, Morocco
	Dr. A. El Guerraf	LCM Laboratory, Faculty of Sciences, Mohammed 1st University, Oujda, Morocco
	Prof. M. Bazzaoui	LME Laboratory, Faculty of Sciences, Ibn Zohr University, Agadir, Morocco
	Prof. E.A. Bazzaoui	LCM Laboratory, Faculty of Sciences, Mohammed 1st University, Oujda, Morocco
<p>FAST AND HIGHLY EFFICIENT REMOVAL OF OG DYE IN WASTEWATER USING A SUPERB ECO-FRIENDLY BIOCOMPOSITE</p>	Hamza Ighnih	Physical Chemistry and Environment Team (ECPE), Faculty of Sciences, Ibn Zohr University, Agadir, Morocco
	Abdelghani Hsini	Laboratoire Matériaux et Environnement (LME), Faculty of Sciences, Ibn Zohr University, Agadir, Morocco
	Abelaziz Imghrane	Laboratoire Matériaux et Environnement (LME), Faculty of Sciences, Ibn Zohr University, Agadir, Morocco
	Mohamed Laabd	Laboratoire Matériaux et Environnement (LME), Faculty of Sciences, Ibn Zohr University, Agadir, Morocco
	Abdelaziz Ait Addi	Physical Chemistry and Environment Team (ECPE), Faculty of Sciences, Ibn Zohr University, Agadir, Morocco
	Abdallah Albourine	Laboratoire Matériaux et Environnement (LME), Faculty of Sciences, Ibn Zohr University, Agadir, Morocco
<p>PHYTOCHEMICAL STUDY OF ROASTED/UNROASTED ARGAN OILS AND THEIR EFFECT ON INTESTINAL GLUCOSE ABSORPTION ACTIVITY IN SITU</p>	Nour Elhouda Daoudi	Laboratory of Bioresources, Biotechnologies, Ethnopharmacology and Health. Faculty of Sciences Oujda
	Hassane Mekhfi	Laboratory of Bioresources, Biotechnologies, Ethnopharmacology and Health. Faculty of Sciences Oujda
	Mohammed Aziz	Laboratory of Bioresources, Biotechnologies, Ethnopharmacology and Health. Faculty of Sciences Oujda
	Abdelkhaleq Legssyer	Laboratory of Bioresources, Biotechnologies, Ethnopharmacology and Health. Faculty of Sciences Oujda
	Abderrahim Ziyat	Laboratory of Bioresources, Biotechnologies, Ethnopharmacology and Health. Faculty of Sciences Oujda
	Mohamed Bnouham	Laboratory of Bioresources, Biotechnologies, Ethnopharmacology and Health. Faculty of Sciences Oujda



SESSION-2 HALL-4

29.01.2021

Discipline: Environmental Sciences & Geolog

	Moroccan Time : 11 : 30 - 13 : 30
	Ankara Time : 13 : 30 - 15 : 30

Moderator: Prof. Dr. Fouad Dimane

LIGNIN AND VEGETABLE OIL BASED POLYURETHANE AS PROMISING COATING FOR CONTROLLED-RELEASE NPK FERTILIZERS	Abdelouahed El gharrak	Moroccan Foundation for Advanced Science, Innovation and Research (MASciR). Rabat Design, Rue Mohamed El Jazouli, Madinat Al Irfane 10100 Rabat. Morocco. Laboratoire de Matériaux, Catalyse et Valorisations des ressources naturelles, Faculté des Sciences et Techniques, Université Hassan II, Mohammedia B. P. 146, 20650, Morocco
	Younes Essamlali	Moroccan Foundation for Advanced Science, Innovation and Research (MASciR). Rabat Design, Rue Mohamed El Jazouli, Madinat Al Irfane 10100 Rabat. Morocco
	Mohamed Zahouily	Moroccan Foundation for Advanced Science, Innovation and Research (MASciR). Rabat Design, Rue Mohamed El Jazouli, Madinat Al Irfane 10100 Rabat. Morocco. Laboratoire de Matériaux, Catalyse et Valorisations des ressources naturelles, Faculté des Sciences et Techniques, Université Hassan II, Mohammedia B. P. 146, 20650, Morocco
NOVEL ENVIRONMENTALLY FRIENDLY SUPERABSORBENT HYDROGELS BASED ON SODIUM ALGINATE REINFORCED WITH CARBOXYLATED CELLULOSE NANOCRYSTALS: SYNTHESIS, CHARACTERIZATION AND STUDY OF THE SWELLING PROPERTIES	A.EL IDRISSE	Laboratory of Materials, Catalysis & Valorization of Natural Resources, Faculty of Sciences and Techniques Mohammedia, University Hassan II, Casablanca, Morocco MASciR Foundation, INANOTECH, VARENA Center, Rabat Design, Rue Mohamed El Jazouli, Madinat El Irfane 10100-Rabat, Morocco
	Y.ESSAMLALI	MASciR Foundation, INANOTECH, VARENA Center, Rabat Design, Rue Mohamed El Jazouli, Madinat El Irfane 10100-Rabat, Morocco
	M. ZAHOUILY	Laboratory of Materials, Catalysis & Valorization of Natural Resources, Faculty of Sciences and Techniques Mohammedia, University Hassan II, Casablanca, Morocco MASciR Foundation, INANOTECH, VARENA Center, Rabat Design, Rue Mohamed El Jazouli, Madinat El Irfane 10100-Rabat, Morocco
OPTIMISATION DES FACTEURS AGISSANT SUR LE PROCESSUS D'HD PAR MICRO-ONDE DE R. OFFICINALIS PAR PLANS DE SURFACE DE REPONSE	NOUIOURA Ghizlane	laboratoire des Substances Naturelles, Pharmacologie, Environnement, Modélisation, Santé & Qualité de Vie (SNAMOPEQ). Faculté des Sciences Dhar Mahraz, Université sidi Mohammed ben Abdellah, Fès, Maroc
	TOURABI Maryem	laboratoire des Substances Naturelles, Pharmacologie, Environnement, Modélisation, Santé & Qualité de Vie (SNAMOPEQ). Faculté des Sciences Dhar Mahraz, Université sidi Mohammed ben Abdellah, Fès, Maroc
	LOUASTE Bouchra	Laboratoire de biotechnologie, Faculté des Sciences Dhar Mahraz, Université sidi Mohammed ben Abdellah, Fès, Maroc
	DERWICH El houssine	laboratoire des Substances Naturelles, Pharmacologie, Environnement, Modélisation, Santé & Qualité de Vie (SNAMOPEQ). Faculté des Sciences Dhar Mahraz, Université sidi Mohammed ben Abdellah, Fès, Maroc
ARTIFICIAL NEURAL NETWORK APPLICATIONS IN ANALYSIS OF FORENSIC SCIENCE	Dr. K.R.Padma	Department of Biotechnology, Sri Padmavati Mahila Visva Vidyalayam (Women's) University, Tirupati, AP.
	K.R.Don	Department of Oral Pathology, Saveetha Dental College, Saveetha Institute of Medical and Technical Sciences, Saveetha University, Velappanchavadi, Chennai, Tamil Nadu, India



Meeting ID: 832 2882 8851/Passcode: 882332

RESPONSE OF FABA BEAN (VICIA FABA VAR. MINOR L.) AND WEEDS TO FOLIAR APPLICATION OF SORGHUM, OAT, AND RAPESEED WATER EXTRACTS COMBINED WITH LOWER HERBICIDE CORUM DOSE	Abdellatif Boutagayout	The Environment and Soil Microbiology Unit, Faculty of Sciences-Moulay Ismail University, B.P.11201 Zitoune, Meknes 50000, Morocco Department of Plant and Environment Protection, National School of Agriculture
	Laila Nassiri	The Environment and Soil Microbiology Unit, Faculty of Sciences-Moulay Ismail University, B.P.11201 Zitoune, Meknes 50000, Morocco
	El Houssine Bouiamrine	The Environment and Soil Microbiology Unit, Faculty of Sciences-Moulay Ismail University, B.P.11201 Zitoune, Meknes 50000, Morocco
	Saadia Belmalha	Ecole Nationale d'Agriculture de Meknès Route Haj Kaddour, BP S/40 - 50000 Meknès, Morocco
ENVIRONMENTAL IMPACT STUDY OF THE COVID-19 PANDEMIC DURING EMERGENCY LOCKDOWN	Prof. LOUKILI Hayat	University of Hassan II - Casablanca, FSTM Mohammedia, Morocco
	Dr. ANOUZLA Abdelkader	University of Hassan II - Casablanca, FSTM Mohammedia, Morocco
	Prof. ABROUKI Younes	Mohammed V University in Rabat, Faculty of Sciences of Rabat, Rabat, Morocco
IN VITRO EVALUATION OF THE ANTIFUNGAL ACTIVITY OF FORMULATIONS BASED ON RHASSOUL WITH OREGANO AND THYME ESSENTIAL OILS AGAINST PENICILLIUM SP	Hamid Ziyat	Laboratory of chemistry-Biology Applied to the Environment, Research team " Applied Materials and Catalyses " Chemistry Department, Faculty of Sciences, Moulay-Ismaïl University, BP. 11201 Zitoune, Meknes, Morocco
	Safae Allaoui	Laboratory of chemistry-Biology Applied to the Environment, Research team " Applied Materials and Catalyses " Chemistry Department, Faculty of Sciences, Moulay-Ismaïl University, BP. 11201 Zitoune, Meknes, Morocco
	Jamal houssaini	Laboratory of chemistry-Biology Applied to the Environment, Research team " Applied Materials and Catalyses " Chemistry Department, Faculty of Sciences, Moulay-Ismaïl University, BP. 11201 Zitoune, Meknes, Morocco
	Hassan Hajjaj	Laboratory of Plant Biotechnology and Molecular Biology, Applied Mycology Team, Faculty of Sciences, Moulay-Ismaïl University, BP. 11201 Zitoune, Meknes, Morocco
	Mohammed Naciri Bennani	Laboratory of chemistry-Biology Applied to the Environment, Research team " Applied Materials and Catalyses " Chemistry Department, Faculty of Sciences, Moulay-Ismaïl University, BP. 11201 Zitoune, Meknes, Morocco
STRUCTURAL SETTING OF THE ISLY BASIN (HORST BELT, NORTHEASTERN MOROCCO) FROM GRAVITY DATA ANALYSIS: HYDROLOGICAL IMPLICATIONS	Soufiane ZIANI	Laboratory of Applied Geosciences, Department of Geology, Faculty of Sciences, Mohammed 1st University, Oujda, Morocco
	Driss KHATTACH	Laboratory of Applied Geosciences, Department of Geology, Faculty of Sciences, Mohammed 1st University, Oujda, Morocco
	Jamila ABDERBI	Laboratory of Applied Geosciences, Department of Geology, Faculty of Sciences, Mohammed 1st University, Oujda, Morocco Regional Center for the Professions of Education and Training, Oujda, Morocco
	Nordine NOUAYTI	National School of Applied Sciences of Al Hoceima
MORPHOLOGICAL, MINERAL AND GEOCHEMICAL CHARACTERIZATION OF BENTONITE DEPOSIT PROSPECTION IN THE EXTERNAL DOMAIN OF THE EASTERN RIFAIN CHAIN, MOROCCO	Hanane Ait Hmeid	Laboratory Observatory of the Marchica Lagoon of Nador and Limiting Regions (OLMAN-RL), Multidisciplinary Faculty of Nador, Mohamed 1st University, 60700 Nador, Morocco
	Mustapha Akodad	Laboratory Observatory of the Marchica Lagoon of Nador and Limiting Regions (OLMAN-RL), Multidisciplinary Faculty of Nador, Mohamed 1st University, 60700 Nador, Morocco
	Mourad Baghour	Laboratory Observatory of the Marchica Lagoon of Nador and Limiting Regions (OLMAN-RL), Multidisciplinary Faculty of Nador, Mohamed 1st University, 60700 Nador, Morocco
	Abdelmajid Moumen	Laboratory Observatory of the Marchica Lagoon of Nador and Limiting Regions (OLMAN-RL), Multidisciplinary Faculty of Nador, Mohamed 1st University, 60700 Nador, Morocco
	Ali Skalli	Laboratory Observatory of the Marchica Lagoon of Nador and Limiting Regions (OLMAN-RL), Multidisciplinary Faculty of Nador, Mohamed 1st University, 60700 Nador, Morocco
	Ghizlane Azizi	Laboratory Observatory of the Marchica Lagoon of Nador and Limiting Regions (OLMAN-RL), Multidisciplinary Faculty of Nador, Mohamed 1st University, 60700 Nador, Morocco



Meeting ID: 832 2882 8851/Passcode: 882332

SESSION-3 HALL-1

29.01.2021

Discipline: Physics Engineering - Mathematics & Computer Sciences



Moroccan Time : 14 : 00 - 16 : 00



Ankara Time : 16 : 00 - 18 : 00

Moderator: Assoc. Prof. Dr. Basak HANEDAN

WELDING FAULTS AND CAUSES OF PLASTICS JOINING WITH FRICTION STIR WELDING	Mustafa Kemal BİLİCİ	Marmara Üniversitesi Uygulamalı Bilimler Yüksekokulu
INVESTIGATION OF WELDING TOOL VARIABLES IN JOINING OF POLYETHYLENE BY FRICTION STIR WELDING METHOD	Mustafa Kemal BİLİCİ	Marmara Üniversitesi Uygulamalı Bilimler Yüksekokulu
THE ANDON SYSTEM DESIGN FOR FACTORIES	Assistant Professor Uğur GÜREL	Eskişehir Osmangazi University Faculty of Engineering and Architecture Computer Engineering Department
NUMERICAL ANALYSIS OF THE EFFECTS OF FLOW FIELD DESIGNS ON PEM FUEL CELL PERFORMANCE	Prof. Dr. Hanbey HAZAR	Fırat Üniversitesi, Teknoloji Fakültesi, Otomotiv Mühendisliği Bölümü
	Mustafa YILMAZ	Fırat Üniversitesi, Teknoloji Fakültesi, Otomotiv Mühendisliği Bölümü
	Arş. Gör. Hüseyin SEVİNÇ	Fırat Üniversitesi, Teknoloji Fakültesi, Otomotiv Mühendisliği Bölümü
VASER LIPOSUCTION	Günel Bayramlı	Azərbaycan Tibb Universiteti, II Cərrahi xəstəliklər kafedrası, Bakı, Azərbaycan
	Eldar Əliyev	Azərbaycan Tibb Universiteti, II Cərrahi xəstəliklər kafedrası, Bakı, Azərbaycan
INVESTIGATION OF THE EFFECTS OF FLOW FIELD DESIGNS ON WATER ACTIVITY IN PEM FUEL CELLS	Prof. Dr. Hanbey HAZAR	Fırat Üniversitesi, Teknoloji Fakültesi, Otomotiv Mühendisliği Bölümü
	Mustafa YILMAZ	Fırat Üniversitesi, Teknoloji Fakültesi, Otomotiv Mühendisliği Bölümü
	Arş. Gör. Hüseyin SEVİNÇ	Fırat Üniversitesi, Teknoloji Fakültesi, Otomotiv Mühendisliği Bölümü





Meeting ID: 832 2882 8851/Passcode: 882332

SESSION-3 HALL-2

29.01.2021

Discipline: Medical Sciences – Biology & Chemistry

	Moroccan Time : 14 : 00 - 16 : 00
	Ankara Time : 16 : 00 - 18 : 00

Moderator: Dr. Mohamed Ramdani

ELECTROCHEMICALLY SYNTHETIZED POLYPYRROLE AND ITS BEHAVIOR AS AN ORGANIC SENSOR TOWARDS AMMONIA VAPORS	Abdelqader EL GUERRAF	Equipe d'Electrochimie, Laboratoire de Chimie Appliquée et Environnement (LCAE), Faculté des Sciences, Université Mohammed 1er, 60 000 Oujda, Morocco
	Sana Ben JADI	University of Health Sciences, Gülhane Faculty of Pharmacy, Department of Analytical Chemistry, Ankara, Turkey
	Nurgul K. BAKIRHAN	University of Health Sciences, Gülhane Faculty of Pharmacy, Department of Analytical Chemistry, Ankara, Turkey
	Sibel A. OZKAN	Ankara University, Faculty of Pharmacy, Department of Analytical Chemistry, Ankara, Turkey
	Mohammed BAZZAOUI	Laboratoire Matériaux et Environnement, Faculté des Sciences, Université Ibn Zohr, 80 000 Agadir, Maroc
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SESSION-3 HALL-3

29.01.2021

Discipline: Environmental Sciences & Geology



Moroccan Time : 14 : 00 - 16 : 00



Ankara Time : 16 : 00 - 18 : 00

Moderator: Prof. Dr. Zakaria TAHRI

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HOW TO MITIGATE THE PANDEMIC RISK FROM ISLAMIC PERSPECTIVE IN THE CURRENT SITUATION

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ABSTRACT

Health is a blessing of Allah. Therefore it is the responsibility of every human being to protect it. Allah Almighty has revealed every disease, as well as its cure. Prophet Muhammad (SAW) said that Allah has sent down a cure for every disease. Pandemic is a disease that affects a large number of people in a community, population or a region. It can be limited to one place and can spread to other places, affecting a large number of people. Pandemic sometimes overwhelms an area which increases the number of deaths. Some diseases are transmitted from one person to another. Most of the pandemic diseases are contagious. Islam advocates the prevention of diseases. Hadiths prove that some diseases are contagious so it is necessary to be careful. The descriptive and analytical methodology will be used in this research to attain the result and recommendations. Islamic teachings have a set of spiritual and apparent precautions and preventions to lessen the pandemic. It is concluded that during the pandemic, praying for health and protection is essential for peace of mind and health. The Holy Quran and Hadith mentioned many prayers which are better to recite in case of pandemics. Ablution five times a day can protect one against diseases. To get rid of necessities before going to bed, to take a bath after sexual intercourse, to trim hair and nails, to clean the mouth, nose and ears, wearing clean clothes and washing hands are an integral part in Islam and the principles of modern hygiene also encourage it.

Keywords: COVID-19, infectious diseases, causes, precautions, Islamic teachings

FRACTALS IN MUSICAL NOTATION FOR AUDIO ENCRYPTION

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ABSTRACT

Mathematics always tried via different structures to establish a model as a characterisation of any process through finding a liaison binding objects together. It's almost trivial that in order to describe objects in nature Euclidean geometry is more adequate but when looking closely in depths into what looks to be simple, details disclose otherwise, hence the need for another structure.

Cantor always saw the obligation in criticizing the basic mathematical concepts like the euclidean model, Mandelbrot and Peano did too making fractal geometry a more adopted notion. In this work, fractals are used as a pseudo random number generator (PRNG) that is then turned into an integer inside the machine up onto binary and then ASCII code. This last sequence will be transformed into a morse-like code which is a shift-transformation known as a dyadic function in symbolic dynamics that is chaotic according to the definition of R.Devaney.

With the help of a table put together by a correspondence between musical notes and morse code, making each dot or space or slash stand for a certain music note, this code is being transcribed into a musical piece, which will be interpreted on an audio as the final encryption cipher. Thus, audio messages can be converted into encrypted audio outputs and sent safely, and this by taking the input that was a fractal as a retrieved sequence from a musical fraction that is itself a transcription of a certain audio which is the clear audio message.

Keywords: Fractals, chaos, PRNG, musical notation, audio encryption.

STRUCTURAL SETTING OF THE ISLY BASIN (HORST BELT, NORTHEASTERN MOROCCO) FROM GRAVITY DATA ANALYSIS: HYDROLOGICAL IMPLICATIONS

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ABSTRACT

The aim of the present study, which is based on the interpretation of available gravimetric data, is to improve our knowledge of the structural context of the Isly basin (North-Eastern Morocco) by delineating the major geological structures and geological contacts. Various and complementary filtering techniques (vertical gradient, horizontal gradient, upward continuation, Euler deconvolution) were applied to the gravimetric map. A multiscale analysis of gravimetric lineaments allows generating a structural map that visualizes the lineaments interpreted as faults. The statistical analysis shows three main trends: N120, N90, and N60, with a clear predominance of the last trend. Euler deconvolution was used to determine source depths and their location. The values of the source depth can reach 2280 m. Superimposition of the interpreted major faults on the geological map indicates that NE-SW and E-W trending fault systems are of regional importance. Besides, results show a good correlation between the mapped structural directions, the sites of springs, and the hydrographical network. They will be helpful for further hydrogeological research in the studied area by providing useful information about the state and the size of subsurface faults and help to identify locations where it would be possible to permanently exploit the groundwater.

Keywords: North-eastern Morocco, Isly basin, gravity data, filtering, faults, hydrographic network, springs.

DEVELOPMENT OF A WEB-BASED FRAMEWORK IN QUEST FOR HIGH IMPACT ONLINE RESEARCH JOURNAL

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ABSTRACT

Most Authors are victims of fake or predatory online journal trying to find out later that their submitted manuscript was published in a blacklisted or fake journal that sometimes advertises that they are indexed in a high impact journal such as Scopus, Web of Science and ISI. For the new authors who are starting with their career in Research and Publication they must be aware of the following situations that there are also fake or predatory online journals that are requested for Call of Papers for Publication. Furthermore, that Researcher is proposing of developing a Web-Based Framework that can detect or measured the impact of a certain Online Research Journal. With this type of study all authors will not be able to encounter these kind of problems and anomalies in Publications and will be able to submit manuscripts to the high impact journal in a much easier and faster way.

Keywords: High Impact, Web-based Framework, Online Research, Journal

GIDA ALERJENİ β -PARVALBUMİNE ELISA, GENOMİK ve *in silico* SİMÜLASYON İLE ÇOK YÖNLÜ BİR BAKIŞ

A MULTIPERSPECTIVE EVALUATION of FOOD ALLERGEN β -PARVALBUMINE BY ELISA, GENOMIC and *in silico* SIMULATION

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ÖZET

β -parvalbuminler termal ve enzimatik bozulmaya karşı dayanıklı alerjen bileşenlerdir. Avrupa Alerji ve Klinik İmmünoloji Akademisi (EAACI) alerjik reaksiyon başlatacak β -parvalbumin miktarını 0.1 mg/100 g balık eti olarak vermektedir. Türkiye'nin en çok ithal ettiği balık türleri içinde somon balığı (*Salmo salar*) ilk sıradadır. Somon, alerjen β -parvalbumin (*Sal s 1*) içermektedir. Bu çalışmada, çiğ ve ambalajlı-yarı işlenmiş toplam 20 adet somon balığı ürünüde sandwich elisa ile *Sal s 1* düzeyi, real-time PCR ile *Sal s 1* kodlamaktan sorumlu genin ekspresyonu ve moleküler kenetlenme çalışmaları ile *Sal s 1*'in soya alerjenleri (*Gly m 5* ve *Gly m 6*), hardal alerjisi (*Sin a 1*), *IgE*, kültür somon balığı yetiştiriciliğinde yoğun kullanılan antibiyotikler (florfenikol ve oksitetrasiklin hidroklorür) ve doğal antihistaminik C vitamini ile çapraz reaktivite potansiyelinin incelenmesi amaçlanmıştır. Bulgular t-testi ile istatistiksel analiz edilmiştir ($p < 0.05$). Elisa sonuçlarına göre, örneklerin *Sal s 1* düzeyi ortalaması 0.285 ± 0.046 mg/100 g balık eti bulunmuştur. Genomik analizde, örneklerin %60'ında *Sal s 1* geni amplifikasyonu ($Ct_{\text{genel ort}}: 28.94 \pm 5.44$) alınmıştır. İstatistik analiz elisa ve gen ekspresyonu sonuçları arasında anlamlı bir ilişki olduğunu göstermiştir ($p = 0,034$). *in silico* hesaplamalı çalışmalar sonucunda ise; *Sal s 1* alerjenine karşı -6.43 kcal/mol (florfenikol) > -5.78 kcal/mol (oksitetrasiklin hidroklorür) > -3.92 kcal/mol (C vitamini) bağlanma enerji sıralaması gözlenmiştir. Bu sıralama ilgili bileşiklerin *Sal s 1* alerjene karşı çapraz reaktivite gösterdiğini, ancak soya ve hardal alerjenleri ile etkileşmediğini ortaya koymuştur. Bunun yanında, *IgE* ile olan *in silico* araştırma *Sal s 1* alerjenine karşı çapraz reaktivite gösterdiği tespit edilmiştir. Sonuç olarak, incelenen somon ürünlerin β -parvalbumin yapının düzeyi, alerjisi kodlamaktan

sorumlu genin aktifliđi ve özellikle antibiyotikler ve *IgE* ile apraz reaktivite potansiyeli tařıdıđı iin alerjene duyarlı kiřiler aısından potansiyel risk oluřturduđu tespit edilmiřtir.

Anahtar Kelimeler: Alerji, Gıda Gvenliđi, β -Parvalbumin, Somon, Molekler Kenetlenme

ABSTRACT

β -parvalbumines are the allergic compounds that are highly resistant to thermal and enzymatic digestion. According to the European Academy of Allergy and Clinical Immunology (EAACI), the upper limit of β -parvalbumin level to trigger allergenic activity is given as 0.1 mg per 100 g fish meat. Salmon (*Salmo salar*) comes first among the major fish species imported by Turkey. Salmon also contains allergen β -parvalbumine (*Sal s 1*). The objective of this study was to evaluate the level of *Sal s 1* by elisa, the expression of the gene responsible for encoding *Sal s 1* by real-time PCR, and the cross-reactivity potential of *Sal s 1* with soy allergens (*Gly m 5* ve *Gly m 6*), mustard allergen (*Sin a 1*), *IgE*, antibiotics intensively used in salmon farming (florfenicol and oxytetracycline hydrochloride), and natural antihistaminic vitamin C by molecular docking studies. To do this, a total of 20 raw and packaged and semi-processed salmon was collected. The statistical analysis was performed by t-test ($p < 0.05$). The elisa results showed that the average level of *Sal s* in the samples was found to be 0.285 ± 0.046 mg/100 g fish meat, and the genomic analysis indicated that 60% of the *Sal s 1* encoding gene yielded expression with an average Ct value of 28.94 ± 5.44 . The relationship between elisa and gene expression levels were statistically significant ($p = 0,034$). The researches including *in silico* studies revealed that the binding energies of florfenicol, oxytetracycline hydrochloride, and vitamin C to the allergen *Sal s 1* were determined to be -6.43 kcal/mol, -5.78 kcal/mol, and -3.92 kcal/mol, respectively. Based on the binding energy levels, *Sal s 1* was potentially reactive with antibiotics and vitamin C, whereas it did not react with soy and mustard allergens. Furthermore, *in silico* calculations are showed that *IgE* exhibited an allergenic cross-reactivity to *Sal s 1*. In summary, the evaluated salmon products were potentially posing risk for the allergic individuals due to the level of β -parvalbumin, the activity of the gene encoding *Sal s 1*, and particularly carrying cross-reactivity potential with antibiotics and *IgE*.

Keywords: Allergy, Food Safety, β -Parvalbumine, Salmon, Molecular Docking

ELECTROCHEMICALLY SYNTHETIZED POLYPYRROLE AND ITS BEHAVIOR AS AN ORGANIC SENSOR TOWARDS AMMONIA VAPORS

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ABSTRACT

In recent years, researchers have devoted enormous interest to the development of new materials that has sensing properties toward toxic vapors, especially, volatile organic compounds (VOCs), which present a real danger to human health.

One of the well-known VOCs is ammonia. Generally released by most chemical industries and agricultural production, it is one of the hazardous gases which give off severely irritating and strongly corrosive odor to the eyes and respiratory organs. There is therefore a need for developing new sensing systems to maintain ideal conditions in the environment.

It is in this context that our results fit: polypyrrole (PPy) was electrochemically synthesized on two different metallic substrates, namely, iron and aluminum. The prepared films exhibit a globular structure with different size particles, thereby increasing the contact surface with the VOCs. After measurements, the PPy coatings have exhibited very promising sensing capabilities.

Keywords: Polypyrrole, Electrosynthesis, Electrode, Toxic gases, Sensor.

**DİYETİSYENLERE AİT SOSYAL MEDYA SİTELERİNİN GÖRÜNÜRLÜK VE
BİLİMSEL GÜVENİRLİK YÖNLERİNDEN İNCELENMESİ**
EVALUATING DIETITANS' SOCIAL MEDIA SITES BASED ON VISIBILITY AND
SCIENTIFIC RELIABILITY PERSPECTIVES

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ÖZET

Sosyal medya, kullanıcıların bilgi paylaşmasını, sosyal ve mesleki irtibat geliştirmesini sağlayan web tabanlı uygulamalardır. Bu çalışmada, diyetisyenlere ait sosyal medya sitelerinin görünürlük ve bilimsel güvenilirlik yönlerinden incelenmesi amaçlanmıştır. Bu bağlamda, toplam 60 adet aktif Instagram sitesi randomize seçilmiştir. Görünürlük bulgularına göre, %63'ünün 5000 ve altı takipçisi, %93'ünün 2000 ve altı takip ettiği ve %73'ünün 2000 ve altı gönderisi olduğu görülmüştür. Sitelerin %73'ü İstanbul'da bulunmaktadır. Instagram dışında Facebook (%23), LinkedIn (%20), Blog (%18), Youtube (%14), Pinterest (%13) ve Twitter (%12) site yöneticilerinin kullandıkları diğer platformlardır. Sitelerin en çok “bitkisel kaynaklı besinler (%100)”, “hayvansal besinler (%98)”, “düşük yağlı diyet (%98)”, “yeterli ve dengeli beslenme (%97)” ile “zayıflama-estetik ve fit görünüm (%97)” konularına yer verdikleri görülmüştür. Diğer taraftan ise, en az değinilen konular arasında “GDO (%3)”, “besin-ilaç etkileşimi (%7)”, “gıda katkı maddeleri (%8)”, “gıda alerjisi (%25)” ve “besin hijyeni (%37)” gelmektedir. İncelenen sitelerin %60'ının etkileşim özel hedef kitlesini belirlemediği fark edilmiştir. Bilimsel güvenilirlik yönünden ise, incelenen sitelerde “bilimsel bilgilere yerme” ve “bilimsel bilgilere diyetisyen site yöneticilerinin yorum ekleme” oranları sırasıyla %85 ve %83 olarak tespit edilmiştir. Ancak, bilimsel kaynak gösterimi %37, gösterilen kaynakların tür bildirimleri %48 ve güncellikleri ise %60 mertebesinde kalmıştır. Ayrıca, sitelerin %57'sinin ulusal ve uluslararası

beslenme ve diyetle ilgili raporlara ve beslenme kılavuzlarına yer vermedikleri belirlenmiştir. Özetle, diyetisyenlere ait incelenen Instagram sosyal medya sitelerinin mesleki sorumluluk açısından geliştirilmeleri gerektiği sonucuna ulaşılmıştır.

Anahtar Kelimeler: Diyetisyen, Sosyal medya, Instagram, Görünürlük, Bilimsel güvenilirlik

ABSTRACT

Social media is the web-based means that are used by the people to share information, and to develop social and professional contact. The objective of this study was to evaluate the dietitians's social media sites based on visibility and scientific reliability perspectives. To do this, a total of 60 active Instagram sites was selected randomly. According to visibility analysis, the frequencies of followers < 5000, following < 2000, and posts < 2000 were found as 63%, 93%, and 73%, respectively. 73% of the sites was based in Istanbul. Other platforms facilitated by site-owners were Facebook (23%), LinkedIn (20%), Blog (18%), Youtube (14%), Pinterest (13%), and Twitter (12%). The most prominent topics mentioned in the sites were "plant-origin foods (100%)", "animal-origin foods (98%)", "low-fat diet (98%)", "adequate and balanced diet (97%)", and "slimming-esthetic and fit appearance (97%)". On the other hand, the least covered ones were "GMO (3%)", "food-drug interaction (7%)", "food additives (8%)", "food allergy (25%)", and "food hygiene (37%)". Among them, 60% did not customize audience clearly. Scientific reliability analysis indicated that frequencies of "providing scientific information" and "making personal comment on scientific information by the site-owner" were 85% and 83%, respectively. However, scientific source citation rate was 37%. Within cited sources, only 48% included type of information source, and only 60% of them was timely sources. In addition, 57% did not include national and/or international reports and dietary guidelines on nutrition and dietetics. In summary, we concluded that the evaluated Instagram sites facilitated by dietitians should be improved based on professional responsibility.

Keywords: Dietitian, Social media, Instagram, Visibility, Scientific reliability

SEX DIFFERENCES AND SYMMETRY IN FINGERPRINT PATTERN: THE NIGERIAN PERSPECTIVE

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ABSTRACT

Concept: Symmetricity provides insight into evolution of traits, structural complexity and favouritism in the development of humans, and several anatomical structures differ in distribution. **Objectives:** The study aimed at evaluating patterns of symmetry of fingerprints among a sample of Nigerian population. **Materials and methods:** Palms of 100males and females each respectively were investigated with the aid of a fingerprint scanner. Palmprints of two hundred (200) Nigerians (100 males and 100 females) were digitally collected using Hewlett Packard G4010. The fingers were numbered 1D-5D according to the Aigbogun *et als*' method and the patterns determined using Galtons method. The data were analysed using Statistical Package for Social Science (Version 23; IBM® Armonk, New York) and Minitab®2017 (version 18.1). Sex-associated side differences in print pattern distribution were analysed using SPSS Chi-square test, while Minitab Mood median test evaluated laterality of finger ridge counts. Confidence level was set at 95% and $P < 0.05$ was considered significant. **Result:** From the results, the order of predominance in fingerprints pattern among Nigerians was loops > whorls > arches for R1D-5D and L1D-5D for males and females. We observed dimorphism for friction ridges on R3D,5D, TR and L2D ($X^2=4.504, 3.922, 3.920, 8.828; P= 0.034, 0.048, 0.048, 0.003$). Furthermore the distribution of complete symmetry for R1-L1, R2-L2, R3-L3, R4-L4, R5-L5 for males was obtained as 78%, 61%, 68%, 74%, 89% while the females had 70%, 66%, 78%, 79% and, 85%. For pattern asymmetry, the males had 22%, 39%, 32%, 26%, and 11% while the females had 30%, 34%, 22%, 21% and, 15%. The study also discovered that 83% males and 73% females had partial symmetry of fingerprint patterns **Conclusion:** The pattern of symmetry was not sexually dimorphic in the studied population.

Keywords: Fingerprints, symmetry, asymmetry, partial symmetry, Nigerians

NONLINEAR DYNAMIC RESPONSE OF A SIMPLY SUPPORTED HIGH SPEED RAILWAY BRIDGES UNDER MOVING LOADS

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ABSTRACT

With the development and the construction of new high speed railway bridges, the dynamic performance of this type of structures, becomes the main interest of researchers and engineers. The resonance phenomenon which occurs when the excitation frequency governed by higher velocities coincides with the natural frequency of the bridge, is one of the must phenomena that should be analysed in design of new bridges. However, in state of resonance and for discrete or continuous system, the damping coefficient affects largely the amplitude of vibration.

Previous works [1-2] have shown that one of the non-linearity sources is the amplitude of vibration, in which for their studied bridges, the authors found that with increasing amplitude of vibration, the fundamental frequency decreases and the damping ratio increases, also the interaction between the ballast and the bridge have been demonstrated as a source of nonlinearity which affect the total stiffness and the damping ratio of the system [3-4], in addition the train-bridge, soil-structure interaction, and the material properties of the structure have a noticeable effects in the dynamic response of high speed railway bridges, in which are slowly known and well understand.

The aim of this work is to propose a numerical method based on the Runge-Kutta method and the Finite Element method to integrate the nonlinear coupled equations related to the geometrical nonlinearity of the beam. The obtained results have shown that the dynamics is governed essentially by a Duffing like oscillator, where a Kelvin viscoelastic model is used to simulate the viscoelastic materials of the beam.

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LIQUID DIGESTATE FROM ANAEROBIC DIGESTION OF SOURCE-SEPARATED HOUSEHOLD WASTE AS FERTILIZER TO CROPS

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Abstract

With 340 students, the restaurant of the Renewable Energies and Energy Efficiency Institute of Oujda (IFMEREE Oujda) generates daily for about 230 kg of organic waste. This organic waste is used for feeding a 20m³ biogas plant installed in the Institute. The aim of this work is to assess the agronomic value of organic waste biogas residue (digestate) compared to chemical fertilizer (NPK). Agronomic tests on digestate are conducted on lettuce and maize in pots and open fields. The results obtained show that digestate from the methanisation of organic waste can be used as an alternative to chemical fertilizers.

Key words: Anaerobic digestion, digestate, biofertilizer, lettuce, maize.

**STUDY OF THE DEGRADATION OF A FLEXIBLE PAVEMENT BY THE
TECHNIQUES OF ROAD INSPECTION. APPLICATION IN A SECTION OF A
MOROCCAN NATIONAL ROAD NUMBER 06**

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ABSTRACT

For several years, the behavior of layers' interfaces has appeared as an important element that can be dimensioned for civil engineering structures, in particular for road pavements. As technologies have evolved, both for surface layers and rolling loads (tires), new damage pathologies have appeared (rutting, tearing, slipping, potholes, top down cracking...). The basis of any maintenance strategy is usually a study of surface deterioration and an associated interpretation. In most cases, surface deterioration is one of the earliest and most sensitive indicators of changes which impacts the structural and surface characteristics of pavements. The pavements is subjected to several types of stress during its life time. Heavy vehicle traffic and thermal variations are the main causes of road deterioration [1] [2]. Within the frame work of our collaboration with the National Centre for Road Studies, we present in this article a descriptive statistical analysis of the results of the auscultation carried out in 2018 on the section of the national road number 06, linking the city of Meknes and Khemissat over a length of 50 kilometers which consists in assessing the interactions between a different types of structural (STI) and surface (SUI) degradations.

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EXPLORATION VIA AN ETHNOBOTANICAL STUDY OF *ANACYCLUS PYRETHRUM* L. POTENTIALS TO TREAT ORAL DISORDERS IN MOROCCO

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ABSTRACT

Anacyclus pyrethrum L. is an algero-moroccan endemic belonging to the *asteraceae* family; it's commonly known by the vernacular appellations *Tigenthas*, *Ighentes*, or *Akkir-Karha*, *Arq chlouh* and *Oud al attass* as local names (Bellakhdar, 1997). In Morocco, this species grows in forest clearings, matorrals, hermits, pastures; it prefers semi-arid cold, subhumid and humid bioclimates in Anti Atlas, High Atlas, Middle Atlas, North Atlantic Morocco, plateau of eastern Morocco (Jerada) Rif (Chaouène; jbel Assilenh, Tizi-n-lel valley) (Fennane *et al.*, 2014).

It is often reported that *Anacyclus pyrethrum* L. has medicinal virtues (Bellakhdar, 1997 ; Daoudi *et al.*, 2014); so, in the present study, through an ethnobotanical survey, we tried to obtain information about the efficiency of the traditional therapeutic receipts which are used for oral disorders. Using snow ball method, 50 herbalists operating in Meknes city were interviewed from January to March 2018. Quantitative indices such as, the use value (UV), the family use value (FUV) and the informant consensus factor (ICF) were calculated.

The results showed that the investigated species has an UV= 0.10 and an FUV= 0.11; roots and flowers are the most used parts in the form of decoction for multiple daily rinsing of oral cavity against several oral problems, namely, caries (ICF=0.69), microbial affections (ICF=0,18) and periodontal disease (ICF=0.16).

Most respondents confirmed the efficiency of the use of *Anacyclus pyrethrum* L. to cure dental affections or to protect buccal cavity; therefore, the species must be subject of thorough scientific research in laboratory, to evaluate its dental effects.

Keywords: *Anacyclus pyrethrum* L., Ethnobotany, Oral disorders, Quantitative indices, Meknes, Morocco.

ÉTUDE DU CYCLE DE REPRODUCTION CHEZ UNE POPULATION DE *SCROBICULARIA PLANA* DE L'ESTUAIRE DE L'OUED SOUSS

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Le mollusque bivalve *Scrobicularia plana* est une espèce caractéristique de la zone intertidale qui vit souvent enfouie dans le substrat meuble : sableux ou vaseux, riche en débris organiques. Elle présente une large distribution, dans la Mer du Nord, la Manche, la façade Atlantique (de la Norvège vers le Sénégal) et en Mer Méditerranée. Elle est très abondante sur les côtes atlantiques marocaines, et plus ou moins commercialisée.

Dans la baie d'Agadir, cette espèce est assez présente, et a fait l'objet de plusieurs travaux de recherche au sein de notre laboratoire. Cependant une seule étude très ancienne a été effectuée jusqu'au aujourd'hui sur le cycle de reproduction de cette espèce au Maroc. A la lumière de ces données et sur la base des données antérieures obtenues, l'objectif du présent travail est d'étudier le cycle de reproduction de *S. plana* afin de compléter et répondre à certaines des hypothèses posées et aux différents questionnements soulevés.

L'étude du cycle de reproduction est suivie pendant une période de 12 mois allant de janvier à décembre 2019. A chaque mois 30 spécimens du même âge sont prélevés puis immédiatement pesés et déposés séparément dans des piluliers contenant un milieu de fixation (Bouin). Pour chaque individu la distribution des stades de gamétogenèse, l'évolution mensuelle de l'indice gonadique et le sex-ratio sont étudiés.

Les résultats préliminaires montrent que la période de gamétogenèse débute à la fin de l'hiver et au début du printemps. Ainsi, la ponte a lieu au mois le plus chauds en réponse aux augmentations de la température et du phytoplancton. Le pourcentage du sex-ratio est plus ou moins équilibré avec une légère prédominance des femelles par rapport aux mâles.

Mots-clés: Baie d'Agadir, *Scrobicularia plana*, histologie, reproduction, sex-ratio.

ÉTUDE D'ANTIBIOGRAMME DE LA BACTERIE LACTIQUE GENRE *LEUCONOSTOC* ISSUE DU LAIT CRU DES VACHES

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RESUME

L'étude d'antibiogramme est une technique visant à tester la sensibilité d'une souche bactérienne vis-à-vis d'un ou plusieurs antibiotiques . Ce test consiste à étudier le profil de la résistance et la sensibilité de 34 souches isolées du lait cru de vache de la région de l'Oriental et qui appartiennent au genre *Leuconostoc* et qui sont classés en trois espèces : *Leuconostoc mesenteroides* subsp. *mesenteroides* , *Leuconostoc mesenteroides* subsp. *dextranicum*, et *Leuconostoc mesenteroides* subsp. *cremoris*; à différents antibiotiques, chaque souche est testée vis-à-vis des dix-huit (18) disques d'antibiotiques respectivement : *Lincomycin* (MY) ; *Cephalothin* (KF) ; *Nitroscolin* (NI) ; *Norfloxacine* (NOR) ; *Amplicin* (AMP) ; *Amplicin* (AMP) ; *Gentamicine* (CN) 15 µg; *Cefaclor* (CEC) ; *Amoxicilline+Acide clavulanique* (AMC) ; *Cefotaxime* (CTX) ; *Ciprofloxacine* (CIP) ; *Gentamicine* (CN) 30 µg ; *Triméthoprime+Sulfaméthoxazole*(co-trimazole) (SXT) ; *Lincomycin* (MY) ; *Cefamandole* (MA) ; *Ceftriaxone* (CRO) ; *Rifampicine* (RD) ; *Cefazoline* (KZ), Ces derniers sont déposés à la surface des boîtes de pétrie ensemencée par les souches lactiques . le résultat de travail montre que le comportement de toutes les souches vis-à-vis à tous les antibiotiques était différent, On observe l'apparition de zones d'inhibition dont le diamètre est mesuré en (mm) , les souches présentant un diamètre de zone d'inhibition inférieur à 5 mm sont considérées comme résistant , à peu près 8mm considérant comme intermédiaire, supérieure à 15 mm considérées comme sensibles . Les souches Ln mesentéroïde ssp mesentéroïde résistes 55% antibiotiques, Ln mesentéroïde ssp *dextranicum* sensible par 25% antibiotiques ,Ln mesentéroïde ssp *cremoris* 50% antibiotiques. Généralement les 3 espèces du genre *Leuconostoc* se caractérise par une diversité concernant leur profil de sensibilité vis-à-vis les antibiotiques testés.

Mot clés: Bactérie lactique, *Leuconostoc*, Résistance, Sensibilité, Antibiotique.

**SEASONAL VARIATIONS IN THE MEAT YIELD, CONDITION INDEX AND
BIOCHEMICAL COMPOSITION OF THE MUSSEL (*MYTILUS
GALLOPROVINCIALIS* L.) FROM MOROCCAN MEDITERRANEAN COASTAL
AREAS**

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ABSTRACT

Mussels are generally appreciated for their nutritive quality, organoleptic properties, and economic potential. Albeit mussel shell appearance can be decisive in market prize and purchase motivation, product quality is mostly regulated by biochemical composition and condition indices. Moreover, Mussel is one of the important edible bivalves, according to Food and Agriculture organization of the United Nations.

To identify the link between Seasonal changes in body weight, biochemical composition and the process of the reproduction, mussels were investigated for their biochemical composition over a period of one year, monthly in 2016, from January to December, from sampling sites of the mussel farming facilities installed in the coastal areas of Al Hoceima. Each sample was analyzed to determine the total content of glycose, lipids, proteins, organic matter, and energy. Moreover, the growth weight parameters (total weight, fresh and dry mass tissue weight as well as fresh and dry shell weight) of the bivalve were determined.

Results shows that the seasonal variations in meat weights, condition index and biochemical components reflect the stage of gonadal development as well as food availability and the best times to harvest are June, July and early September.

Keywords: *Mytilus galloprovincialis*, Condition index, meat yield, reproduction.

MORPHOLOGICAL, MINERAL AND GEOCHEMICAL CHARACTERIZATION OF BENTONITE DEPOSIT PROSPECTION IN THE EXTERNAL DOMAIN OF THE EASTERN RIFAIN CHAIN, MOROCCO

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ABSTRACT

In addition to a perspective of sustainable local development, this study focuses on the characterization of clay materials in the northeastern zone of Morocco. It is characterized by a high content in very diverse useful substances including clay deposits which have a wide range of composition and properties, origin of their multiple applications such as building, industrial and craft ceramics, pottery, pharmaceutical, cosmetic, chemical industries, oil purification, etc. This study has the advantage of contributing to the promotion of local building materials while improving the quality of artisanal ceramics produced. In this region, the terracotta clay-based are used mainly for the manufacture of traditional and modern building materials (bricks, tiles) and for making many pottery items.

Most Moroccan bentonite deposits are located in northeastern Morocco, in the Nador region. This natural resource is linked to the volcanic activities of Gorougou and its satellites. The present work focuses on the study of Trebia bentonite deposit located 18 km west of the city of Nador, on the western flank of the Tidiennit volcanic massif. All studied samples were collected from that area and analysed accordingly in order to characterize and identify their components.

Experimental techniques used included X-ray diffraction, Fourier transform infrared spectroscopy, X-ray fluorescence and the geotechnical characterization of the clay fraction and Atterberg limits. The morphology and size of the particules were observed by scanning electron microscopy (SEM). Mineralogical results showed that all specimens were mostly composed of montmorillonite alongside other clay minerals. Some crystalline impurities were also detected by X-ray diffraction and Fourier transform infrared spectra. SEM reveals the porous characteristics and surface texture of bentonite particles. It is apparent the petaloid aggregates of the grains in spherical form with heterogeneous dimensions. A large amount of the main oxides in the Fe samples ranged between 28.6 and 48.9% Si content (from 0.1 to 16.7%). The geotechnical study showed that the bentonites studied were generally very plastic and are also characterized by very high liquidity limits. A high water retention capacity with water contents indicated this bentonites have important swelling properties.

Keywords: Bentonite, SEM, Texture, Heterogeneous dimensions, Volcanic activities.

REMOVAL OF HEAVY METALS: CU (II), PB (II) AND ZN (II) IONS FROM AQUEOUS SOLUTION USING SUPERB DATE STONES

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ABSTRACT

Presence of heavy metals in water, even in trace amounts, is an environmental hazard. Hence, there is an imperative need to develop innovative and environmentally-friendly materials for their removal from wastewaters.

The present study is concerned with the valorization of date stones for the waste water treatment. Date stones as adsorbent were tested for the adsorption of Cu (II), Pb (II) and Zn (II) from aqueous solution. The effects of different parameters on the adsorption of metals such as the contact time, the initial concentration and the pH of the solution were investigated. It showed an efficient adsorption, exceeding 95% toward Cu^{2+} , Pb^{2+} and Zn^{2+} , when their concentration was lower than 10 ppm and ranged from 60-90% for a metal concentration higher than 10 ppm. Cu (II) and Pb (II) had higher adsorption capacity than Zn (II). The concentrations of Cu, Pb and Zn were determined with AAS. The equilibrium data were fitted using Freundlich and Langmuir isotherm models.

Keywords: Adsorption; heavy metals; date stones; aqueous solution

EFFECT OF SEVERE WATER DEFICIT ON YIELD AND PHYSIOLOGICAL TRAITS OF VARIOUS PLUM (*PRUNUS DOMESTICA* L.) CULTIVARS

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ABSTRACT

To cope with water scarcity in agriculture, research works are focused on two main strategies: development of improved and precise deficit irrigation management practices able to minimize the impact on productive potential; and selection of plant material less water-demanding or able to tolerate deficit irrigation with minimum negative impact on yield and physiological traits. In this sense, this work was carried out to assess the effects of severe water deficit on yield level, fruit weight, number of leaves per 10 cm shoot, leaf area, stomatal density, stomatal surface area, stomatal surface index, chlorophyll pigment content (Cha and Chb), stomatal conductance, cuticular wax and proline content of leaves of 11 plum cultivars at experimental station of INRA in Ain Taoujdate. Irrigation treatments consisted of a control, irrigation applied to fully satisfy crop water requirements (100% ET_C), and a continuous deficit irrigation (50% ET_C), applied from fruit set to harvest. Results showed significant differences among cultivars in response to water stress for all measured traits. Cluster analysis based on the average ratios between CDI and full irrigation (FI) treatments for all characteristics revealed three distinct clusters within the cultivars studied for drought tolerance. PCA analysis using the mean ratios of the studied traits showed that the effects of water stress on stomatal length and width, stomatal area and stomatal area index had the greatest impact on the discrimination between cultivars for their drought tolerance. The obtained results are of great interest for selection of cultivars to be grown in arid areas and for breeding programs to improve drought tolerance in plum.

Keywords: *Prunus domestica* L., water stress, genetic diversity, fruit yield, fruit quality

EFFECT OF COVID-19 PANDEMIA ON INDIVIDUALS WITH ANXIETY COVID 19 PANDEMİSİNİN ANKSİYETE BOZUKLUĞU OLAN BİREYLERE ETKİSİ

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ABSTRACT

Coronaviruses; They are zoonotic viral pathogens that can be found in cats, dogs, birds, bats, pigs, mice and rodents, can be transmitted to humans through animal consumption, and can cause respiratory and digestive system infections. The most common mental disorders in pandemics; mood disorders, anxiety disorders, and post-traumatic stress disorder (PTSD).

The most common mental disorders in a pandemic pandemic, including PTSD, witnessing deaths and the death of loved ones; mood disorders, anxiety disorders, and post-traumatic stress disorder. It can be triggered by a variety of stress factors associated with 619. In a 2-46-month longitudinal study, 44 percent of SARS patients developed PTSD. Psychological problems, including PTSD symptoms, have been reported to persist for years after the physical effects of the virus have disappeared in many SARS patients. Anxiety disorders are among the most common mental illnesses throughout life. Studies have shown that approximately 3.6% of the global population suffers from an anxiety disorder, and the prevalence of anxiety disorders increased by 14.9% between 2005 and 2015. Anxiety disorders are more common in women than men. Among the main features of anxiety disorders; Situations such as extreme and persistent fear, anxiety, or avoidance of perceived threats are observed. Anxiety disorders are a mental disorder characterized by extreme fear and anxiety that affect daily living activities.

For adverse situations caused by the COVID-19 outbreak, crisis and stress management, awareness and compassion-based work, and social support resources for individuals with anxiety disorders are important to tackle and strengthen. It should be ensured that the health team consisting of psychiatrists, psychologists, nurses, social workers, occupational therapists and other auxiliary personnel take an active role in the treatment and rehabilitation of individuals. It is recommended that individuals with anxiety disorders during the epidemic can provide psychological support and therapeutic interventions remotely and online in accordance with the needs of that period.

Keywords: COVID-19, Anxiety Disorder, Pandemic

ÖZET

Bu araştırma endoskopi uygulanan hastalarda stres düzeyinin hasta memnuniyetine etkisini belirlemek amacıyla kesitsel tipte gerçekleştirilmiştir.

Koronavirüsler; kedi, köpek, kuş, yaras, domuz, fare ve kemirgenlerde bulunabilen, hayvanların tüketilmesi ile insanlara bulaşabilen, solunum yolu ve gastrointestinal sistem enfeksiyonlarına neden olabilen zoonotikviral patojenlerdir. Pandemide en sık görülen ruhsal bozukluklar; duygudurum bozuklukları, kaygı bozuklukları ve travma sonrası stres bozukluğudur (TSSB).

TSSB, ölümlere tanık olma ve sevdiklerinin ölümü de dahil olmak üzere pandemide en sık görülen ruhsal bozukluklar; duygudurum bozuklukları, kaygı bozuklukları ve travma sonrası stres bozukluğudur. 619 ile ilişkili çeşitli stres faktörleri tarafından tetiklenebilir. 2-46 aylık uzunlamasına bir çalışmada, SARS hastalarının yüzde 44'ünün TSSB geliştirdiği görülmüştür. Birçok SARS hastasında TSSB belirtileri de dahil olmak üzere psikolojik sorunların, virüsünün fiziksel etkileri ortadan kalktıktan yıllar sonra da devam ettiği bildirilmiştir. Anksiyete bozuklukları, yaşam boyu en sık görülen ruhsal hastalıklar arasında yer almaktadır. Yapılan çalışmalar küresel nüfusun yaklaşık % 3.6'sının bir anksiyete bozukluğundan muzdarip olduğunu ve anksiyete bozukluklarının prevalansının 2005 ile 2015 arasında% 14.9 arttığını göstermiştir. Anksiyete bozuklukları kadınlarda erkeklere oranla daha yaygın olarak görülmektedir. Kaygı bozukluklarının temel özellikleri arasında; aşırı ve kalıcı korku, endişe veya algılanan tehditlerden kaçınma gibi durumlar görülmektedir. Anksiyete bozuklukları, günlük yaşam aktivitelerine etki eden aşırı korku ve anksiyete ile karakterize edilen bir ruhsal bozukluktur.

COVID-19 salgınının yarattığı olumsuz durumlar için anksiyete bozukluğu olan bireylere kriz ve stres yönetimi, farkındalık ve şefkat temelli çalışmalar, baş etme ve sosyal destek kaynaklarının güçlendirilmesi yönünde çalışmalar önem arz etmektedir. İçerisinde psikiyatri uzmanı, psikolog, hemşire, sosyal çalışmacı, ergoterapist, uğraş terapisti ve diğer yardımcı personelin de olduğu sağlık ekibinin bireylerin tedavi ve rehabilitasyonunda etkin rol alması sağlanmalıdır. Salgın sırasında anksiyete bozukluğu olan bireylerin psikolojik destek ve terapötik müdahalelerin, o dönemin ihtiyaçlarına uyacak şekilde uzaktan, çevrimiçi olarak da sağlanabilmesi önerilmektedir.

Anahtar Kelimeler: COVID-19, Anksiyete bozukluğu, Pandemi

EFFECT OF STRESS LEVEL ON PATIENT SATISFACTION IN PATIENTS WITH ENDOSCOPY

ENDOSKOPİ UYGULANAN HASTALARDA STRES DÜZEYİNİN HASTA MEMNUNİYETİNE ETKİSİ

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ABSTRACT

This study was conducted in a cross-sectional type to determine the effect of stress level on patient satisfaction in patients who underwent endoscopy.

The population of the study consisted of patients who applied to the endoscopy unit of a state hospital. Sampling method was not used and the study was completed with 110 patients who volunteered to participate in the study. The data were collected using a personal information form and Perceived Stress Scale. Number, percentage, mean, Mann Whitney-U test, Kruskal Wallis test and Spearman correlation analysis were used to evaluate the data. Data were expressed as mean \pm SD or median (interquartile range), as appropriate. All differences associated with a chance probability of .05 or less were considered statistically significant.

The perceived stress scale mean score of the patients included in the study was found to be 29.87 ± 7.94 , the insufficient self-efficacy perception sub-dimension mean score was 16.74 ± 5.75 , and the stress / discomfort sub-dimension mean score was 13.12 ± 5.76 . It was found that the stress / distress perception sub-dimension scores of female patients ($p = 0.002$) and smokers ($p = 0.048$), and the insufficient self-efficacy sub-dimension scores of single patients were found to be significantly higher ($p = 0.025$). It was determined that there was a moderately significant negative relationship between the patients' perceived stress scale and service satisfaction scores ($p = 0.005$).

In this study, it was found that the stress level of patients who underwent endoscopy was affected by their gender, smoking status and marital status, and as the stress of the patients increased, their satisfaction with the service received decreased.

Keywords: Endoscopy, Patient, Stress

ÖZET

Bu araştırma endoskopi uygulanan hastalarda stres düzeyinin hasta memnuniyetine etkisini belirlemek amacıyla kesitsel tipte gerçekleştirilmiştir.

Araştırmanın evrenini bir devlet hastanesinin endoskopi ünitesine başvuran hastalar oluşturdu. Örneklemeye yöntemine gidilmemiş olup çalışmaya katılmaya gönüllü olan 110 hasta ile çalışma tamamlanmıştır. Veriler kişisel bilgi formu ve Algılanan Stres Ölçeği ile toplanmıştır. Verilerin değerlendirilmesinde sayı, yüzde, ortalama, Mann Whitney-U testi, Kruskal Wallis testi ve

Spearman korelasyon analizi kullanıldı. 0.05 veya daha düşük bir olasılık ile ilişkili tüm farklılıklar istatistiksel olarak anlamlı kabul edildi.

Araştırma kapsamına alınan hastaların algılanan stres ölçeği puan ortalaması 29.87 ± 7.94 , yetersiz öz-yeterlik algısı alt boyut puan ortalaması 16.74 ± 5.75 ve stres/rahatsızlık algısı alt boyut puan ortalaması 13.12 ± 5.76 olarak bulundu. Kadın hastaların ($p=0.002$) ve sigara kullananların ($p=0.048$) stres/rahatsızlık algısı alt boyut puanlarının, bekar hastaların ise yetersiz öz-yeterlik algısı alt boyut puanlarının anlamlı olarak daha yüksek olduğu bulundu ($p=0.025$). Hastaların algılanan stres ölçeği ile alınan hizmetten memnuniyet puanları arasında negatif yönde, orta düzeyde anlamlı bir ilişkinin olduğu belirlendi ($p=0.005$).

Bu çalışmada endoskopi uygulanan hastaların stres düzeyinin cinsiyet, sigara kullanma durumu ve medeni durumdan etkilendiği ve hastaların stresleri arttıkça alınan hizmetten memnuniyetin azaldığı bulundu.

Anahtar Kelimeler: Endoskopi, Hasta, Stres

**THE EFFECT OF ROYAL JELLY ON SOME PROTEIN SIGNALING PATHWAYS
AGAINST FLUORIDE-INDUCED KIDNEY DAMAGE IN RATS**

**SIÇANLARDA FLORÜR İLE OLUŞTURULMUŞ BÖBREK HASARINA KARŞI ARI
SÜTÜ'NÜN BAZI PROTEİN SİNYAL YOLAKLARI ÜZERİNE ETKİSİ**

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ABSTRACT

Natural products have been used for years and continue to be used in maintaining health and treating diseases. Especially in recent years, bee venom, propolis, bee pollen and Royal jelly are of great importance in addition to honey 'apitherapy', which is rapidly developing all over the world and is called bee products and treatment. Royal jelly has many biological functions and pharmacological activities.

For this reason, 42 Wistar albino male rats (n = 42, 8 weeks) were used in this study. Rats were divided into 6 groups and each group included 7 rats. Groups: (1) Control Group: Group fed with standard diet; (2) Royal jelly Group: Royal jelly (100 mg/kg CA, oral gavage); (3) Fluoride-50 Group: Fluoride (50 mg/kg CA, drinking water); (4) Fluoride-100 Group: Fluoride (100 mg/kg CA, drinking water); (5) Fluoride-50 + Royal jelly Group: Fluoride (50 mg/kg CA, drinking water) + Royal jelly (100 mg/kg CA, oral gavage); (6) Fluoride-100 + Royal jelly Group: Fluoride (100 mg/kg CA, drinking water) + Royal jelly (100 mg/kg CA, oral gavage). Rats were decapitated after 8 weeks and kidney tissues were removed and examined. Expression levels of BDNF, COX-2, GSK-3, caspase-9 and TNF-alpha proteins in kidney tissue were determined by western blotting technique. Compared to the Fluoride-50 and Fluoride-100 groups BDNF, COX-2, GSK-3 and TNF-alpha protein expression levels decreased, caspase-9 protein expression levels in the Fluoride-50 + Royal jelly and Fluoride-100 + Royal jelly group were increased.

As a result of this study, it has been determined that Royal jelly application is a promising drug in the treatment of many diseases in the future by reducing kidney damage. This work was supported by Firat University Scientific Research Projects Unit (FUBAP) with FF.19.16 project number.

Keywords: Apoptosis, BDNF, Caspase-9, COX-2, Royal jelly

ÖZET

Sağlığın korunması ve hastalıkların tedavi edilmesinde doğal ürünler yıllar boyunca kullanılmış ve kullanılmaya da devam etmektedir. Özellikle son yıllarda, bütün dünyada hızla gelişen ve arı ürünleri ile tedavi olarak adlandırılan “apiterapi” balın yanı sıra arı zehiri, propolis, arı poleni ve arı sütü de oldukça büyük önem arz etmektedir. Arı sütü birçok biyolojik işleve ve farmakolojik aktiviteye sahiptir.

Bu nedenle yapmış olduğumuz bu çalışmada, 42 Wistar albino erkek sıçan ($n = 42$, 8 haftalık) kullanılmıştır. Sıçanlar 6 gruba ayrılmış ve her grupta 7 sıçan yer almıştır. Gruplar: (1) Kontrol Grubu: Standart diyet ile beslenen grup; (2) Arı Sütü Grubu: Arı sütü (100 mg/kg CA, oral gavaj); (3) Florür-50 Grubu: Florür (50 mg/kg CA, içme suyu); (4) Florür-100 Grubu: Florür (100 mg/kg CA, içme suyu); (5) Florür-50 + Arı sütü Grubu: Florür (50 mg/kg CA, içme suyu) + Arı sütü (100 mg/kg CA, oral gavaj); (6) Florür-100 + Arı sütü Grubu: Florür (100 mg/kg CA, içme suyu) + Arı sütü (100 mg/kg CA, oral gavaj). Sıçanlar 8 hafta sonra dekapite edilmiş ve böbrek dokuları alınarak incelenmiştir. Böbrek dokusundaki BDNF, kaspaz-9, GSK-3, Nrf-2 ve NF- κ B proteinlerinin ekspresyon seviyeleri western blotlama tekniği ile belirlenmiştir. Florür-50 ve Florür-100 gruplarına kıyasla, Florür-50 + Arı sütü ve Florür-100 + Arı sütü gruplarında BDNF, COX-2, GSK-3 ve TNF-alfa protein ekspresyon düzeyleri azalmış, kaspaz-9 protein ekspresyon düzeyleri ise anlamlı bir şekilde artış göstermiştir.

Bu çalışmanın sonucunda, arı sütü uygulamasının böbrek hasarını azaltarak gelecekte birçok hastalığın tedavisinde umut verici bir ilaç olma özelliği taşıdığı tespit edilmiştir. Bu çalışma FÜBAP FF. 19.16 nolu proje ile desteklenmiştir.

Anahtar Kelimeler: Apoptoz, BDNF, Kaspaz-9, COX-2, Arı sütü

METHANE ENERGY RECOVERY FROM THE LEACHATE OF CONTROLLED LANDFILL OF GREATER AGADIR BY USING ANAEROBIC DIGESTION

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ABSTRACT

In recent years, the growing production of waste in Agadir city generate a large toxic quantity of leachate without treatment. This first part of work aims the characterization of three types of the leachate from the controlled landfill of Greater Agadir. The results of physicochemical characterization (pH, T°C, electrical conductivity, TDS, COD, BOD₅, SV, SM, ST, and heavy metals) were used to determine the pollutant load of different leachate types.

The second part of this work aims the recovery of methane energy from leachate by using anaerobic digestion. The experimental design methodology was used to screen the individual parameters tested during anaerobic digestion process (pH, type of leachate, type of inoculum and the percentage of inoculum). Experimental design makes it possible to distinguish the parameters influencing the process of anaerobic digestion and improve the methanogenic yield.

Keywords: Leachate; landfill; physico-chemical parameters; methane; anaerobic digestion.

SYNTHESIS AND CHARACTERIZATION OF A SUPERB MAGNETIC ORGANO-MONTMORILLONITE FOR CATIONIC DYE REMOVAL IN AQUEOUS MEDIA

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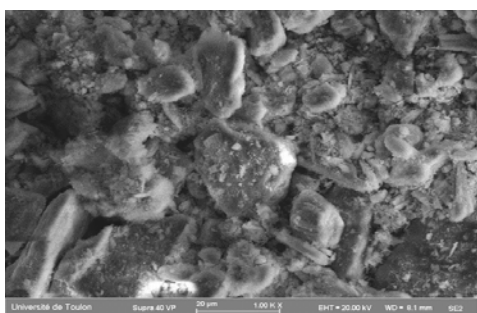
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ABSTRACT

In this study, natural clay modified by two surfactants (cationic, and anionic) and spinel was successfully synthesized using simple co-precipitation method. The composite was applied for the removal of MG and RhB cationic dyes from aqueous medium. The structure, morphology and properties of the nanocomposite clay- CT-SD@spinel were determined by X-ray diffraction (XRD), Fourier transform infrared spectroscopy (FTIR), scanning electron microscopy (SEM), and energy dispersive X-ray spectroscopy (EDS). clay -C-S@spinel displays better adsorption activity for the removal of MG and RhB in comparison with pure Mt clay. The adsorption performance of the nanocomposite was assessed by various parameters, such as, adsorbent dose, pH, contact time, temperature and dye concentration. On the other hand, ethanol is used to regenerate the adsorbent and reused it many times with good adsorption capacities. Thus, this enhancement of adsorption properties of clay -C-S/ spinel allows its application in wastewater treatment and industrial waste disposal.

Figure: SEM image of clay-C-S@spinel



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PHYTOPYTHIUM VEXANS CAUSING DIEBACK DISEASE AND NEW DISCOVERING RELATED TO APPLE TREES IN MOROCCO

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ABSTRACT

Apple trees hold an important place in the Moroccan economy, especially in Fez-Meknes region where it considered as the main income of a lot of small and medium-sized farmers. This plant is threatened by many diseases and problems that harm agricultural production. In this context this study was conducted to confirm the existence of *Phytophthora vexans* as the main species causing dieback disease to this plant. To achieve this, samples were taken from the dead roots of plants showing symptoms of the disease (root rot, yellow leaves, and wilting) and their corresponding soils. *Phytophthora vexans*, was isolated and purified on CMA medium, and the results shows the presence of Globose or subglobose sporangia with/out papilla, $15.9 \times 26.10 \mu\text{m}$ in diameter, on V8 medium after incubation for 4 days. The exact identification was performed by the amplification and the sequencing of the internal transcribed spacer (ITS). The results presented a similarity of 99% to those of *Phytophthora vexans*, and the sequences were deposited in the GenBank database under the accessions MK656897, MN545593, MN545588, and MN545587. The confirmation of the pathogenicity was done in certified seedlings of apple rootstock MM 115. For each isolate 4 apple seedlings were infected and plants with only PDA plugs served as controls. After 18 days of inoculation the seedlings showed disorder in color and the damages reached the wood after 30 days, and in another hand the control plants don't shows any sign of symptoms. The results of this study considered as the confirmations of the dieback disease related to *Phytophthora vexans* in apple trees.

Keywords: Apple trees, *Phytophthora vexans*, dieback disease, pathogenicity.

**KEDİ VE KÖPEKLERDE BAKTERİYEL DERİ HASTALIKLARINDA
ANTİMİKROBİYAL SAĞALTIM SEÇENEKLERİ**
**ANTIMICROBIAL TREATMENT OPTIONS FOR BACTERIAL SKIN DISEASES IN
CATS AND DOGS**

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ÖZET

Piyodermanın temel nedenleri ektoparazit enfestasyonları, alerjik deri hastalıkları ve hormon kaynaklı hastalıklardır. Piyodermanın nüksetmesinde temel neden alerjik hastalıklara bağlanmaktadır. Köpeklerde piyodermaların büyük kısmı koagülaz pozitif stafilokoklarla ilgilidir. En yaygın görülen tür *Staphylococcus pseudintermedius*'dur. Diğer stafilokoklardan *S. aureus*, *S. hyicus*, *S. schleiferi* de izole edilmektedir. Diğer bakteriyel patojenlerden *Pseudomonas aeruginosa*, *Proteus* spp., *Streptococcus* spp., *Burkholderia* spp. ve *Escherichia coli*, koagülaz negatif stafilokoklardan *S. epidermidis*, *S. xylosus*, *S. lugdunensis*, *S. schleiferi* subsp. *schleiferi* ve *Macrococcus* spp. izole edilebilmektedir. Kedilerde bakteriyel yüzeysel piyoderma durumunda izole edilen bakteriler *S. pseudintermedius* ve *S. aureus*'dur. Diğer yangısal deri hastalıklarında izole edilen bakteriler *S. felis*, *Pasteurella multocida*, *Streptococcus canis*, *Pseudomonas aeruginosa*, *S. simulans*, *S. epidermidis*, *S. hyicus*, *S. xylosus*, *S. schleiferi* subsp. *schleiferi* ve *Bacillus* spp.'dir.

Belirtilen nedenlerle kedi ve köpeklerde bakteriyel deri hastalıkları oldukça önemlidir. Bu makale kapsamında kedi ve köpeklerin bakteriyel deri hastalıklarına neden olan başlıca etkenler sıralandı. Derideki bakteriyel kökenli yüzeysel enfeksiyonların sağaltımı için bölgesel antibiyotik uygulamalarının önemi, yüzeysel piyodermanın iyileşmesi için gerekli olan antibakteriyel uygulamalar ile ayrıca derin piyoderma ve yaygın ve şiddetli yüzeysel piyodermalar için gerekli olan sistemik antibakteriyel ilaç uygulamalarına yönelik son yıllara ait bilimsel kaynaklardan geniş kapsamlı bilgiler derlendi. Ayrıca klinisyen veteriner hekimlere pratik yönden kolaylık sağlaması bakımından, köpeklerde yüzeysel bakteriyel follikülitiste tercih edilecek antimikrobiyal ilaçlar, köpeklerde yüzeysel bakteriyel follikülitisin sağaltımında önerilen ilaçlar ve dozları, kedilerde bakteriyel deri hastalıklarında antimikrobiyal ilaç seçimi, kedilerde dermatitlerde kullanılan antimikrobiyal ilaçlar, dozları ve uygulama yolları, köpeklerde mikobakteriyel enfeksiyonlarda kullanılan antibiyotiklerin doz, uygulama yolları ve öneriler ile kedilerde mikobakteriyel enfeksiyonları sağaltmak için genellikle tercih edilen ilaçlarla ilgili önemli bilgiler ayrı ayrı tablolar halinde sunuldu.

Anahtar Kelimeler: Deri Hastalıkları, Antibiyotik Sağaltımı, Kedi, Köpek

ABSTRACT

The main reasons of pyoderma are ectoparasitic infestations, allergic skin diseases and hormonal diseases. The main reason in the recurrence of pyoderma is associated with allergic diseases. In dogs, the most pyodermas are associated with coagulase-positive staphylococci. The most common species is *Staphylococcus pseudintermedius*. Of other staphylococci, *S.*

aureus, *S. hyicus*, *S. schleiferi* are also isolated. Of other bacterial pathogens, *Pseudomonas aeruginosa*, *Proteus* spp., *Streptococcus* spp., *Burkholderia* spp. and *Escherichia coli*, of coagulase-negative staphylococci, *S. epidermidis*, *S. xylosum*, *S. lugdunensis*, *S. schleiferi* subsp. *schleiferi* and *Micrococcus* spp. can be isolated. In cats, bacteria isolated in the event of bacterial superficial pyoderma are *S. pseudintermedius* and *S. aureus*. The bacteria isolated in other inflammatory skin diseases are *S. felis*, *Pasteurella multocida*, *Streptococcus canis*, *Pseudomonas aeruginosa*, *S. simulans*, *S. epidermidis*, *S. hyicus*, *S. xylosum*, *S. schleiferi* subsp. *schleiferi* and *Bacillus* spp.

Bacterial skin diseases in cats and dogs with stated reasons are quite important. In the context of this manuscript, the main agents causing bacterial skin diseases of cats and dogs were aligned. Detailed knowledge was reviewed from scientific sources of recent years about the importance of local antibiotic applications for the treatment of superficial bacterial infections in the skin, antibacterial treatments required for recovering of superficial pyoderma and also systemic antibacterial drug applications required for deep pyoderma and extensive and severe superficial pyoderma. Also, in respect to providing veterinary clinicians with practical convenience, important knowledge was separately presented in tables with regard to antimicrobial drugs to be chosen in superficial bacterial folliculitis in dogs, drugs and their dosages recommended in the treatment of superficial bacterial folliculitis in dogs, antimicrobial drug choice in bacterial skin diseases in cats, antimicrobial drugs used, their dosages and administration ways in the events of dermatitis in cats, dose of antibiotics used, administration ways and recommendations in mycobacterial infections in dogs, and drugs generally chosen for treating mycobacterial infections in cats.

Keywords: Skin Diseases, Antibiotic Treatment, Cat, Dog

TRAITEMENT DES EFFLUENTS TEXTILE PAR DES PROCÉDÉS ÉLECTROCHIMIQUES COMBINÉS

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RÉSUMÉ

L'industrie textile produit quotidiennement des effluents difficiles à traiter par les procédés conventionnels. Ces eaux usées de textile peuvent contenir une diversité de colorant et aussi des molécules dangereuses et persistantes. Ces polluants doivent être éliminés avant d'être rejetés dans l'environnement. Dans ce travail, l'électrocoagulation (EC) et l'électro-oxydation, tels que la peroxy-coagulation (PC), l'oxydation anodique (OA), et électro-Fenton (EF), ont été couplés pour décontaminer ce rejet textile chargé en matières organiques toxiques dans des conditions optimales.

Les résultats trouvés, après la comparaison de différents couplages, montrent une bonne efficacité de traitement avec le procédé hybride EC-EF. Après 2h de minéralisation, les taux d'éliminations du carbone organique total COT, de la turbidité et de la couleur sont de 97%, 100% et 100% respectivement. Ainsi, une estimation de l'énergie consommée au cours de cette électrolyse a été calculée (0.45–1.5 kWh kg⁻¹ du COT éliminé). La caractérisation des boues générées lors du traitement EC à une densité de courant de 20 mA cm⁻² a été réalisée. Le procédé hybride EC-EF est efficace dans le traitement des effluents textiles et en vue de leur réutilisation dans l'arrosage des espaces verts.

MOTS CLES : Electrocoagulation, Electro-Fenton, COT, DCO, Effluents textiles.

EATING BEHAVIORS OF CHILDREN WITH SPECIAL NEEDS: A PILOT STUDY**Dr. Öğr. Üyesi Ülkü Demirci**

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Turkey**Hayrettin Mutlu**Istanbul Health and Technology University, Faculty of Health Sciences, Nutrition and
Dietetics, İstanbul, Turkey**ABSTRACT**

Psychosocial and abnormal determinants in children and adolescents with special needs can be effective in feeding behavior. In children with special needs, the development of food selection or hypersensitivity observed very often. Studies made with these, children with Down syndrome being obese or overweight prevalence of approximately 33.5% - 43.5% rate, the prevalence of malnutrition in children with cerebral palsy is approximately 22.2% - 78.2% in the rates of children diagnosed with autism spectrum disorder and it has been observed that children are more prone to be obese or overweight when compared to children with normal development. The number of studies in this field in our country is limited due to a variety of factor. Thus eating behaviour of individuals with special needs is not yet fully understood. The aim of our study was to evaluate children with special needs with the Eating Behavior Scale in children. The study sample consisted of 47 boys and 16 girls, ages between 6 and 18, who were clinically and cytogenetically diagnosed with developmental disorders and their legal guardians. The sample covers 6 different diagnostic groups (Down Syndrome, Mental Retardation, Autism Spectrum Disorder, Prader Willi Syndrome, Mental Syndrome, and Cerebral Palsy). Adaptation and validation of the Childhood Eating Behavior Questionnaire, used in our research, made by Yilmaz R, et al which gives the results of subscale score and total scale score. Our study was carried out at a private Integrated Physical Activity Center. Evaluation of research data is done with Spss 25.

The height, weight, and age average of the research participants were by order (133,33 cm \pm 18,9)(40,6kg \pm 19,49) and (10,71yrs \pm 3,319). Furthermore, the average Body Mass Index was (22,17 \pm 7,01) which is not within the recommended BMI values for children. There was no significant difference between the total nutritional behavior scores(P=0,155)) when the Eating Behavior Scale sub-scores according to gender and special needs groups were examined, the boys diagnosed with Cerebral Palsy groups had significantly higher Emotional Undernourishment Subscores and Picky Eating subscores compared to other children. No significant difference was found in girls according to their eating subscore and specific requirement type.

In children with special needs, adequate and balanced nutrition is one of the main factors that increase the quality of life and prevents the development of diseases. Eating behaviors may differ according to diagnosis. Especially in children with Cerebral Palsy, emotional undereating and food selectivity should be taken into consideration during the treatment period. Thus diet plans should be adjusted to provide more energy, balance metabolism, compensate for deficiencies and increase digestion. In addition, partial or total enteral/parenteral nutrition treatments should also be taken under consideration in case of

malnutrition, poor/unsafe oral intake or elevated needs, to provide adequate growth and development.

Key Words: special needs, nutritional behavior in children, obesity, malnutrition

VALORIZATION OF A NEW BIO FLOCCULENT IN THE FLOCCULATION COAGULATION PROCESS OF WATER LADEN WITH COPPER, ZINC AND SUSPENDED MATTER

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ABSTRACT

In this work we used a biodegradable organic flocculating agent that we extracted from natural seed, Furthermore it present considerable value in different domain such as cosmetics, medicine and food, on the other hand it doesn't affects human health. The main aim of this study is to use a biodegradable flocculent with Moroccan seed juice in physicochemical process (coagulation-flocculation) in order to treat liquid solution charged with suspended matter and heavy metals, especially zinc and copper. We also study the efficacy of that juice compared to the other product usually used for water treatment. The test were done on pseudo sample, prepared in the laboratory and in other one collected from marine environment subject to pollution. The comparative study with organic flocculent (sodium alginate) or synthetic flocculent (flocculent based on acrylamid and sodium acrylic), has showed a great competitiveness with appreciable flocculent coagulation with aluminum sulphate, followed by flocculation step using the new flocculating agent, than decanting operation has showed significant effect on the abatement of zinc, copper and suspended matter. The performance of elimination of metals exceed 70% for our bio flocculent, concerning the solution which is full of suspended matter (marl limestone and brown clay), the turbidity goes from about 400-600NTU to approximately 1NTU with 99% in performance.

Keyword: Coagulation-flocculation, heavy metal, copper, Zinc, Turbidity, suspended matter.

RESONANCE AND CANCELLATION PHENOMENA OF SIMPLY SUPPORTED PARTIALLY CLAMPED BEAMS: APPLICATION TO BRIDGES WITH BALLASTED TRACK

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ABSTRACT

Since the development of new railway lines of high speed; the dynamic response of bridges constitutes a subject interest of researchers and engineers; several Scientifics have investigated the resonance phenomena in railway bridges [1-4]; resonance phenomena occurs as the excitation frequency coincide with the proper frequency of the bridge. In this work the dynamic behavior of beams leaning on identical rotational springs subjected to the circulation of moving loads at constant speeds is investigated. The free vibration response of the beam when traversed by a single load is obtained analytically and the conditions for maximum response and cancellation in free vibration are derived and interpreted. Then the response of the simply supported partially clamped (SSPC) beam under series of equidistant loads is addressed focusing in the possibility of exciting resonance situations of the former for particular traveling velocities. Equating the conditions for resonance of a particular beam with that of maximum free response and cancellation under a single load, ratios of the bridge length and train characteristic distances leading to resonances of remarkable amplitudes or, contrarily, cancelled resonances are obtained. The possibility to predict both situations could be of especial interest in the set up of dynamic tests in experimental campaigns performed on High-Speed railway bridges.

Key words: resonance, cancellation, high railway bridge, partially clamped beam

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ELECTROCHEMICAL DEGRADATION OF AN ANIONIC DYE SOLUTION BY ANODIC OXIDATION PROCESS

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ABSTRACT

Recently, organic dye pollutants become a serious menace to the environment. Among them anionic dyes are considered as persistent organic pollutants (POPs). They present a real problem toward aquatic system due to the coloration of effluents and their side-effects such carcinogenicity, acute toxicity, and mutagenicity.

The so-called advanced oxidation processes (AOPs) are used recurrently in industrialized countries. They are considered as promising powerful methods for the removal of POPs from water. Generally, AOPs are based on the in-situ production of strong oxidants, mostly the hydroxyl radical (OH^\bullet). Anodic oxidation as clean and friendly method for the treatment of water and wastewater constitutes a direct way to produce OH^\bullet radicals, from water and without using chemicals, where electrons are the only reagents.

The aim of this work is to study the elimination of an anionic dye from water using anodic oxidation process. Different combination of electrodes was investigated in an undivided electrolytic cell. Parameters studied were the concentration of the electrolyte, the applied current density, the nature of electrodes, the initial pH, and the dye concentration. The performances were monitored in terms of color and TOC removals, the current efficiency, and the energy consumption.

Keywords: Advanced oxidation processes; Anodic oxidation; anionic dye; Degradation.

**MIKRODENETLEYICI TABANLI DÜŞÜRÜCÜ TIP DA-DA KONVERTÖRÜN
TASARIMI, BENZETİMİ VE UYGULANMASI**
**DESIGN, SIMULATION AND APPLICATION OF MICROCONTROLLER BASED
DC-DC BUCK CONVERTER**

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ÖZET

Enerji çağını yaşadığımız dönemde petrol, doğalgaz, güneş, rüzgâr gibi yenilenebilir enerji kaynaklarından elde edilen enerjinin yönlendirilmesi, kontrolü ve son kullanıcıya iletilmesi oldukça önemlidir. Özellikle güç elektroniği tabanlı güç kaynakları, enerji ihtiyacının yoğun olarak kullanıldığı sanayide ve tüketici elektroniğinde yaygın olarak kullanılmaktadır. Anahtarlama elemanlarının akım ve gerilim sınırlarının artması, anahtarlama hızlarının yükselmesi, devre elemanlarının boyutlarının küçülmesi ve ısı iletkenliklerinin iyileşmesi gibi yarı iletken teknolojisindeki hızlı gelişmeler daha verimli, ekonomik ve düşük maliyetli çözümler sunmaktadır. Güç elektroniği uygulamalarında yaygın olarak kullanılan devrelerden biri olan düşürücü tip da-da konvertörler (buck converter) giriş doğru gerilimini görev periyodu oranında düşürmektedirler. Bu tip konvertörler elektrikli araçlarda, led sürücülerde, batarya şarj cihazlarında, cep telefonları ve da motor sürücülerini gibi birçok alanda yaygın olarak kullanılmaktadırlar.

Bu çalışmada yaklaşık 10 Watt'lık mikrodnetleyici tabanlı düşürücü tip da-da konvertörün analizi, tasarım parametrelerinin seçimi ve benzetimi yapılmıştır. Konvertör tasarımında yüksek verim, düşük çıkış akım dalgalanması gibi dinamik performans özellikleri göz önünde bulundurulmuştur. Tasarlanan konvertörün *MATLAB@Simulink* ortamında benzetimi yapılmış ve benzetim sonuçlarının tasarım parametrelerine uyumluluğu kontrol edilmiştir. Altium Designer programından yararlanılarak konvertör PCB-kart tasarımı gerçekleştirilmiş ve deneysel sonuçlar ile tasarım kriterleri ve benzetim sonuçlarının doğruluğu ispatlanmıştır. Tasarlanan konvertörün dinamik performansını deneysel olarak inceleyebilmek için giriş güç kaynağı, tasarımı yapılan düşürücü konvertör ve mikrodnetleyiciden oluşan bir deneysel devre düzeneği kurulmuştur. Uygun anahtarlama işaretleri üretebilmek ve görev periyodu ayarlayabilmek için Texas Instruments firmasının yüksek performanslı mikro denetleyicilerinden olan *TI-C2000* serisi *F28379D DSC* kontrol kartı kullanılmıştır. Bu kartın analog girişlerine bir ayarlı direnç bağlanarak görev periyodu yazılımsal ve donanımsal olarak ayarlanmaktadır. Devrede giriş gerilimi haricinde PCB kartında bulunan mosfet sürücü

entegresini beslemek için gerekli olan $+V_{cc}=12\text{ V}$ gerilimi uygun entegreler kullanılarak PCB kart üzerinden sağlanmıştır. Tasarlanan konvertörün benzetim sonuçlarının gerçek sonuçlara çok yakın olduğu yüksek çalışma frekansı, düşük çıkış akım dalgalanması, sürekli akım modunda çalışması gibi önemli tasarım kriterlerini sağladığı gözlemlenmiştir.

Anahtar Kelimeler: Altium Designer, Düşürücü Konvertör, PWM kontrol, Matlab@Simulink

ABSTRACT

It is important to direct, control and finalize the energy obtained from renewable energy sources such as gasoline, natural gas, solar and wind in which we live in the energy age. Power supplies are widely used in industry and consumer electronics with high energy needs. Semiconductor technology offers more efficient, economical and low-cycle solutions in a short time, such as increasing the current and voltage limits of the switching elements, increasing the switching speeds, shrinking the size of the circuit elements and improving their thermal conductivity. The buck converter, which is one of the circuits commonly used in power electronics applications, reduces the input correct voltage over the duty period. These types of converters are widely used in electric vehicles, led drivers, battery chargers, mobile phones and motors.

In this study, the analysis, selection of design parameters and simulation of a 10 Watt microcontroller based step down type converter were made. Dynamic performance features such as high efficiency and low output current ripple have been taken into account in the converter design. The designed converter has been simulated in *MATLAB @ Simulink* environment and the compatibility of the simulation results with the design parameters has been checked. Using the Altium Designer program, the converter PCB-card design was realized and the accuracy of the experimental results, design criteria and simulation results were proven. In order to experimentally examine the dynamic performance of the designed converter, an experimental circuit setup consisting of the input power source, the designed step-down converter and the microcontroller was established.

TI-C2000 series *F28379D* DSC control card, which is one of the high-performance microcontrollers of Texas Instruments, was used to produce appropriate switching signals and to set the duty period. By connecting an adjustable resistor to the analog inputs of this card, the duty period is adjusted in software and hardware. The $+V_{cc} = 12\text{ V}$ voltage required to feed the mosfet driver integrated in the PCB board, except the input voltage in the circuit, was provided on the PCB board by using appropriate integrated circuits. It has been observed that it meets such important design criteria.

Keywords: Altium Designer, Buck Converter, PWM control, Matlab@Simulink

3D NUMERICAL SIMULATION OF SOUND WAVE PROPAGATION IN AIR

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ABSTRACT

The numerical simulation of the propagation of acoustic waves in three dimensions (3D) is carried out in this paper. The lattice Boltzmann method (LBM) is used in this work as a numerical approach to perform the simulation. The physical problem studied is a simple cubic cavity filled with air. The sound waves are generated by an acoustic point source placed in the center of this cavity. The found numerical results show that the waves emitted by the source propagate as spherical waves in the cavity. The LBM code employed is validated by comparing the obtained results with the published works for the case of the simulation of the lid driven cavity flows.

Keywords: Sound waves, Lattice Boltzmann method, 3D simulation.

SYNTHESIS AND CHARACTERIZATION OF PANI@WALNUT SHELL BIOCOMPOSITE AND ITS APPLICATION FOR EFFECTIVE REMOVAL OF ORANGE G DYE USING ADSORPTION IN DYNAMIC REGIME

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ABSTRACT

The aim of this work is the study of the dynamic adsorption of the anionic dye OG by the biocomposite (PANI/Walnut shells). This biocomposite was synthesized by chemical polymerization and characterized by FTIR and MEB. The influent pH, adsorbent amount, dye concentrations, and influent flow rate were variable parameters for the present study, which was followed by the absorbance measurement. PH 2 is the optimum value for total OG removal, elucidated by the electrostatic attraction of the anionic dye with the protonated amine group (NH₃⁺) of (PANI/WNS), with increasing adsorbent mass at 150 mg and a solution flow rate of 0,45 L/ min. The adsorption of Orange G dye onto (PANI/WNS) was better described by the pseudo-second-order-kinetic model and followed the Langmuir isotherm model.

Keywords: Dynamic adsorption, Orange G, PANI / walnut shells, biocomposites.

ÉVALUATION IN VIVO DE LA PATHOGENICITE CAUSE PAR *PHYTHOPYTHIUM VEXANS* CHEZ LE *MALUS DOMESTICA*

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RESUME

Dans les années 2018-2019 des graves dégâts ont été apparues sur des pommiers cultivées dans des vergers dans la région Fès-Meknès dont l'agent responsables été le *phythopythium vexans* . à fin d'évaluer le degré de pathogénicité que de confirmer que cet espèce est l'agent responsable de la maladie des pommiers . un test de pathogénicité à été réaliser sur 115 pommiers sains .deux blessures sur deux sites , le collet et la tige avec un foreur liège de 5mm remplie d'un bouchon mycélien coupé du bord d'une colonie fraîche cultivées sur PDA à 25°C pendant 7 jours .la taille et la couleurs des lésions nécrotiques induites par cet pathogène à été enregistrées 4 mois après l'inoculation , une analyse statistiques par le test du chi carré (x2) à été utiliser pour évaluer la prévalence de la maladie ainsi qu'une analyse de la variance (ANNOVA) à été appliquée à l'aide du logiciel statistique SPSS 5 (IBM SPSS STATISTICS 25) pour évaluer l'effet de l'inoculation des isolats .l'analyse statistique a montré un effet hautement significatif (P<0,0001) .de plus une différence significative à été observées entre les isolats pour tous les caractères évaluées , la gravité de la pourriture des racines variait de 70% à 100% .

ON GENERALIZATIONS OF HOPFIAN MODULES

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ABSTRACT

The study of modules by properties of their endomorphisms has long been of interest. In 1986, V. A. Hiremath, [3], introduced the name of Hopfian modules and rings. A bit later, in 1992, K. Varadarajan, [5], introduced the name of co-Hopfian modules and rings. In 2001, Haghany and Vedadi, [2], and in 2002, Ghorbani and Haghany, [1], respectively, introduced and investigated the weakly co-Hopfian (respectively generalized Hopfian) modules (i.e., every injective endomorphism has an essential image) (respectively every surjective endomorphism has a small kernel). In 2007, A. Hmaimou, A. Kaidi and E. Sánchez Campos, [4], introduced and investigated the Generalized Fitting modules. In this talk, we investigate some properties and some characterizations of Generalizations of Hopfian modules.

Keywords: Hopfian modules ; co-Hopfian modules ; weakly co-Hopfian modules ; generalized Hopfian modules ; Generalized Fitting modules.

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DIVERSITE DES BACTERIES LACTIQUES DES LAITS CRUS DE VACHE AU MAROC ORIENTAL

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RESUME

Les bactéries lactiques, naturellement présentes sur les matrices alimentaires, sont à l'origine de fermentations utilisées par l'Homme pour transformer les produits alimentaires, afin d'en modifier le goût, la texture, et/ou d'en améliorer la conservation. A l'issue de ce travail des prélèvements mensuels de lait cru ont été réalisés durant un période de vingt mois auprès des fermes et des centres de collectes des quatre villes de la région de l'orientale (Maroc) à savoir Oujda, Berkane ,Taourirt et Jerada. les souches lactiques ont été isolées sur milieu MRS et M17, puis purifiées. Les résultats des tests biochimiques, physiologique et le profil fermentaire ont montré la diversité de la flore lactique dont cents trente huit souches classés au genres suivante: *Lactococcus* (24,5%), *Streptococcus* (19%), *Leuconostoc* (18,2%), *Lactobacillus* (28,3%), *Pediococcus* (8%), et *Enterococcus* (2%).

La caractérisation des différentes espèces du genre bactérienne a permis d'identifier les sous espèces des souches lactiques: en premier *Lactococcus* (*Lc. lactis* subsp. *cremoris* : *Lc. lactis* subsp. *lactis*), suivi par les espèces de *Streptococcus salivarius* subsp. *Thermophilus* , *Streptococcus equinus*, et par la suite *Leuconostoc. mesenteroides* subsp. *mesenteroides* , *Leuconostoc. mesenteroides* subsp. *dextranicum*, et *Leuconostoc mesenteroides* subsp. *Cremoris*, suivie par *Lactobacillus delbrueckii* subsp. *Bulgaricus* ; *Lactobacillus plantarum*; *Lactobacillus delbrueckii* subsp. *Lactis*, *Lactobacillus brevis*; *Lactobacillus delbrueckii* subsp. *delbrueckii* , en quatrième position vient les *Pediococcus acidilactici*, *Pediococcus damnosus* , *Pediococcus Parvulus* , et en dernière *Enterococcus faecium*, *Ec. faecalis*, la caractérisation du profil aromatique ,épaississant, coaguler a été effectué par le test technologique et on a trouvé que les espèces suivants ont été les plus caractéristique . d'après cette étude les souches lactiques les plus fréquemment rencontrés sont surtout les coques (71,7%).

Mots Clés : Lait cru , *Streptococcus* , *Lactococcus* , *Leuconostoc*, *Lactobacillus* , *Pediococcus*, et *Enterococcus*.

PRINCIPAL COMPONENT ANALYSIS FOR INVESTIGATION OF RELATIONSHIP BETWEEN CHILDREN'S ASTHMA AND AMBIENT AIR POLLUTION

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ABSTRACT

Clean air is vital to our health and well-being. Economic activities such as transport, industry and agriculture produce pollutants for the environment and health. This polluted air we breathe affects our respiratory system and causes illnesses like asthma.

According to the WHO, air pollution is the 5th health risk factor after malnutrition, dietary risks, high blood pressure and smoking. It causes the premature death of seven million people worldwide each year. It is easy to understand that our lungs find it difficult to breathe polluted air, charged with all these oxides of sulphur and nitrogen, and especially these dangerous fine particles which, because of their microscopic size of the order of a micron, will lodge at the bottom of our pulmonary alveoli to commit their irreversible damage.

Asthma in infants is clinically defined as any episode of breathing discomfort accompanied by wheezing that has occurred at least three times since birth. Until today, we do not yet know the direct causes but on the other hand we know the factors favouring infant asthma, among these factors is air pollution. Among the air pollutants that may have adverse effects on the respiratory system include sulphur dioxide, nitrogen dioxide and particulate matter.

The purpose of this work is to study the impact of ambient air pollution on asthma in Moroccan infants under 1 year old using principal component analysis.

Keywords: Principle Component Analysis, Children's Asthma, Ambient Air Pollution

A FACILE APPROACH TO SYNTHESIZE MULTIFUNCTIONAL COATED PET TEXTILE FABRIC: CHARACTERIZATION AND APPLICATION

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ABSTRACT

The development of advanced functional textile fabrics has gained tremendous interest over the last few decades, due to their tunable properties such as high flexibility, electrical conductivity, hydrophobicity, antibacterial activity and so on[1]. The properties of textile fabrics can be adjusted and manipulated by using coating and reinforcing agents.

The aim of this study[2] is the elaboration of polyester fabric (PET) coated organophilic graphene nanosheets (OGN), using simple dip-coating approach. The OGN was successfully synthesized and functionalized by covalently grafting a long chain fatty amine onto the GO nanosheets. FTIR results revealed the formation of an amide bond between graphene oxide's (GO) functional groups and the OctadecylAmine (ODA) molecules through an amidation reaction. Organic solvent-based dispersion experiments showed that the organophilic graphene nanosheets exhibit a very good dispersion. OGN exhibit a very good dispersion in organic solvents forming a stable and homogeneous suspension. Modified PET loaded with different OGN contents, ranging from 1 to 7 wt.% were successfully prepared and characterized by several physicochemical techniques. FTIR has confirmed the formation of strong interfacial interaction between the PET and OGN functional groups. The modified PET resulted achieving enhanced thermal stability as well as excellent water repellency compared to the pristine PET. Water contact angle measurements showed a tremendous enhancement of surface hydrophobicity up to 148°. The produced PET fabric showed that it could be used for oil-water separation application with separation efficiency in absorbing oil from water-oil mixture of more than 5 times its weight. The obtained results are very promising in terms of producing multifunctional PET fabrics with improved properties, using a facile and scalable approach.

Keywords: Amidation, Functionalization, Graphene, Hydrophobic, Organophilic.

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THE CURRENT STATUS OF ORGANIC ANIMAL HUSBANDRY PRODUCTION IN TURKEY

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ABSTRACT

Today, organic husbandry production is increasing all over the world. It is necessary for human nutrition in terms of protein in organic animal foods as in conventional animal foods. Organic livestock breeding; It is an activity carried out by applying the principles deemed to be appropriate by the organic agriculture regulation. Organic husbandry breeding; This activity has become widespread across the world, especially as it feeds animals with organic food, as antibiotics and additives are not used.

A total of 186 countries have practice organic agriculture around the world. Among these countries, 103 countries have organic regulations. According to 2018 data, 71.5 million hectares of organic farming exist in the world. Oceania ranks first with 36 million hectares, followed by Europe with 15.6 million hectares, and Latin America with 8 million hectares. There are 2.8 million organic farming producers in the world. Of these, 1.3 million producers are in Asia, 806,000 producers are in Africa, and 418,610 (Turkey 79.563) in Europe. Organic livestock activities have started with the first organic beekeeping in Turkey. It developed with organic cattle breeding and organic sheep farming and poultry breeding later on.

Organic Farming Information System in Turkey (OTBİS) According to the data of 2019 the number of organic sheep 17.184, 5.543 Number of cattle, poultry number is 848.619. Turkey has a total of 184 producers dealing with organic animal husbandry.

Turkey has a high potential for organic husbandry farming; Therefore, it can be expanded further with incentive packages and projects that can be made with the private sector. Animal husbandry are mostly carried small farming families living in rural areas in Turkey.

The ratio of organic husbandry products is low due to low-income consumers and the lack of awareness in the society about organic agriculture. Some activities should be carried out to increase the number of conscious consumers. In addition by increasing these incentives, migration from rural to urban can be reduced due to low family income in rural areas.

Key words: organic, organic husbandry, Turkey, organic husbandry production

ÉTUDES INTÉGRÉES 3D-QSAR, DOCKING MOLÉCULAIRE ET DE SIMULATION DE LA DYNAMIQUE MOLÉCULAIRE SUR DES DÉRIVÉS À BASE DE 1,2,3-TRIAZOLE POUR LA CONCEPTION DE NOUVEAUX INHIBITEURS DE L'ACÉTYLCHOLINESTÉRISE POUR LA MALADIE D'ALZHEIMER

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RESUME

La maladie d'Alzheimer est un trouble neurodégénératif progressif caractérisé par une perte de la cognition et une altération des capacités et des fonctionnalités intellectuelles. En fait, il n'existe pas à l'heure actuelle d'agents anti-Alzheimer capables de traiter cette maladie de manière définitive. Il existe plusieurs cibles médicamenteuses qui seraient capables de contrôler la sévérité de la maladie d'Alzheimer, parmi lesquelles l'enzyme acétylcholinestérase est considérée comme une bonne cible médicamenteuse pour cette maladie. Par conséquent, la présente étude visait principalement à découvrir de nouveaux dérivés à base de 1,2,3-triazole comme inhibiteurs potentiels de l'acétylcholinestérase par le biais de plusieurs approches computationnelles. Un ensemble de données de dérivés à base de 1,2,3-triazole, précédemment synthétisés et évalués pour une activité inhibitrice de l'acétylcholinestérase, a été étudié à l'aide d'une étude quantitative tridimensionnelle de la relation structure-activité (3D-QSAR), révélant les principaux facteurs structurels des inhibiteurs de l'acétylcholinestérase. En outre, le docking moléculaire et la simulation de la dynamique moléculaire ont été explorés pour révéler le mode de liaison entre les molécules sélectionnées et le récepteur de l'acétylcholinestérase. La génération de modèles de 3D-QSAR suivis de sa validation a montré une bonne puissance prédictive pour les valeurs expérimentales. Les caractéristiques moléculaires fournies par les cartes de contour 3D-QSAR ont été très utiles pour la conception de six nouveaux molécules ayant une activité prédite élevée. Les molécules conçues ont été ensuite soumises à une étude de simulation dynamique moléculaire assistée par le docking et comparées au molécule la plus active. Les résultats de docking et de simulation dynamique moléculaire ont montré une corrélation satisfaisante avec l'étude 3D-QSAR. La comparaison a montré que les molécules conçues combinées à l'acétylcholinestérase étaient plus stables que la molécule la plus active. Les résultats fourniraient des indications précieuses pour la conception de nouveaux inhibiteurs de l'acétylcholinestérase à l'avenir.

Mots clés: Pharmaceutical chemistry, 3D-QSAR, docking moléculaire, simulation de la dynamique moléculaire, acétylcholinestérase, maladie d'Alzheimer

ERİTROPOİETİNİN IN VİTRO EMBRİYO GELİŞİMİ VE OKSİDATİF STRES ÜZERİNE ETKİSİ

EFFECTS OF ERYTHROPOİETİN ON IN VITRO EMBRYO DEVELOPMENT AND OXİDATİVE STRESS

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ÖZET

Çalışmanın konusu, in vitro sığır embriyolarının gelişiminde kültür medyumlarına katılan eritropoietinin antioksidan etkinliği ve embriyo gelişimi üzerine etkisinin araştırılması olmuştur. Çevre mezbahadan alınan inek ovaryumları antibiyotik (gentamisin 100 mg/L) içeren fizyolojik tuzlu su (%0,9) içerisinde ve 30°C'lik sıcaklıkta 2-3 saat içerisinde laboratuvara getirildi. Çalışmada, mezbahadan sağlanan ovaryumlardan toplanan A ve B kalite oositler kullanıldı. Foliküllerden (2-8 mm çapında) immatür oositler 18 G enjektör ile aspire edildi. 2-3 kat kumulus hücre katmanı içeren oositler seçilerek in vitro embriyo üretim periyoduna alındı. Oositlerin maturasyonu için %10 FCS + 2µg/ml FSH ilave edilen TCM-199 kullanıldı. Maturasyondan sonra kumulus ekspansiyonu görülen oositler donmuş/çözülmüş sperma ile Brackett Oliphant (BO) medyumunda 5-6 saat fertilizasyona tabi tutuldu. Oositlerin in vitro maturasyonu ve fertilizasyonu sonrası, eritropoietinin farklı dozlarının (0,5 µg, 0,25 µg, 0,125 µg /ml) ilave edildiği ve eritropoietin ilave edilmemiş (antioksidansız) Charles Rosencrans (CR1aa) embriyo kültür medyumunda kültür periyoduna alınan embriyoların gelişim aşamaları takip edildi. Kültürün ikinci günü cleavage kontrolü, devam eden yedinci gün ise morula-blastosit oranları ve biyokimyasal parametreler değerlendirildi. Morula ve 48. saat bölünen oosit oranları bakımından gruplar arasındaki farklılık önemli iken, diğer özellikler için gruplar arası farklılıkların istatistiksel olarak önemsiz olduğu tespit edildi (p>0,05).

Anahtar kelimeler: Antioksidan, embriyo, eritropoietin, in vitro, oksidatif stres

ABSTRACT

The objective of the present study was to investigate the effect of erythropoietin added to culture media on oxidative stress and the development of in vitro bovine embryos. Cow ovaries provided from local slaughterhouses were transported to the laboratory in transport medium, consisting of physiological saline (0.9%) and antibiotic (gentamicin 100 mg/L), at 30°C within 2-3 hours. In the study, A and B quality oocytes collected from ovaries obtained from the slaughterhouse were used. Immature oocytes were aspirated from follicles (2 to 8mm in diameter) with a 18-G needle. Cumulus-oocyte complexes with more than two or three compact layers of cumulus cells were selected, then taken into in vitro embryo production period. TCM-199 containing 10 % FCS + 2µg/ml FSH were used for oocyte maturation. After maturation, oocytes with cumulus expansion were fertilized in vitro with a sample of frozen-thawed semen in Brackett Oliphant (BO) medium for 5-6 h. Following their in vitro maturation and fertilization, the oocytes were cultured in Charles Rosenkrans medium (CR1aa) containing different doses of erythropoietin (0,5 µg, 0,25 µg, 0,125 µg /ml) and

without erythropoietin (no antioxidant) and were monitored for embryonic development. Cleavages were checked on the second day, blastocyte ratios and biochemical parameters were evaluated on the seventh day. Morula and 48th hour cleaved oocyte ratios were significantly different between groups whereas differences regarding the other parameters were insignificant ($p>0,05$).

Keywords: Antioxidant, embryo, erythropoietin, in vitro, oxidative stress

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MANGANESE PHOSPHATE ELECTRODES FOR HIGH ELECTROCATALYTIC AND PHOTOELECTROCATALYTIC DEGRADATION OF RHODAMINE B

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ABSTRACT

The increase in industrial discharges into nature leads to pollution of the environment. Among these releases, those from the textile industry, loaded with dyes, are responsible for nuisances since most of them are toxic and not biodegradable. The use of synthetic dyes products (Rhodamine B as example) in our lives is getting more and more in progress, which became an issue and getting a considerable interest in the research area of organic pollutant removal for environmental remediation.

In this context, we have electrochemically deposited manganese phosphate films on the FTO substrate and used them as an active photoanode to oxidize a model dye (RhB). The synthesized phase is characterized using X-ray diffraction and Scanning Electron Microscope and Energy Dispersive Spectrometry. X-ray diffraction patterns showed the appearance of peaks in our manganese phosphate phase, SEM analysis revealed a sheetlike morphology of size 9µm. The second part of this work focuses on the use of developed layers for the electrochemical degradation and photoelectrodegradation of organic pollutants (Rhodamine B). The degradation was followed by UV-Visible spectrophotometry. The analysis showed that we successfully decolorized 91% of the RhB by electrodegradation and 95% by photoelectrodegradation in 33 minutes, the photoanode displayed a superior photoelectrodegradation efficiency. This last is due to the synergetic effect induced by combining electrodegradation with UV-light energy.

Keywords: photoelectrodegradation, electrodegradation, rhodamine B, Manganese phosphate, photoanode.

DUAL LEAP MOTION CONTROLLERS FUSION FOR RECOGNITION OF ARABIC SIGN LANGUAGE

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ABSTRACT

Sign language is the language of hearing-impaired people used for communication between deaf-deaf or deaf-normal individuals which is different from spoken natural languages in that it is a language of signs and gestures in which words are produced using hands movement, shoulders' movements, head nodding, and facial expressions to convey meaning. According to the most recent statistics of the world health organization is estimated that by 2050 more than 900 million people around the world which is one in ten people will suffer from hearing loss. Across the world, most vocal people do not understand sign language, hence deaf people are daily facing a lot of obstacles with the rest of society. Hence, researchers look for a way to develop a system capable of translating sign language into words and sentences to be an interface between hearing-impaired and normal persons to overcomes the gap between them.

Sensor-based and Image-based systems are two traditional approaches that have been used in the literature. Each of the two approaches has its disadvantages. In this system, we work on freeing the users from performing the signs under limiting environmental conditions or wearing a cumbersome electronic glove. We proposed a novel approach capable of recognize and translating 70 signs from Arabic sign language into words using a pair of an affordable and small device called leap motion controller (LMC), using both front and side controllers to cater to the challenges of finger occlusions and missing data. This device detects and tracks the hand and fingers to provide position and motion in a high frame rate. For classification, we used Linear Discriminant Analysis (LDA) for individual LMCs, and we used Dempster-Shafer's theory to combine pieces of information from two leap motion controllers at the classifier level which further enhances the performance.

Keywords: Arabic Sign Language, Leap Motion Controller LMC, Linear Discriminant Analysis LDA, Dempster-Shafer Theory

**GROWTH OF THINS FILMS COMPOSITES SEMICONDUCTORS MATERIALS:
Cu₂CoxZn_(1-x)SnS₄ and (Ag_xCu_(1-x))₂ZnSnS₄ VIA SINGLE STEP FREE
SULFURIZATION ON TRANSPARENT CONDUCTIVE OXIDES BY
ELECTRODEPOSITION FOR PHOTOVOLTAIC APPLICATION**

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ABSTRACT

CZTS is a semiconductor metal chalcogenide material known by kesterite, with the structural formula Cu₂ZnSnS₄[1]. Unlike the quaternary semiconductor CIGS (CuInGa(S/Se)₂), which is an efficient material but whose toxicity and the scarcity of the elements gallium, indium and selenium which constitute it are slowing down its development and its industrialization. Kesterite and thanks to its harmlessness and the simplicity of its components has acquired great importance in energy slides and photovoltaic applications and has attracted the attention of several researchers.

Much research has been done on the development of the CZTS composite by various synthetic methods. However, the efficiency of the CZTS-Se solar cell (~12.6%) is much lower than that of the CIGS solar cell (~22.6%), contrary to what is theoretically predicted by the Shockley-Queisser limit (SQ) which postulates that the effectiveness of CZTS can be as high as 32.2%. Many studies conclude that the deficit in Voc (open circuit potential) is the main problem which prevents the achievement of the greatest efficiency, this obstacle comes mainly from the non-radiative recombination of charge carriers photo-generated in the secondary phases (intrinsic faults: Zn_{Cu}, Cu_{Zn})[2].

In order to minimize the defects of anti-sites (Cu_{Zn}, Zn_{Cu}) in CZTS, we opted for elaboration by partial and total substitution of Cobalt (Co) by Zinc (Zn), and of Silver (Ag) by Copper (Cu) in CZTS; Cu₂Co_xZn_(1-x)SnS₄ (CCZTS) and (Ag_xCu_(1-x))₂ZnSnS₄ (ACZTS). The electroplating method has been chosen and successfully used to prepare these quaternary chalcogenide materials due to the low temperature involved, its simplicity and its ability to study electrochemical behaviours, in order to understand the mechanisms of co-electrodeposition between the elements to be deposited.

Keywords: Cu₂ZnSnS₄ thin film, Electrodeposition, Substitution, Absorber layer, Applied potential.

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EFFECT OF TEMPERATURE ON BARRIER HEIGHT AND SERIES RESISTANCE OF Ti / p-Si SCHOTTKY CONTACT

Ti / p-Si SCHOTTKY KONTAĞININ ENGEL YÜKSEKLİĞİ VE SERİ DİRENCİ ÜZERİNDE SICAKLIĞIN ETKİSİ

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ÖZET

Ti/p-Si Schottky diyotun elektriksel özellikleri 80 K- 300 K sıcaklık aralığında ve 20 K'lik adımlarla akım-gerilim ($I-V$) karakteristiği sıcaklığın bir fonksiyonu olarak incelenmiştir. İdealite faktörü (n), engel yüksekliği (Φ_b) ve seri direnç (R_s) gibi temel diyot parametreleri elektriksel ölçümlerden hesaplanmıştır. $I-V$ metoduyla ve Norde fonksiyonu ile idealite faktörü (n), engel yüksekliği (Φ_b) ve seri direnç (R_s) hesaplanarak karşılaştırılmıştır. İdealite faktörü, engel yüksekliği ve seri direnç parametreleri sıcaklığa güçlü bir şekilde bağlıdır. $I-V$ metoduyla idealite faktörü 1.43 (300 K) – 3.77 (80 K) ve engel yüksekliği 0.738 eV (300 K) – 0.267 eV (80 K) aralığında elde edilmiştir. $I-V$ metoduyla hesaplanan idealite faktörü artan sıcaklık ile azalmış ve engel yüksekliği ise artan sıcaklık ile artmıştır. Norde fonksiyonu ile hesaplanan engel yüksekliği 0.782 eV (300 K) – 0.370 eV (80 K) ve seri direnç 16.17 k Ω (300 K) – 266.13 k Ω (80 K) aralığında bulunmuştur. Norde fonksiyonu ve $I-V$ metodundan hesaplanan engel yükseklikleri birbirinden farklı çıkmıştır. Çünkü Norde fonksiyonları $I-V$ karakteristiğinin düz beslem tarafındaki akım- gerilim grafiğinin tümüne uygulanır.

Anahtar Kelimeler: Schottky diyotlar, engel yüksekliği, p-Si, Norde fonksiyonu.

ABSTRACT

The electrical properties of the Ti / p-Si Schottky diode were examined in the temperature range of 80 K-300 K and the current-voltage ($I-V$) characteristic in 20 K steps as a function of temperature. The basic diode parameters such as ideality factor (n), barrier height (Φ_b) and series resistance (R_s) were calculated from electrical measurements. The ideality factor (n), barrier height (Φ_b) and series resistance (R_s) were calculated and compared with the $I-V$ method and the Norde's functions. The ideality factor, barrier height and series resistance parameters are strongly temperature dependent. With the $I-V$ method, the ideality factor was obtained between 1.43 (300 K) - 3.77 (80 K) and barrier height was obtained between 0.738 eV (300 K) - 0.267 eV (80 K). The ideality factor and barrier height calculated by the $I-V$ method decreased with increasing temperature and increased with increasing temperature, respectively. The barrier height calculated by the Norde function was found to be between 0.782 eV (300 K) - 0.370 eV (80 K) and the series resistance between 16.17 k Ω (300 K) - 266.13 k Ω (80 K). The barrier heights calculated from the Norde's functions and the $I-V$ method are different from each other. because the Norde's functions are applied to the full forward bias $I-V$ characteristics of the junctions.

Keywords: Schottky diodes, barrier height, p-Si, Norde's function.

A NEW ADAPTIVE MPPT FOR A STANDALONE PHOTOVOLTAIC GENERATION SYSTEM

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ABSTRACT

The production of electrical energy from renewable energies has become a hot topic. This work proposes a new MPPT for a photovoltaic system based on the fuzzy logic approach. The studied system consists of a PV generator, a DC-DC Boost converter, a full H-bridge single-phase inverter, (LC) filter and the load. To extract the maximum power from the PV generator we have used a new proposed MPPT based on Variable Step Size P&O. In addition, the complete inverter topology of the H-bridge as well as two control loops; a voltage control loop and a current control loop are used as a link between the system and the load. To reduce parasites in the form of voltage and current, a passive second-order filter with an inductance capacitor (LC) has been designed. The various simulation results have shown the efficiency of the system. Implementation of the system is done by Matlab/Simulink Software and relevant results are discussed.

Keywords: photovoltaic system, fuzzy logic approach, DC-DC Boost converter, full H-bridge single-phase inverter, Variable Step Size P&O, load.

MODÉLISATION DE LA SURFACE D'ÉNERGIE POTENTIELLE DE LA GLYCINE NEUTRE ET PROTONÉE PAR L'ALGORITHME GÉNÉTIQUE MULTI-NICHE CROWDING

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RÉSUMÉ

L'algorithme génétique basé sur la méthode Multi Niche Crowding (MNC) est utilisé avec les méthodes semi-empiriques AM1 et PM3 pour parcourir la surface d'énergie potentielle (PES) de la glycine neutre et protonée.

L'algorithme est implémenté sous forme de paquet de programmes interfacés avec MOPAC dans le but d'évaluer la qualité de l'individu à insérer dans la population à chaque itération. Le critère d'évaluation étant bien entendu l'énergie de la molécule (la chaleur de formation dans notre cas). Les méthodes semi-empiriques AM1 et PM3 sont utilisées séparément pour accomplir cette tâche.

Une comparaison avec les résultats disponibles dans la littérature pour la glycine neutre en AM1 et PM3 a montré la capacité de l'algorithme à bien décrire la PES de la glycine en semi-empirique.

Les deux méthodes AM1 et PM3 ont localisées six minima sur la PES de la glycine neutre et sept sur celle de glycine protonée, dont trois sont ceux de la forme protonée sur l'azote et quatre ceux de la forme protonée sur le carbonyle.

Mots clés: Algorithme génétique, MNC, recherche multimodale, PES, AM1, PM3.

DISCOVERY NEW 3, 5-DISUBSTITUTED INDOLE DERIVATIVES AS HEMATOLOGICAL ANTICANCER AGENTS, USING 3D-QSAR, MOLECULAR DOCKING AND DRUG-LIKENESS STUDIES

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ABSTRACT

The World Health Organization (WHO) considers cancer as the deadliest disease, according to the increase in the death in the 21 century. In the search of new therapeutic molecules, scientific researchers consider the proviral integration moloney (Pim) kinases as promising therapeutic targets for the treatment of hematological cancers. A series of thirty-four 3,5-disubstituted indole derivatives identified as potent Pim1 kinase inhibitors were studied based on the three-dimensional quantitative structure-activity relationship (3D-QSAR). This study was built using comparative molecular field analysis and comparative molecular similarity indices analysis models. The generated models were in accordance with the model acceptance criteria. The obtained contour maps specify the types of groups that can be added to increase the activity. Based on these findings, four compounds were designed, showing high inhibitory activity. Docking molecular, as an important method, is performed for exploring the interactions between the ligand and the proviral integration moloney -1 kinase protein (PDB ID: 5DWR). The designed compounds exhibit favorable interaction while the most active compound in the database showed unfavorable interactions. The newly proposed compounds validated the Lipinski's rules, showing good results, and they are not toxic (AMES toxicity). These compounds are important against hematologic cancer and all of them are easy to synthesize.

Keywords: Indole based derivatives, Hematological cancer, 3D-QSAR, Molecular docking, Drug-Likeness.

LIGNIN AND VEGETABLE OIL BASED POLYURETHANE AS PROMISING COATING FOR CONTROLLED-RELEASE NPK FERTILIZERS**Abdelouahed El gharrak,^{1,2} Younes Essamlali,¹ Mohamed Zahouily^{1,2}**¹Moroccan Foundation for Advanced Science, Innovation and Research (MASciR). Rabat Design, Rue Mohamed El Jazouli, Madinat Al Irfane 10100 Rabat. Morocco.²Laboratoire de Matériaux, Catalyse et Valorisations des ressources naturelles, Faculté des Sciences et Techniques, Université Hassan II, Mohammedia B. P. 146, 20650, Morocco.**ABSTRACT**

To meet the ever-increasing food commodities needs of a constantly rising human population, farmers worldwide will need to increase crop production, either by increasing the amount of agricultural land to grow crops or by enhancing crop yields through the use of mineral fertilizers [1,2]. In this context, fertilizers are the most important vital input materials for crop production. They are applied to the soil in order to provide nutrients to the plants and to increase or sustain an optimal crop yield. The most reliable and effective way to make the availability of nutrients coincide with plant requirements is by controlling their release into the soil solution by using a water insoluble semi-permeable coating material. Goals for these outer coating is to supply nutrients gradually and synchronize nutrients (N, P, K...) availability with crop requirement, thus improving nutrient use efficiency, improving crop yields, and decreasing nutrient losses through leaching and volatilization.

In the present study, a novel bio-based coating formulations for NPK fertilizer mainly consisting bio-resourced elastic polyurethane (PU) were successfully developed using low-cost, biodegradable, and renewable resources. PU formulations were formulated from a vegetable oil polyol and oxpropylated lignin through a condensation reaction using toluene diisocyanate (TDI) as a source of isocyanate. Formulations were firstly casted into Petri dish to yield the corresponding PU film and then differently characterized using various physicochemical techniques (TGA-DTG, DSC, WCA, SEM, moisture uptake, water uptake, and WVP) to determine their physicochemical properties and to determine whether the chosen polymers are appropriate as a coating material. The results showed that the bio-based polyurethane (PU) coating efficiently delayed the nutrient release in water and contribute to hold water by improving the water holding capacity of the soil.

Keywords: Bio-based elastic polyurethane, lignin polyol, vegetable oil polyol, coating formulation, controlled release fertilizer, sustained nutrient release.

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ACTIVE INTELLIGENT PACKAGING FILM BASED ON CHITOSANE/PVP NANOCOMPOSITE CONTAINING EXTRACTED ANTHOCYANIN, REINFORCED WITH SULFUR NANOPARTICLES**O.DARDARI^{1,2}, O.AMADINE², M. ZAHOUILY^{1,2*}**

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ABSTRACT

A new strategy to avoid food spoilage is the use of intelligent and active food packaging. These are defined as barrier films that have the property of preventing or delaying food spoilage and are able to predict quality changes by different mechanisms. In this study pH-sensitive chitosan/poly (vinyl pyrrolidone) (CS/PVP) functional films were prepared by incorporating anthocyanin extracted from red cabbage (ATC) and sulfur nanoparticles (SNPs). The additives and prepared films were characterized by FTIR, SEM, TGA, mechanical tests and contact angle analysis. The performance of the developed films was studied by antioxidant activity using DPPH test, water absorption, moisture absorption, water vapor permeability and UV barrier. The results showed that the sulfur nanoparticles were successfully synthesized, FTIR analysis showed that the ATC interacted with the CS/PVP matrix through electrostatic interactions, tensile strength, water vapor permeability, moisture absorption, Light transmission and film transparency decreased after the addition of SNPs, while ATC-containing films exhibit remarkable antioxidant activity compared to virgin CS/PVP film, and have the ability to change color from red to green with pH variations ranging from 2.0 to 12.0. These results indicated that CS/PVP-ATC films containing sulfur nanoparticles (SNPs) can be used as a multifunctional food package capable of predicting quality changes while extending the shelf life of food products.

Keywords: Chitosane; poly (vinyl pyrrolidone); anthocyanin; Sulfur nanoparticles; pH-responsive; Color change.

KINETIC AND ISOTHERM STUDIES OF THE REMOVAL OF METHYLEN BLUE FROM AQUEOUS SOLUTION BY THE MORROCAN NATURAL CLAY

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ABSTRACT

To better understand the application of the Moroccan natural clay as an adsorbent for the removal of MB from dyes-contaminated water, in this paper, raw clay was used to adsorb MB dye from aqueous solution under various conditions. The rate of adsorption was investigated under various parameters such as ionic strength, pH, initial concentration of pollutant and temperature. Adsorption rate increased with the increase in initial concentration, pH and temperature. Kinetic study showed that the adsorption process of MB dye on natural clay follows the pseudo-second-order kinetic model. The equilibrium adsorption results of MB dye on the natural clay were well adjusted by the Langmuir model.

Keywords: Adsorption, MB dye, Moroccan natural clay, adsorption kinetics, isotherm.

**NOVEL ENVIRONMENTALLY FRIENDLY SUPERABSORBENT HYDROGELS
BASED ON SODIUM ALGINATE REINFORCED WITH CARBOXYLATED
CELLULOSE NANOCRYSTALS: SYNTHESIS, CHARACTERIZATION AND
STUDY OF THE SWELLING PROPERTIES****A.EL IDRISSE^{1,2}, Y.ESSAMLALI², M. ZAHOUILY^{1,2*}**¹ Laboratory of Materials, Catalysis & Valorization of Natural Resources, Faculty of Sciences and Techniques Mohammedia, University Hassan II, Casablanca, Morocco.² MAScIR Foundation, INANOTECH, VARENA Center, Rabat Design, Rue Mohamed El Jazouli, Madinat El Irfane 10100-Rabat, Morocco**ABSTRACT**

Superabsorbent hydrogels are a class of materials having a cross-linked three-dimensional polymeric network that can absorb and retain large quantities of water without dissolving or losing their own structural integrity[1]. High swelling capacity, good water retention capacity and biodegradability are superior properties of superabsorbent hydrogels, which allow them to have potential applications in various fields such as agriculture and horticulture drug delivery, wastewater treatment and hygiene products[2].

In this study, a novel superabsorbent nanocomposite hydrogel was prepared via free radical polymerization of between sodium alginate, acrylic acid, acrylamide using carboxylated cellulose as a hydrophilic nano-reinforcing agent. The maximum swelling degree of the hydrogels and the swelling rate constant were optimized as a function of the hydrogel's composition (the % of grafting of acrylic acid, acrylamide in the polymer mixture and the amount of crosslinking agent), the crosslinking reaction conditions and the amount of the nano-reinforcing agent. Superabsorbent hydrogels were fully characterized by various techniques including FTIR, TGA-DTG and DSC. The effects of crosslinker, neutralization degree of acrylic acid and cellulose nanocrystals content on water absorbency of the superabsorbent were also studied and optimized. The swelling behavior of hydrogels in aqueous solutions at various pH (2-12) and different saline solutions such as NaCl, CaCl₂ and FeCl₃ as well as swelling kinetics were investigated. Superabsorbent nanocomposite showed greater equilibrium swelling capacity (316 ±10 g/g) compared with neat hydrogel (260 ± 8 g/g). Superabsorbent nanocomposite exhibited high water retention capability, making it more efficient water-saving material for agricultural and horticultural applications.

Keywords: Sodium alginate, Cellulose nanocrystals, Superabsorbent, Nanocomposite, Water absorbency; Swelling kinetics.

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AN EXPERIMENTAL STUDY ON MECHANICAL PROPERTIES OF SANDWICH COMPOSITES USED IN WIND TURBINE BLADES

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ABSTRACT

The grid-scored foams are often used in the production of curved sandwich design such as outer shell of wind turbine blades. It is known that the such cores contributes significantly to the overall mechanical properties of these sandwich structures, which are subjected to different loads under operating conditions. The goal of this study is to investigate the flatwise; edgewise compression and in-plane shear properties of sandwich beams composed of composite face sheets of E-glass/vinyl ester and grid-scored PVC foam core. Sandwich composites were fabricated by vacuum assisted resin transfer method. Two different types of PVC foam were chosen in the production of sandwich samples: the effect of using grid-scored structure was compared with that of rigid core. Compression and shear tests of the samples were carried out according to ASTM standards. The flatwise compression strength of samples containing grid-scored foam increased by 546% compared to those containing rigid PVC foam. This result showed that the flatwise compression stress to induce core crushing was greatly increased by the resin-filled channels. Under the edgewise compression load, the grid-scored structure increased the maximum load values by only about 2.9% relative to the rigid foam structure. The reason for this small difference can be addressed as the face sheets are more effective in carrying the edgewise loadings. With the use of the grid-scored foam, an increase of 38.2% was obtained in-plane shear strength compared to rigid foamed sandwich beams. It was concluded that the resin filled channels improved adhesion between the face sheets and foam core.

Keywords: Sandwich composite, grid-scored foam, shear, compression

ASSESSMENT OF DROUGHT TOLERANCE IN ELEVEN POMEGRANATE CULTIVARS UNDER FIELD CONDITIONS**Atman ADIBA^{1,2}, Jamal CHARAFT¹, Abdelmajid HADDIOU², Mohamed ALGHOUM¹ Anas HAMDANI¹, Rachid RAZOUK^{1*}**¹National Agricultural Research Institute, BP 578, Meknes, Morocco²Laboratory of Biotechnology and Valorisation of Plant Genetic Resources, Faculty of Sciences and Techniques, University of Sultan Moulay Slimane, BP 523, Beni Mellal, Morocco**ABSTRACT**

The aim of this study was to assess eleven Mediterranean pomegranate (*Punica granatum* L.) cultivars for drought tolerance based on their responses to severe water stress, under field conditions in Sais Plain (NW Morocco): Bzou, Djebali, Gjeibi, Gordo De Jativa, Grenade Jaune, Grenade Rouge, Mollar Osin Hueso, Ounk Hmam, Sefri, Zheri Automne and Zheri Precoce. Two water treatments were applied in each cultivar from flowering stage to harvest (May to October): a control treatment irrigated at 100% of seasonal ET_c (FI), and a continuous deficit treatment irrigated at 50% of ET_c (CDI). The cultivars were assessed for eighteen agronomic traits regarding production, vegetative growth and trees water status under FI and CDI. Clear differences were observed among pomegranate cultivars in response to water stress. Fruit yield was not affected in Zheri Automne cultivar, while it has decreased in response to CDI in the other cultivars by 14% for Bzou cultivar to 51% for Ounk Hmam. Fruit weight decreased in six cultivars, by 13% for Gordo De Jativa cultivar to 24% in average for Grenade Jaune, Grenade Rouge and Ounk Hmam. These three cultivars were the only ones affected in terms of juice content by 9% to 11%. Regarding CDI effect on vegetative growth, a high decrease of shoot length was recorded in the cultivars Gjeibi (78%), Sefri (64%) and Mollar Osin Hueso (38%). While, shoot length remained unaffected by CDI in the other cultivars. The UPGMA clustering analysis applied to the ratios between CDI and FI highlighted the existence of three main homogeneous groups of cultivars in terms of drought tolerance, with regard to all measured traits. The scoring method was applied on ratios for all the traits to classify cultivars for drought stress tolerance. According to this method, the most tolerant cultivar was Zheri Automne, followed by Djebali and Bzou, since they totaled highest scores, while Grenade rouge cultivar was the most sensitive.

Key words: Climate change, *Punica granatum* L., Drought stress tolerance, Productive potential, vegetative growth.

ÉTUDE DE LA MOUSSE FLEXIBLE DE POLYURÉTHANE PAR IRTF ET DRX**Mr. EL HATKA Hicham**Equipe de Chimie Moléculaire et Matériaux Organiques (CMMO), Faculté des Sciences,
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RESUME

La mousse flexible de polyuréthane (MFPU) est un matériau cellulaire à base densité, généralement utilisée comme matériau amortissant dans de nombreuses applications telles que le meuble, la literie, l'emballage...etc. A l'échelle industrielle, elle est produite dans un processus continue, où un mélange réactif des produits chimiques (polyéther polyol, 2,4-2,6 TDI catalyseurs, silicone et eau) est versé sur un convoyeur mobile. Le matériau est un copolymère composé des segments alternés, souples et rigides. Les segments souples sont des polyéthers qui assurent l'extensibilité et l'élasticité du matériau. Tandis que les segments rigides sont des polyurées formés au cours de la polymérisation à partir de TDI et TDA. Ce dernier est formé à son tour in situ par action de l'eau sur le TDI. Les segments rigides qui se comportent comme des charges dures dispersées dans la matrice souple de polyéthers, jouent un rôle clé dans la détermination des propriétés mécaniques de la MFPU, telles que le module de Young et la compression.

Grâce à la liaison hydrogène entre N-H et C=O, les segments rigides tendent à se grouper pour des domaines rigides plus ou moins ordonnés. Ces derniers, et suite à un phénomène thermodynamique se regroupent pour former des boules.

Dans l'objectif d'améliorer les propriétés mécaniques de la MFPU face aux différentes contraintes subies par ce matériau au cours de son utilisation, nous rapportons dans ce travail une étude de ces segments rigides par IRTF et par diffraction des rayons X (DRX). En effet, nous avons étudié grâce à ces deux techniques l'effet de l'eau, de la symétrie de diisocyanate et des métaux alcalins sur la zone semi-cristalline de la microstructure de la MFPU.

Mots clés : Mousse flexible de polyuréthane, polyurées, segments souples, segments rigides.

MECHANICAL AND STATIC STUDY OF A SPREADER USING FINITE ELEMENT MODELING METHOD**Hamza MALAHAKCH**

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ABSTRACT

The Aeronautics is one of the most demanding industrial field at all levels[1], whose players are in direct interaction with the most imposing machines and very complex designs[2], [3]. As a result, being the safest means of transports in the world is not a coincidence. An impact on an airplane wing, a malfunction of the turbojet engine, a small technical problem and the consequences can be catastrophic. Thus any calculation made during the study phase must be in line with the constraints imposed by the aeronautical authorities. Each part, even the smallest and each screw of the aircraft must be dimensioned in such a way that it withstands the cases of most severe loads.

The aim of this study is to develop a new meshing type in order to minimize elements number, nodes, time analysis and consequently the quality and cost. Different models of aircraft seat were studied by finite element modeling. Geometrical modeling of aeronautical and automotive parts using ANSA mesh software was carried out. The fatigue of the studied spreader was calculated and analyzed in order to determine the critical areas. Two modeling types have been investigated through this study: Hexa-Penta and tetra meshing, the Hexa-Penta type showed superior advantages compared to tetra type, in term of customer's specification, time analysis, elements number, quality and cost. It was found that the production performance can significantly increase by decreasing analysis time and the minimizing elements number. Geometric modifications were elaborated and technical solutions were investigated. This study showed the importance and the impact of the spreader in the seat, as one of the essential tools for the safety of the passengers.

Keywords: finite element modeling, meshing, software, spreader

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EFFET HEPATOPROTECTEUR DES POLYPHENOLS DE *CARALLUMA EUROPAEA* (GUSS.) SUR LES LESIONS HEPATIQUES INDUITES PAR LE TETRACHLORURE DE CARBONE

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RESUME

Caralluma europaea (Guss.) est une plante médicinale largement utilisée dans la médecine traditionnelle pour traiter plusieurs maladies, y compris les maladies hépatiques. Cette étude a été menée afin d'évaluer l'effet hépatoprotecteur de la fraction polyphénolique de *Caralluma europaea* (Guss.), à la dose de 50 mg /kg administrée par voie orale, sur des lésions hépatiques chroniques induites par le tétrachlorure de carbone (CCl₄). Le CCl₄ a été utilisé pour induire des lésions hépatiques chez les souris, et à la fin du test, des analyses biochimiques ainsi que des observations histopathologiques ont été étudiées. Aucune altération biochimique ou histologique significative n'est survenue dans le foie des souris traitées par les polyphénols de *Caralluma europaea* (Guss.), tandis que des modifications biochimiques et histopathologiques graves ont été notées pour le groupe des souris traitées uniquement avec du tétrachlorure de carbone. Cette étude préliminaire vise à développer des médicaments à base des plantes pour traiter les maladies hépatiques.

Mots clés: *Caralluma europaea* (Guss.); Polyphénols; Effet hépatoprotecteur ; Tétrachlorure de carbone ; Lésion hépatique.

OPTIMISATION DES FACTEURS AGISSANT SUR LE PROCESSUS D'HD PAR MICRO-ONDE DE *R. OFFICINALIS* PAR PLANS DE SURFACE DE REPONSE

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Résumé

Le Maroc produit un rendement annuel de plus de 60 tonnes d'huile essentielle du romarin destinée à l'exportation. Ces huiles essentielles possèdent des propriétés antimicrobiennes, des activités antioxydante et anti-inflammatoire. Elles ont été employées en aromathérapie pour différentes propriétés et dans l'industrie pharmaceutique, thérapeutique, l'industrie cosmétique ainsi que l'industrie alimentaire.

Ce travail s'intéresse à une comparaison qualitative et quantitative des composés majoritaires des huiles essentielles du romarin extraites par trois méthodes d'extraction différentes : méthode artisanale par Entraînement à la vapeur d'eau dans une coopérative, hydrodistillation de type clewenger, et hydrodistillation assisté par micro-ondes. Et l'optimisation des facteurs qui agissent sur le processus d'hydrodistillation de la plante *R. officinalis* afin de maximiser le rendement des huiles essentielles.

Mot clés : *R. officinalis*, hydrodistillation de type clewenger, hydrodistillation assisté par micro-ondes, plans de surface de réponse.

ASSESSMENT OF SUB-ACUTE TOXICITY AND ESTROGENIC EFFECT OF *LAVANDULA OFFICINALIS* USED IN TRADITIONAL TREATMENT OF FEMALE INFERTILITY

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ABSTRACT

Since antiquity, medicinal and aromatic plants (MAP) have been a precious heritage for humanity, especially for the poor communities in the third world countries, who depend on them for their primary health care and livelihoods. *Lavandula officinalis* belongs to Lamiaceae family. It is traditionally used to treat digestive problems, inflammation, anti-infertility effect, diuretic, coughing and as a sedative. This study was carried out in order to characterize the chemical composition of *lavandula officinalis* and to evaluate the *in vivo* effect of its hydro-ethanolic and polyphenolic extract on the levels of proteins, cholesterol and estrogen. Sub-acute toxicity have also been studied. The chemical composition of the hydroethanolic extract was determined by High-Performance Liquid Chromatography with Diode-Array Detection (HPLC-DAD). Followed by a four-week sub-acute toxicity test while measuring the weight of the animals. Then, a test of the hepatic (ASAT, ALAT, ALP) and kidney (UREA, CREA) parameters and their histopathological examination were checked. Subsequently, we studied the estrogenic effect of the plant by biochemical analysis of cholesterol, protein and estrogen levels. The results showed the presence of some phenolic compounds mainly gallic acid, ferulic acid, catechin and quercetin. *Lavandula officinalis* extracts showed no evidence of nephrotoxicity nor hepatotoxicity. More importantly, a significant estrogenic effect was highlighted comparatively to control group.

Key words: *lavandula officinalis*, HPLC-DAD, Sub-acute toxicity, Histopathological examination, Estrogenic effect.

FABRICATION AND CHARACTERIZATION OF CITRIC ACID CROSS-LINKED CHITOSAN, POLYVINYLPIRROLIDONE BIO-NANOCOMPOSITE FILMS FOR FOOD PACKAGING APPLICATION

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Petroleum-derived plastics have presented enormous benefits to society in terms of applications, diversified into healthcare products, packaging, etc., but excessively use this material to end the production of harmful chemicals and still contribute to the uncontrolled growth of landfills. Thus, biodegradability and renewability have become an essential requirement for plastic to be used for all applications. This is why numerous studies have been devoted to the development of bio-nanocomposites used, including at least one of the components derived from nature or even from biomass.

The present study focuses on the preparation of bio-nanocomposite films for food packaging using polyvinylpyrrolidone chitosan (CS-PVP) in different percentages (Cs75-PVP25; Cs60-PVP40; Cs50-PVP50; Cs40-PVP60; Cs25-PVP75) as the device matrix and citric acid as the crosslinking agent. To choose the optimal ratio, several characteristics and tests are performed such as FTIR, mechanical test, water absorption, moisture absorption, water vapor permeability and contact angle. Mechanical performance studies include that adding pvp increases film elongation (19% to 108%) and decreases tensile stress (228 MPa to 52 MPa). Thus, the contact angle decreases from 930 for (Cs75-PVP25) to 76.20 for (Cs25-PVP75). In addition, nanocomposite techniques demonstrate reduced moisture absorption and permeability, and high-water absorption. In this work, the preparation steps of new bio-nanocomposite films have been described, taking advantage of the combination of CS, PVP and citric acid to design the mentioned bio-nanocomposite films, which allow to have new properties that will be applied in several areas, packaging materials, if applicable.

Keywords: Chitosan; Polyvinylpyrrolidone; Citric acid; composites films; Crosslinking; food packaging

**ISOXAZOLINE-CONTAINING PODOPHYLLOTOXIN/2'(2',6')-(DI)
HALOGENOPODO - PHYLLOTOXIN DERIVATIVES AS ACARICIDAL
ACTIVITIES AGAINST TETRANYCHUS CINNABARINUS. 2D-QSAR STUDY BY
USING MOLECULAR OPERATING ENVIRONMENT (MOE)**

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ABSTRACT

The carmine spider mite, *Tetranychus cinnabarinus*, is one of the most serious mite pests on crops. It is capable to rapidly develop resistance to pesticides and the control methods still difficult. Thus, make the development of new natural-product-based insecticidal agents a very desirable method for sustainable pest control. The present study was carried out to explain the relationships between chemical structure and experimental observations. In which we have employed the Molecular Operating Environment (MOE), powerful molecular visualization software that can be implemented on a variety of operating platforms. A total of 29 molecules of isoxazoline-containing podophyllotoxin/2'(2',6')-(di)halogenopodophyllotoxin derivatives were subjected to quantitative structure-activity relationship (2D-QSAR) analysis, based on their acaricidal activity, to find two models at 48h and 72h. The two 2D-QSAR models demonstrated that two descriptors lip-don and PEOE-VSAFNEG are likely to influence the acaricidal activity of these compounds. Statistically robust 2D-QSAR models were developed for all studied compounds with ($R^2 = 0.83$, $Q^2 = 0.79$, R^2 test = 0.64 and RMSE = 0.06) for the first model at 48h, moreover, the second model at 72h showed better performance with the ($R^2 = 0.92$, $Q^2 = 0.83$, R^2 test = 0.67 and RMSE = 0.16).

IN SILICO STUDY OF 2,4,5-TRISUBSTITUTED THIAZOLES AS INHIBITORS OF TUBERCULOSIS USING 3D-QSAR AND MOLECULAR DOCKING SIMULATION

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ABSTRACT

In order to predict and evaluate new potent drug used as inhibitors of tuberculosis diseases, three-dimensional quantitative structure-activity relationship (3D-QSAR) and molecular docking study were conducted on a series of eighteen 2,4,5-trisubstituted thiazoles derivatives. The comparative molecular field analysis (CoMFA) and comparative molecular similarity indices analysis (CoMSIA) models were developed using 14 compounds in the training set. They give a significant coefficient of determination R^2 (0.995 and 0.982 respectively) as well as a high values of leave-one-out cross validation coefficient Q^2 (0.533 and 0.601, respectively). The robustness of these models was checked by an external validation using a test set of 4 molecules affords important R_{test}^2 values of 0.654 and 0.648 for CoMFA and CoMSIA models respectively. The contour maps created by CoMFA and CoMSIA models provide sufficient information to identify the main regions responsible for increasing or decreasing the activity. On the basis of these findings, we predicted new 2,4,5-trisubstituted thiazoles compounds with important activities. Molecular docking was executed to guess the types and modes of interactions of 2,4,5-trisubstituted thiazoles compounds in the active site of CTP synthase PyrG (PDB: 4ZDJ).

Keywords: Molecular docking, 3D-QSAR, Anti-tuberculosis, thiazoles, drug discovery.

ARTIFICIAL NEURAL NETWORK APPLICATIONS IN ANALYSIS OF FORENSIC SCIENCE

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ABSTRACT

The constant growth in the crime rates instigates computational resources for examinations at a robust rate. Whatever data being examined with help of forensic tools needs to be stored in digital memory. Hence artificial intelligence is the upcoming machine learning technology which is comprehensive for human minds and provide capacity of digital storage media which can be accessed when in need. The purpose of our current research is to have broader understanding about the applicability of Artificial Intelligence (AI) along with computational logic tools analysis. Through the latest AI technology human errors can be overawed. The present artificial neural network helps in detection of criminals through comparison of faces by employing deep learning which offers neural networks. Thus our paper focus on the computational forensic approaches built with AI applications to detect and predict the possible future crimes. Several in built algorithms are accessible to control to create model image in camera which can be utilized in forensic casework. Since, the camera has tiny artefacts sensor figured with different light sensitive elements to make a pattern which creates intrusive patterns which triggers interest to solve cases at a rapid rate.

Key words: Artificial Intelligence, Computational Logic tools, Artefacts Sensor, Algorithms, Digital Memory.

EMERGING ROLES OF EXOSOMES IN CANCER RADIOTHERAPY

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ABSTRACT

Cancer is a complex disease and an important health problem that occurs with uncontrolled division and proliferation of cells and is under the influence of genetic and environmental conditions. According to statistics, about 50% of cancer patients receive radiotherapy. The greatest obstacle of radiotherapy is the radio resistance of cancer cells, which causes treatment failure and often recurrence and metastasis of the tumor and radio resistance is highly associated with tumor microenvironment.

Radio resistance is a complex biological process associated with abnormal DNA damage response, apoptosis, autophagy, gene mutations, cell cycle check point and irregular signaling pathways. Radio resistance leads to poor prognosis in cancer patients and represents a major clinical disability for radiotherapy and ultimately leads to tumor recurrence and metastasis.

Exosomes are nanometer-sized (30-120 nm) extracellular vesicles secreted by different cells. Studies have shown that these vesicles, which can be obtained from all body fluids, play an important role in many biological functions such as intercellular communication, signal transmission, genetic material transfer and regulation of the immune response. Because of these properties, exosomes can be used in both diagnosis and treatment of cancer, autoimmune and auto-inflammatory diseases.

Exosomes are important components and regulators of the tumor microenvironment. Data revealed in recent years show that radiation-derived exosomes increase tumor burden, decrease survival, cause radiation-induced adverse effects, and promote radio resistance.

In this project study, it was aimed to examine and evaluate the causes and consequences of the use of exosomes in cancer treatment and the place and importance of exosomes in radiotherapy in the light of literature studies.

As a result, it has been observed that exosomes have complex effects in cancer chemotherapy and radiotherapy and the mechanisms of these effects are not fully elucidated yet. It is thought that the information obtained in this subject is still in the initial stage and mostly limited to in-vitro studies, and further in-vivo and clinical studies are required. The methodologies developed for exosome isolation and purification should be universal, precise and suitable for clinical settings. With the information to be obtained from further studies, exosomes have the potential to be ideal biomarkers for cancer diagnosis and targeted therapy.

Keywords: Exosome, Cancer, Radioresistance, Radiotherapy, Diagnosis and Treatment

2D-QSAR STUDY OF THE ANTI-OBESITY ACTIVITY FOR THE COMPOUNDS BASED ON 2-ANILINO, 4-ARYL PYRIMIDINES AND 2,4-DIARYL 7-AZAINDOLES USING STATISTICAL METHODS

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ABSTRACT

In this study, we have developed a new effective study to find solutions for obesity disease by exploring the links between this disease and the CAMKK2 inhibitor by developing a two-dimensional model of quantitative structure-activity relationships (2D-QSAR) for a group of 32 molecules based on pyrimidine and azaindole derivatives, these molecules were subjected to quantitative structure activity analysis (QSAR) to study, interpret and predict activities using several statistical tools, such as Multiple Linear Regression (MLR), Nonlinear Regression (MNL) , and principal component analysis models (PCA) which are developed using 32 molecules with a pIC₅₀ between 6.7 and 9.1. The 16 descriptors are calculated for the 32 compounds studied using ACD / ChemSketch and Marvin Sketch software. The best-generated MLR and MNL models show conventional correlation coefficients R of 0.829 and 0.878, respectively.

Keywords : Obesity, CAMKK2, QSAR, PCA, MLR, MNL.

ATTACK ON THE PHYSICAL CAN BUS TO CONTROL THE VEHICLE COMPUTER

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ABSTRACT

Currently, most of the vehicles are characterized by the presence of the main standard communication protocol CAN (Controller Area Network), according to the standard ISO 11898, which plays the role of a communication tool between the electronic control units (ECU) that regulates the different functionalities of the vehicles. The wide propagation insured to reach all the areas of the vehicle in a short period of time is one of the main qualities of data transport by this CAN bus. But unfortunately, the CAN bus control system is considered vulnerable because of the weak security system of this technique which is characterized by both the ease of access, either physically or by using a remote, which makes the CAN bus lack of confidentiality. This weakness allows the vehicle to be controlled outside and endangers the vehicle's users. This article demonstrates the vulnerability of the vehicle's security system against attacks, as well as the realization of an intrusion on the physical CAN bus of the vehicle in order to control an electrical control unit (ECU).

Keywords: Attack method, weakness of CAN Bus, CAN Bus protocol, OBD-2.

RESPONSE OF FABA BEAN (VICIA FABA VAR. MINOR L.) AND WEEDS TO FOLIAR APPLICATION OF SORGHUM, OAT, AND RAPESEED WATER EXTRACTS COMBINED WITH LOWER HERBICIDE CORUM DOSE

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ABSTRACT

The negative impacts of herbicide use on humans, animals, and environment has attracted the attention of researchers to find new environment-friendly methods for weed management. Among these alternative methods is allelopathy plant extracts manipulation. The present study was conducted in open field of faba bean (*Vicia faba* L. var. minor) at educational farm of the National School of Agriculture of Meknes (Morocco). The objective of this study is to analyze the effect of reducing the dose of Corum (Bentazone and Imazamox) (at half dose) in combination with water extracts of rapeseed, sorghum and oats on growth and field bean yield. The experiment was carried out in a randomized complete block design (RCBD) with four replications according to the following treatments: Corum (1.5 l/ha) + DASH (1.5 l/ha) and Corum (0.75 l/ha) + DASH (0.75 l/ha) in combination or not with water extracts were sprayed at the post-emergence faba bean stage, a weedy check (Control) was maintained for comparison purposes. The results showed that the fields sprayed with Corum at 1.5 l/ha and Corum at 0.75 l/ha in combination with used water extracts had been reduced weed dry weight by more than 75.6 and 68.5% respectively. In addition, the combination of plant extracts decreased the total weed density by 14% compared to the Corum (0.75 l/ha) alone. On the other hand, faba bean biomass was improved by 75, 68 and 57% in fields sprayed with Corum (1.5 l/ha), Corum (0.75 l/ha) + plant extracts, and Corum (0.75 l/ha) respectively, which also improved faba bean yield and yield components. The results suggested that the use of allelopathy plant extracts could be an important ecological alternative for weed management in faba bean fields.

Key words: Allelopathy, Corum, Faba bean, Plant extract, Weed management.

ENVIRONMENTAL IMPACT STUDY OF THE COVID-19 PANDEMIC DURING EMERGENCY LOCKDOWN

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ABSTRACT

The coronavirus crisis has resulted in the gradual confinement of part of the world's population. It started in January in Asia, most notably in China, and in March for Europe and Africa.

Fairly quickly, the effects of this confinement on the environment were observed. As global economic activity has slowed, road and air flows have fallen sharply, thus influencing global CO₂ emissions.

In Morocco, according to a press release from the Ministry of the Environment, a preliminary assessment of air quality at the level of the city of Marrakech during the period from November 2019 until April 8, 2020, shows a significant reduction in atmospheric pollutants, in particular a reduction of 55% for nitrogen dioxide (NO₂), 70% for carbon monoxide (CO) and 67% for particulate matter. Despite a temporary drop in global carbon emissions, the Covid-19 pandemic reacts negatively on the environment.

The aim of this work is to study the negative environmental impact of the Covid-19 pandemic during the emergency lockdown such as the increase in the percentage of plastic in household waste, the increase in the concentrations of pesticides in sewage and illegal activities like deforestation, poaching.

Keywords: Environmental impact, Covid-19 Pandemic, Emergency Lockdown

IN VITRO EVALUATION OF THE ANTIFUNGAL ACTIVITY OF FORMULATIONS BASED ON RHASSOUL WITH OREGANO AND THYME ESSENTIAL OILS AGAINST PENICILLIUM SP

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ABSTRACT

The essential oils from aromatic plants are today considered a suitable tool to protect stored grains from fungal attacks. The purpose of this work is to study the effect of formulations of Thyme and Oregano essential oil (EO) adsorbed on purified (Gh-P) and sulfuric acid-activated (Gh-A) Ghassoul on the biological activity of fungal pathogens. Purified and activated Ghassoul were characterized by XRD and FTIR and EOs used in this study were issued from two medicinal plants known in Morocco and commercially available. Their chemical compositions were analyzed by the GC-MS technique. The main constituents of Thyme EO were thymol (67.13 %), ρ -cymene (4.85 %), Z-Caryophyllene (1.77 %), and γ -terpinene (2.74 %). Oregano EO contained Carvacrol (59.82 %), γ -terpinene (10.85 %), and α -pinene (9.89 %). This work focused on the study of the antifungal activity of EOs mixed with purified and sulfuric acid-activated Ghassoul, in order to look for new natural bioactive products and assess their antifungal activity. *Penicillium* sp. was used as a pathogen agent for biological activity on Czapek agar medium. The results showed that the active Ghassoul formulations had significant antifungal activity against *Penicillium* sp. Gh-A-thyme, Gh-A-thymol, and Gh-A-oregano had an inhibitory potential of more than 75% and excelled to retain it over time even after five months. On the other hand, the three purified Ghassoul formulations (Gh-P-thyme, Gh-P-thymol, and Gh-P-oregano) showed an initial inhibitory power of less than 22 %, which was decreasing over time.

Keywords: Essential oils; Thyme; Oregano; antifungal activity; *Penicillium*; formulation; Ghassoul clay.

ALPHA-LINOLENIC ACID (ALA): IN AN H₂SO₄ AGGRESSIVE MEDIUM, THE INHIBITOR (ALA) CURES THE PROBLEM OF CORROSION OF THE REINFORCEMENTS

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ABSTRACT

Metals and alloys are distinguished from other materials by a set of advantageous properties, but they have disadvantages due to their instability in contact with certain environments, which leads to a decrease in their resistance to corrosion, the costs of which are attributable to its consequences are enormous, especially in industrialized countries. These costs could be higher if there was no protection from corrosion. The durability of reinforced concrete constructions depends on mainly the corrosion resistance of its reinforcement. The ions chlorides are considered responsible for the pitting corrosion of these chlorides frames. The technique of protection by adding corrosion inhibitors (ALA) will be the subject of our study in this work. We studied of the electrochemical measurements (stationary current-voltage curves) as well as gravimetric measurements (weight loss method) for the inhibition of the corrosion performance of Alpha-linolenic acid (ALA) molecule used of XC48 steel in a (1M) H₂SO₄ solution. In a wide concentration range, the results show that this product acts as a

good inhibitor and the effectiveness of the inhibition 92% of the concentration 5×10^{-3} (M). This inhibitor adsorbs on the metal surface according to Langmuir's model.



Recent Publications (maximum 5)

1. Chahul, H.F., Ndukwe, G.I., Ogwu, D.O., OUAC 29 (2) (2018) 103-109.
2. Ngobiri, N.C., Okorosaye-Orubite, K., Chemistry Intl., 2 (2017) 185-194.
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Biography

Author has expertise in the field of materials engineering, characterization processing, quality control and surface treatment.

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Service paints and coatings, under the title of characterization of a material while mastering the quality and accreditation of paint construction tests and routers. Currently a doctoral student in his first year at the Faculty of Science in Oujda at Mohamed Premier University. His expertise in evaluation and his passion for the use of inhibitors to protect metals against corrosion, especially in acidic environments.

His objective is based on the use of his organic molecules to have applications in industries.

AN EMBEDDED SYSTEM TO NOTIFY THE COMPANY ABOUT FRAUD OR FUEL LEAKAGE AND MAKE A MONTHLY STATISTIC OF FUEL CONSUMPTION

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ABSTRACT

Fuel theft has become a real problem for trucking companies, not forgetting Road haulage companies transporting goods and people are reportedly victims of fuel theft. In our article we have proposed a simple, cheaper and effective solution to fight against this type of fraud and instantly monitor the fuel tank in order to send an instant message to the company to inform it about the attempted fraud (using GSM Global System for Mobile Communications card) and locate its location (using Global Positioning System GPS module), moreover we can inform the driver in case of a leak as well as the company can have access at any time to the monthly or annual fuel consumption statistics which will be stored in an SD Memory Card. Our Embedded System is based on two situations. In the case where the vehicle is at rest our system detects fraud or leakage by processing vehicle fuel level sensor data. When the vehicle is moving we can instantly calculate the fuel consumption from several parameters (speed, flow ...) and thanks to this information our system detect abnormal and abusive fuel consumption.

Keywords: Fuel fraud, OBD-II Protocol, Consumption fuel, CAN bus, Embedded System.

**OPTICAL ABSORPTION AND THE REFRACTIVE INDEX CHANGES OF
EXCITON TRANSITIONS $1s - sb$ IN A QUANTUM DOT UNDER THE INFLUENCE
OF HYDROSTATIC PRESSURE AND TEMPERATURE**

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ABSTRACT

This work theoretically investigates the optical properties (optical absorption coefficients AC and the refractive index changes RIC) associated with the ground state and sub-band state ($1s - sb$) excitonic transition to exciton in a 2D quantum disk AlAs/GaAs/AlAs. In particular, we investigate the effects of hydrostatic pressure, temperature and the effect of the quantum dot size on the system ACs and RICs. The results obtained after numerical calculations show that

the temperature and pressure have an important influence on the absorption coefficients (ACs) and relative refractive index change (RICs).

Keywords: Quantum dot, Hydrostatic pressure, Temperature, $1s - sb$ transition, AC, RIC

REGULATION NUMERIQUE DE LA PUISSANCE D'UN SYSTÈME PHOTOVOLTAÏQUE PAR UNE CARTE DSPACE

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RESUME

Le Laboratoire Génie Electrique et Maintenance (LGEM) est équipé d'un sous-ensemble de module solaire monocristallin. Le module qui nous intéresse dans cette étude est le PV ET-M53930.

Nous voulons contrôler la puissance du module solaire monocristallin 30W - ET-M53930. Pour cela, nous avons implémenté une commande numérique par la carte DSPACE 1104.

Les expériences ont été réalisées à l'Ecole Supérieure de Technologie d'Oujda (ESTO) au laboratoire LGEM avec une température ambiante égale à environ 16 ° C. Plusieurs tests ont été réalisés afin de valider notre algorithme de contrôle.

Dans ce travail de recherche, nous présentons quelques résultats expérimentaux obtenus dans notre laboratoire en utilisant cette commande numérique sur un système PV, ceci en l'absence de perturbation: essais avec un éclairage fixe et une charge fixe.

L'acquisition des données et résultats expérimentaux a été réalisée par le logiciel Control Desk et de la carte DSPACE.

Mots clés: DSPACE 1104, système hybride, systèmes PV, éolienne, MPPT, P&O, convertisseur Boost.

TRANSFERT DE MESURE IOT A PARTIR DE NODEMCU VERS LE CLOUD BASE SUR MQTT : SUPERVISION DU SpO2 DES PATIENTS COVID-19

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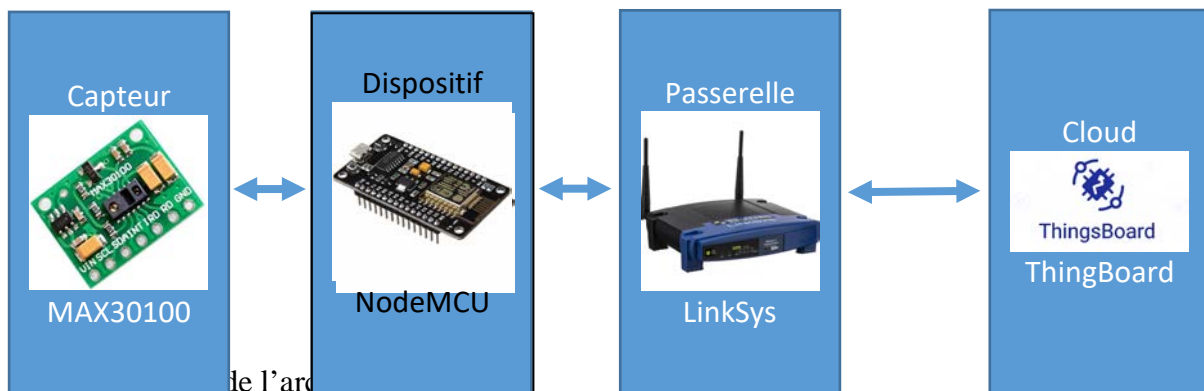
RESUME

L'oxymétrie colorimétrique mesure la saturation en oxygène périphérique (SpO₂), qui reflète l'efficacité du système cardio-pulmonaire à fournir du sang riche en oxygène à l'organisme. Ces mesures ont pris une grande importance lors de la pandémie de COVID-19. Les Médecins surveillent une diminution de la saturation SpO₂ comme signe avant-coureur de dommages aux tissus pulmonaires causés par le virus SRAS-CoV-2 qui est à l'origine de la COVID-19.

Pour les personnes atteintes présentant des symptômes légers et devant être mises en quarantaine à domicile, l'accès à un oxymètre colorimétrique peu coûteux peut aider à évaluer l'évolution de l'infection et fournir l'alerte nécessaire pour une prise en charge importante.

Dans ce travail nous proposons une architecture de supervision du SpO₂ à distance des personnes atteintes du Covid-19.

Dans ce travail nous proposons une architecture de supervision du SpO₂ à distance des personnes atteintes du Covid-19.



- Le Capteur MAX30100 : une solution intégrée de capteur d'oxymétrie colorimétrique et de moniteur de fréquence cardiaque.
- Le Dispositif NodeMCU: plate-forme open source IoT, matérielle et logicielle basée sur le Wi-Fi ESP8266.
- Passerelle Linksys, est le routeur du réseau local est la passerelle de cette architecture IOT
- ThingsBoard est une plate-forme IoT open source pour la gestion des Dispositifs connecté, la collecte de données, le traitement et la visualisation de vos projets IoT.

Le dispositif interrogera le capteur et l'utilisation de MQTT enverra les données formatées en JavaScript Object Notation (JSON) dans le cloud ThingsBoard à intervalles réguliers.

ThingsBoard peut créer en temps réel un Tableau de bord IoT pour la visualisation des données des capteurs et les partager avec les médecins.

Nous proposons aussi un système d'alerte automatique si SpO2 <90% puisque c'est une urgence médicale et doit être traitée avec l'oxygène et les thérapeutiques adéquates. La confirmation de cette urgence sera démontrée par les données collectées.

Nous proposons un stockage de l'historique de ces valeurs sur une base de données Postgres,

Mots clés: Supervision, SpO2, Covid-19, IOMT, MAX30100, ThingBoard, NodeMCU

EFFECT OF GENOTYPE AND SEX ON INCIDENCE OF CONTACT DERMATITIS IN BROILERS¹

ETÇİ PİLİÇLERDE GENOTİP VE CİNSİYETİN KONTAKT DERMATİT GÖRÜLME
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¹Bu araştırma, birinci yazarın doktora tezinden özetlenmiştir.

ÖZET

Kontakt dermatit, etçi piliçlerde bir refah sorunudur ve göğüs, ayak tabanı ile dizlerde yanıklar şeklinde gözlenir. Bu çalışma, üretimin 6. ve 10. haftasında etçi piliçlerde genotip (Hubbard-Isa Red JA ve Ross-308) ve cinsiyetin kontakt dermatit görülme sıklığına etkisini belirlemek için yapılmıştır. Bu çalışmada, her bir bölmedeki tüm piliçler üretimin 6. ve 10. haftasında göğüs, ayak tabanı ve diz yanıkları açısından incelenmiştir. Araştırmada üç noktalı ölçek sistemi kullanılmıştır. Bu ölçeğe göre, skor 1 lezyon olmadığını, 2 skoru hafif lezyonu ve 3 skoru şiddetli lezyonu göstermektedir.

Bu çalışmanın sonucunda, incelenen her iki dönemde de etçi piliçlerde göğüs yanığı görülmemiştir. 6. haftada ayak taban yanığı görülme sıklığı incelenen gruplar arasında istatistik açıdan önemli bulunmamıştır ($X^2 = 5.32$ ve $P > 0.05$). Bununla birlikte, üretimin 10. haftasında, ayak taban yanığı en yüksek oranda erkek Ross-308 piliçlerinde ($X^2 = 7.65$ ve $P \leq 0.05$) görülmüştür. Diz yanıkları incelendiğinde üretimin 6. ($X^2 = 97.56$ ve $P < 0.001$) ve 10. ($X^2 = 70.53$ ve $P < 0.001$) haftalarında en yüksek düzeyde dişi ve erkek Ross 308 etçi piliçlerde olduğu tespit edilmiştir. Dişi Hubbard-Isa Red JA etçi piliçlerinde her iki dönemde diz yanıkları görülmemiştir. Sonuç olarak etçi piliçlerde ayak tabanı ve diz yanıklarında genotip ve cinsiyetin önemli olduğu tespit edilmiştir.

Anahtar Kelimeler: Etçi piliç, Kontakt Dermatit, Genotip, Cinsiyet

ABSTRACT

Contact dermatitis is a welfare problem in broilers and is observed in the form of burns in the breast, foot pad, and hocks. This study was carried out to determine the effect of genotype (Hubbard-Isa Red JA and Ross-308) and sex on incidence of contact dermatitis in broilers at the 6th and 10th weeks of production. In this study, all broilers of each pen were examined for breast, foot pad and hock burns at the 6th and 10th weeks of production. Three point scale system was used in the study. According to this scale, score 1 indicated no lesions present, a score of 2 indicated mild lesion and a score of 3 indicated severe lesion.

As a result of this study, breast burn in broilers was not observed in both examined periods. Incidence of foot pad burn at 6th was not found statistically significant ($X^2=5.32$ and $P > 0.05$) among examined groups. However, at the 10th week of production, foot pad burn was seen at the highest incidence in the male Ross-308 broilers ($X^2=7.65$ and $P \leq 0.05$). When hock burns

were examined, it was found that the highest incidence was found in the female and male Ross 308 at 6th week ($X^2=97.56$ and $P<0.001$) and at 10th week ($X^2=70.53$ and $P<0.001$) production. Hock burn was not observed in female Hubbard-Isa Red JA broilers at the both periods. As a conclusion, it was determined that genotype and sex were important in foot pad and hock burns in broilers.

Keywords: Broiler, Contact dermatitis, Genotype, Sex

ETÇİ PİLİÇLERDE ASİTES SENDROMU**ASCITES SYNDROME IN BROILERS****Arş. Gör. Hilal Çapar Akyüz**

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ÖZET

Asites, karın boşluğunda sıvı birikimi ile karakterize edilen metabolik bir hastalıktır. Kanatlı sektöründe ciddi ekonomik kayıplara neden olabilecek niteliktedir. Bu sendromun ortaya çıkmasında çevresel ve genetik faktörler rol oynamaktadır. Bu konudaki çalışmalar, hızlı büyüyen piliçlerin oksijen hemoglobin doygunluğunun diğerlerine göre daha düşük olduğundan asites oluşumuna daha duyarlı bulduklarını göstermektedir. Hızlı büyüyen piliçlerde kas kütleindeki artış (özellikle göğüs kası), kalp ve akciğerler gibi diğer hayati organlar ile orantılı biçimde gerçekleşmez. Bu nedenle büyük ve ağır göğüs kütlelerine sahip küçük akciğer hacmi karın içeriği vasıtasıyla hava keselerine basınç uygulayarak metabolik bozukluklara yol açar. Ascites sendromunda ortaya çıkan vücut metabolizmasında oksijen eksikliği, pulmoner arterlerde kalp debisi ile artan vasküler basıncı uyarır. Hipoksemi, kalp debisinin azalmasıyla ortaya çıkar. Ödem, karın boşluğunda asidik sıvı birikimine neden olur ki bu ölüme yol açar. Bu piliçler, pulmoner vasküler kapasite eksikliğinden kaynaklanan doku artışına olan talepten dolayı asitese daha duyarlı hale gelirler. Asites sendromunun ortaya çıkmasında kümeslerin bulunduğu yerdeki rakım, solunum sistemi hastalıkları, toksinler ve rasyon etkili olmaktadır. Özellikle yüksek rakımın etkisi çok önemlidir. Yapılan araştırmalar, 3810 m rakımda olan kümeslerde piliçlerin pulmoner arter basıncının, kümesleri deniz seviyesinde olan piliçlerden iki kat daha fazla olduğunu ve bu durumun kronik hipoksiye neden olduğunu göstermektedir. Bu sendromun görülme sıklığını azaltmak için etçi piliçlerde ideal çevresel koşulları sağlamak önemlidir.

Anahtar Kelimeler: Etçi Piliç, Asites, Metabolik Bozukluk**ABSTRACT**

Ascites is a metabolic disorder characterized by fluid accumulation in the abdominal cavity. It may cause serious economic losses in the poultry industry. Environmental and genetic factors play a role in the appearance of this syndrome. The studies show that fast-growing broilers are more susceptible to ascites because these have lower oxygen hemoglobin saturation than others. The increase in muscle mass (especially the breast muscle) in fast-growing broilers does not occur proportionally in other vital organs such as the heart and lungs. Therefore, small lung volume with large and heavy breast mass leads to metabolic disorders by applying pressure on the air sacs through the abdominal contents. Oxygen deficiency in body metabolism, which occurs in ascites syndrome, stimulates cardiac output and increases vascular pressure in pulmonary arteries. Hypoxemia happens with the cardiac output decrease. Edema causes acidic fluid accumulation in the abdominal cavity, which leads to death. In these broilers, the demand for increases in tissues due to the lack of pulmonary vascular capacity, therefore, they become more sensitive to ascites. The altitude of the poultry houses, respiratory system diseases, toxins and ration are effective in the emergence of ascites

syndrome. Especially, the effect of high altitude is very important. Studies show that the pulmonary artery pressure of broilers in poultry houses at an altitude of 3810 m are twice that of broilers whose poultry houses are at sea level, and this situation causes chronic hypoxia. It is important to provide ideal environmental conditions in broilers to reduce the incidence of this syndrome.

Keywords: Broiler, Ascites, Metabolic Disorder

EVOLUTION OF THE WATER QUALITY OF ESMEBAŞI POND (YILDIZELI- SIVAS)

ESMEBAŞI GÖLETİ (YILDIZELİ –SİVAS) SU KALİTESİNİN DEĞERLENDİRİLMESİ

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ÖZET

Sivas ili, Yıldızeli ilçesi sınırlarında bulunan Esmebaşı Göleti'nde gerçekleştirilen bu çalışmanın amaçları; alınan su numunelerindeki aylık, mevsimsel ve yıllık değişiklikleri gözlemlemektir. Ayrıca; fiziko- kimyasal yöntemler kullanarak, göletin su kalitesi özelliklerini Su Kirlilik Durumu ile göletin sucul canlıların yaşam açısından uygunluk durumunu belirlemek ve göletin su kalitesini Yerüstü Su Kalitesi Yönetmeliğine göre sınıflandırmaktır. Gölette yapılan bu çalışma Mart 2019'da başlamış ve göletin bütünlüğünü temsil eden 4 istasyondan 12 ay süreyle düzenli olarak su örnekleri alınarak gerçekleştirilmiştir. Her ay düzenli olarak 4. istasyondan alınan su örneklerinde on (10) adet fiziko-kimyasal su kalitesi parametresi araştırılmıştır.

Bu çalışmada; sulama amaçlı kullanılan bu gölette yapılan ilk çalışma olup, yapılan analizler sonucunda Esmebaşı Göleti içinde bulunan sucul canlıların yaşaması için uygun olduğu ancak göletin kirlilik baskısı altında olduğu ve su kalitesinin korunması ve kirliliğin azaltılması için göletteki su kalitesi parametrelerinin düzenli olarak izlenmelidir.

Anahtar Kelimeler: Sivas, Esmebaşı Göleti, su kalitesi, su kirliliği

ABSTRACT

The objectives of this study, which was carried out in Esmebaşı Pond located in Sivas city, were to observe the seasonal, monthly and annual changes in water samples through physicochemical methods, to determine the water quality properties, to reveal the pollution problems, to determine the suitability level in terms of aquatic life, and to classify the quality of water in accordance with the Surface Water Quality Regulation (SWQR) criteria. The study was started in March 2019 and water samples were taken from 4 stations for 12 months. In total, 10 physico chemical parameters were investigated for water quality. In this pond used for irrigation purpose; for the first time and such a detailed study has been done. As a result of performing analyses, it was found that, in Esmebaşı Pond hosting aquatic animals and being suitable for aquatic life but this pond is under pollution pressure, it should be regularly monitored periodically in terms of protection of water quality, so that it is not further polluted.

Keywords: Sivas, Esmebaşı Pond, water quality, water pollution

REMOVAL OF METHYLENE BLUE FROM AQUEOUS SOLUTIONS ON ALGINATE ENCAPSULATED KAOLIN HYDROGEL MICROSPHERES IN A BATCH ADSORPTION SYSTEM**S.MARRANE¹, D.ALLOUSS¹, K.DAANOUN², A.RHIHIL¹, M. ZAHOUILY^{1,2*}**¹ Laboratory of Materials, Catalysis & Valorization of Natural Resources, Faculty of Sciences and Techniques Mohammedia, University Hassan II, Casablanca, Morocco² MAScIR Foundation, INANOTECH, VARENA Center, Rabat Design, Rue Mohamed El Jazouli, Madinat El Irfane 10100-Rabat, Morocco**ABSTRACT**

Due to its complex aromatic structure [1], wastewater containing dyestuffs from various industries, such as textiles, printing, leather and plastics, is durable and resistant to biodegradation. Various physicochemical processes, such as membrane filtration, chemical oxidation, coagulants, and adsorption, have been used to treat wastewater. On the economic and productivity side, the last technique cited is considered one of the most promising and widely used methods [2]. Recently, clay-based materials (bentonite, montmorillonite, kaolin...) have been suggested to be a potential candidate to satisfy the need to remove toxic organic dyes from wastewater.

In this work, a low-cost and environment-friendly composite hydrogel beads based on kaolin (Kao) and alginate (Alg) were synthesized via ionotropic gelation technique, and utilized as an efficient adsorbent for methylene blue removal from aqueous solutions. The structure and morphology of the prepared hydrogel beads were characterized by Fourier transform infrared (FTIR), scanning electron microscope (SEM) and Thermogravimetric analysis (TGA). Moreover, the isoelectric point, the stability and swelling properties have been investigated. The effects of various operating parameters, such as adsorbent dose, pH and initial dye concentration on the removal efficiency were studied. The results of the different analysis and tests proved that our hydrogel beads were successfully synthesised with a uniformed spherical shape, a guaranteed stability and high removal efficiency (97% of MB).

Keywords: Methylene Blue; batch adsorption; hydrogel beads; kaolin; alginate.

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ELECTROCHEMICAL DEGRADATION OF CRYSTAL VIOLET BY SnO₂R. El Bychy^(a), M. Rguiti^(a), L. Bazzi^(a), H. Zejli^(a), M. Hilali^(a), S. Elissami^(a)(a) *Team of Chemistry Physic, Faculty of Sciences, Ibn Zohr University, Agadir, Morocco***ABSTRACT**

Environmental protection has been the starting point for the development of new technologies, which make it possible to control highly toxic substances present in the effluents of several industries, the elimination of them is not possible by conventional methods. Today, organic wastes (paints, pigments, etc.) are considered to be a major concern for the pollution of aqueous environments. Therefore, it is essential to find new methods to solve this problem.

This research was conducted to study the electrochemical processes to remove organic pollutants (e.g., crystal violet (CV)) from aqueous solutions. The electrolysis of CV was carried out galvanostatically by using SnO₂ anode, was conducted in an electrochemical cell with 100 mL of solution using Na₂SO₄ and NaCl as supporting electrolyte, the effect of the electrochemical parameters: current density (20–60 mA/cm²), CV concentration (10–50 mg/L), sodium chloride concentration (0.01–0.1g/L) and initial pH (2, 4, 7, 8, 10) was evaluated and optimised. The degradation of crystal violet (CV) was monitored by the UV-visible spectrometry and the chemical oxygen demand (COD).

After 120 min, in a 0.01mol/L NaCl solution with a current density of 50 mA/cm² and a pH value of 7 containing 10 mg/L CV, the CV removal efficiency can reach 100%, the COD removal efficiency is up to 80%. The process can be considered as a suitable process for removing CV from colored wastewater in the textile industries.

Key words: *crystal violet, electrochemical oxidation, COD, decolourisation, water treatment*

DIELECTRIC, PIEZOELECTRIC, ELECTRICAL CONDUCTIVITY AND IMPEDANCE SPECTROSCOPIC STUDIES OF $Ba_{1-x}Li_xTi_{1+x/4}O_3$ CERAMICS**Fatima Zahra Krimech^{a,b}, Salaheddine Sayouri^b**^a LBGIM, University Hassan II, ENS - Casablanca, Casablanca, Morocco^b LPTA, Faculté des Sciences, BP 1976 Fès-Atlas, Fès, Morocco**ABSTRACT**

Li-doped $BaTiO_3$ nanoparticles with Li^+ mole fraction, x , such as $0 \leq x \leq 0.30$ (BL_xT) have been successfully synthesized by the sol-gel method. The crystal structure, microstructure, dielectric, piezoelectric properties, and ac conductivity of the sample were studied. X-ray diffraction data showed that these materials, heat treated at $1000^\circ C$ during 4hrs; crystallize in the pure tetragonal phase for the undoped sample (BT), which transforms into pseudo-cubic phase for $x \geq 0.05$. These results were confirmed by Raman analysis.

The variations in permittivity as a function of frequency for different temperatures revealed the relaxation phenomenon for pure BT and for other compounds with different concentrations of lithium (Li), respectively. The piezoelectric charge coefficient d_{33} changes inversely with that of the coefficient g_{33} ; In fact, the value of the coefficient d_{33} passes from 92 pC/N (around $120^\circ C$.) recorded for pure BT, reaches its maximum value of 224.83 pC /N for the concentration 0.10 (around $160^\circ C$.) before taking the Value 60 pC / N for $x = 0.15$. The value observed for $x = 0.10$ is lower than that of 260 pC / N but for a low concentration of lithium $x = 0.03$, reported Takeshi Kimura. This means that the optimal values of the coefficients in question should be observed for the low Li substitutions.

Keywords: Ceramics; dielectric relaxation; Piezoelectric; conductivity; impedance spectroscopy

CONSTRUCTION OF AN EDUCATIONAL DEVICE FOR REAL TIME DATA ACQUISITION BASED ON ARDUINO FOR A CALORIMETRIC STUDY

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ABSTRACT

The purpose of this work is to present a new method for performing an experiment and real time data acquiring using an Arduino-based platform. This configuration makes it possible to determine the coefficient J connecting the Joule and the Calorie. The general idea is to measure the increase in heat of a liquid due to an amount of electrical energy, heating a mass of cold water with a heating resistance carrying an electric current. We have used the DS18B20 probe as a temperature sensor connected to an Arduino UNO microcontroller for temperature detection, and a magnetic stirrer for system agitation. The Data Streamer add-in was used to transfer data in real time from the Arduino microcontroller to Excel. In this work, we have developed an innovative, modern and affordable physics laboratory configuration.

Keywords: DS18B20 sensor; Arduino UNO; Physics education.

Acknowledgments

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IN SILICO STUDY OF 4-METHYL QUINAZOLINE DERIVATIVES AS PI3K α INHIBITORS: A COMBINED 3D-QSAR AND MOLECULAR DOCKING STUDY

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ABSTRACT

Lately, a new series of 4- methyl quinazoline derivatives were synthesized and their anti-cancer activity was assessed. It was discovered that these compounds have potent inhibition on related phosphoinositide 3-kinases alpha (PI3K α). In this study, we have utilized blended studies of Three-dimensional quantitative structure-activity relationship (3D-QSAR), molecular docking; those methods have been performed on 4- methyl quinazoline derivatives. 3D-QSAR study was applied using Comparative Molecular Field Analysis (CoMFA) with Q^2 of 0.850, R^2 of 0.998, and Comparative Molecular Similarity Indices Analysis (CoMSIA) with Q^2 of 0.921, R^2 of 0.987. The predictive ability of these models was determined using a test set of molecules that gave acceptable predictive correlation (R^2 test) values 0.793 and 0.804 correspondingly of CoMFA and CoMSIA. Developed models and Docking methods offer direction to design molecules with enhanced activity, based on these results, four novel compounds were designed and each exhibited potential PI3K α inhibitory activity in vitro.

Keywords: PI3K α · cancer diseases · QSAR · Molecular docking · 4- methyl quinazoline derivatives

**CARALLUMA EUROPAEA (GUSS.) N.E.BR. EN TANT QUE SOURCE
POTENTIELLE DE MOLECULES BIOACTIVES: PROPRIETES
ANTIOXYDANTES ET ANTI-INFLAMMATOIRES**

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ABSTRACT

Caralluma europaea (Guss.) N.E.Br est une espèce médicinale succulente utilisée dans la médecine traditionnelle marocaine en tant qu'antitumorale. Cette étude porte sur l'évaluation de l'activité antioxydante et anti-inflammatoire de l'extrait hydroethanolique, ainsi que les flavonoïdes et les saponines de la partie aérienne de *Caralluma europaea* (Guss.).

L'activité antioxydante des extraits est évaluée par deux techniques, la réduction du fer (Ferric reducing antioxidant power ou FRAP) et le piégeage du radical libre 2,2-diphényl-1-picrylhydrazyl (DPPH). L'activité anti-inflammatoire a été évaluée par la méthode d'induction d'œdème par la carragénine.

Les valeurs EC50 obtenues par la technique FRAP de l'extrait hydroethanolique ainsi que les flavonoïdes, et les saponines sont 5,19 mg/ml, 4,53 mg/ml, et 3,05 mg/ml respectivement. L'IC50 obtenue par la technique du DPPH est de 1,628 mg / ml, 1,05 mg / ml, et 1,94 mg / ml respectivement. A la dose de 100 mg/kg pour l'extrait hydroethanolique, et 15 mg/kg pour l'extrait des flavonoides, et 10 mg/kg pour les saponines ; l'œdème a été inhibé de manière dose dépendante et à toutes les phases de la réaction inflammatoire pour les trois types d'extraits testés avec un pourcentage d'inhibition maximale de 79 % à la 6^{ème} heure après l'injection de la carragénine pour l'extrait flavonodique. *Caralluma europaea* a montré un pouvoir antioxydant et antiinflammatoire très intéressant et peut être utilisé comme un éventuel traitement pour d'autres activités pharmacologiques.

Mots clés : *Caralluma europaea* (Guss.), Extrait total, Fractions, Activité antioxydante, Activité anti-inflammaoire.

THEORETICAL STUDY OF NEUROTRANSMITTERS (DOPAMINE AND ITS DERIVATIVES) INCLUDED IN PARKINSON'S AND ALZHEIMER'S DISEASES: STRUCTURAL OPTIMISATION AND REACTIVITY STUDY

Abdallah Imjjad^{1*}, Khalid Abbiche^{1,2}, Asma Skotta¹, Abdallah El Assri¹, Mustapha Hilali¹

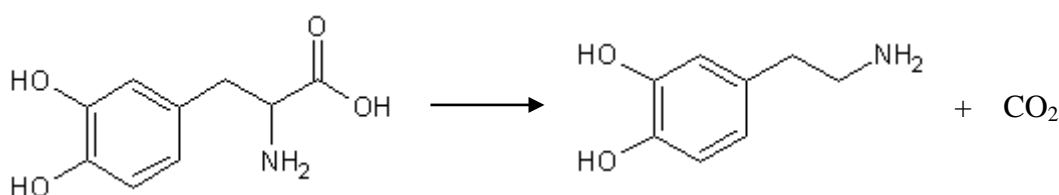
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ABSTRACT

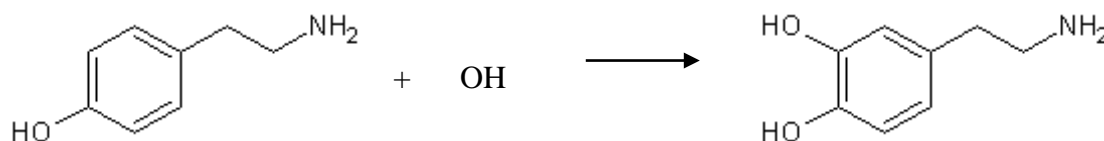
This work focuses the study of the geometric aspect and reactivity inside the brain of two compound (Tyramine and L-Dopa) who can be used to synthesize the Dopamine (DA) as an important catecholamine in neurotransmission process. The interest in the redox behavior of DA comes from the fact that this compound and its derivatives (Tyramine, L-Dopa) are directly involved in the neurotransmission process. The electrochemical behavior of these compounds is a key factor in the diagnosis of certain diseases in clinical medicine such as Parkinson's disease (PD) and Alzheimers disease (AD).

L-Dopa decarboxylation: Reaction mechanism to be studied, allowing dopamine to be obtained from L-Dopa by decarboxylase (elimination of carbon dioxide) according to the reaction path below.



Schem 1. L-dopa decarboxylation reaction scheme

Tyramine hydroxylation: Reaction mechanism to be studied, allowing dopamine to be obtained from Tyramine by hydroxylase (addition of hydroxide) according to the reaction path below.



Schem 2. Tyramine hydroxylation reaction scheme

The computational study and calculation of geometric and energy parameters have been performed at the DFT (B3LYP) level by using 6-311+G basis set and compared to the results obtained by the HF (restricted) approach.

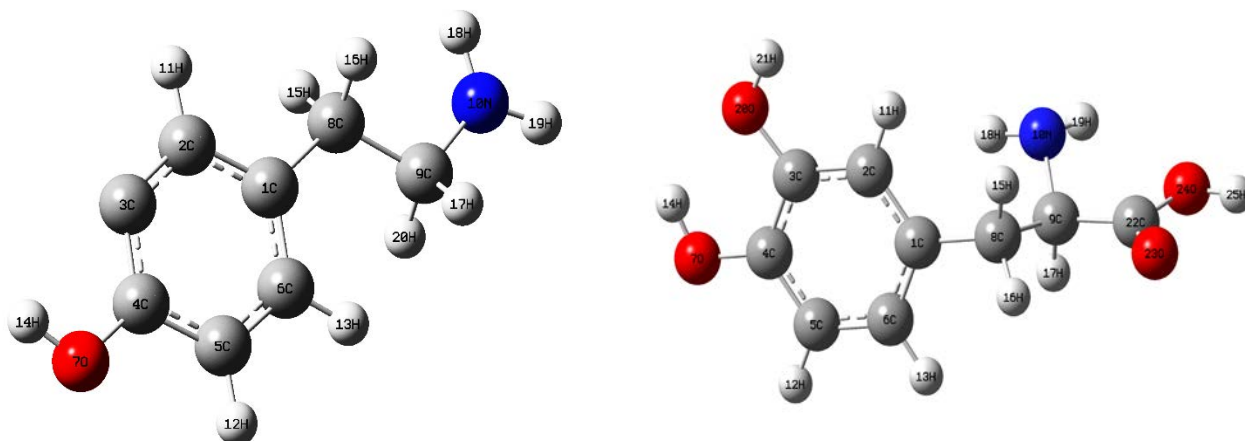


Fig 1. Optimized geometry of Tyramine and L-Dopa

Keywords: Computational study, Dopamine, Tyramine, L-Dopa, Parkinson, Alzheimer, DFT.

**PHYTOCHIMIE ET QUELQUES ACTIVITES BIOLOGIQUES DES HUILES
ESSENTIELLES DE *SYZYGIUM AROMATICUM*, *PIMPINELLA ANISUM* ET *APIUM
GRAVEOLENS***

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La résistance bactérienne aux antibiotiques est devenue un véritable problème mondial, ce qui impose les chercheurs à trouver d'autres molécules bioactives efficaces contre les infections bactériennes. La présente étude consiste à tester l'activité antibactérienne de trois huiles essentielles : *Syzygium aromaticum*, *Pimpinella anisum* et *Apium graveolens* contre deux souches bactériennes à gram positive *Staphylococcus aureus*, *Enterococcus faecalis* et deux souches bactériennes à gram négative ; *Pseudomonas aeruginosa* et *Escherichia coli*, aussi on a étudié l'activité antioxydante de ces huiles et la composition chimique.

L'activité antioxydante *in vitro* montre que *Syzygium aromaticum* est le plus actif avec une IC₅₀ de (1.42±0.05 mg/ml), suivi par l'huile essentielle de *Pimpinella anisum* avec une IC₅₀ de (2.96±0.20mg/ml), puis celui de *Apium graveolens* avec une IC₅₀ de (4.72±0.12 mg/ml). Concernant le pouvoir réducteur, seulement l'huile essentielle de *Syzygium aromaticum* qui présente cette activité avec un EC₅₀ de (0.35±0.02), alors que les deux autres huiles essentielles de *Pimpinella anisum* et de *Apium graveolens* ne présentent pas cette activité. L'activité antibactérienne montre que *Apium graveolens* est le plus actif contre les bactéries Gram positive *Staphylococcus aureus* et *Enterococcus faecalis*, suivi par l'huile essentielle de *Pimpinella anisum* et ensuite par *Syzygium aromaticum*. Alors que la souche *Pseudomonas aeruginosa* reste résistante pour les trois huiles essentielles testées.

Mots clés : *Apium graveolens*, activité antibactérienne, activité antioxydante, huile essentielle, *in vitro*, *Pimpinella anisum*, *Syzygium aromaticum*

ETUDE DE L'INHIBITION DE LA CORROSION DU CUIVRE EN MILIEU ACIDE SULFURIQUE PAR L'ACIDE 4-AMINO BENZOÏQUE

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RESUME

Le présent travail est consacré à l'étude d'inhibition de corrosion de cuivre dans une solution de 1 M H_2SO_4 à la présence de composé organique acide 4 –aminobenzoïque, au moyen de différentes techniques gravimétrique et électrochimiques comme courbe de polarisation et spectroscopie d'impédance électrochimie. Ces études sont complétées par la méthode de caractérisation de surface ; la microscopie électronique à balayage (MEB).

Les résultats obtenus montrent que le composé inhibe efficacement la corrosion de cuivre lorsque celui-ci est immergé directement dans la solution corrosive contenant les molécules dissoutes de l'inhibiteur. L'efficacité inhibitrice de ce composé augmente avec sa concentration. L'inhibiteur présente une meilleure efficacité inhibitrice de 80.33 % à 1 g/l. Cet inhibiteur présente un caractère d'inhibition cathodique et agit par simple adsorption en bloquant les sites actifs de la surface de cuivre. L'effet de la température est très perceptible par la diminution de l'efficacité qui devient 33.82 % à 50°C.

La confrontation des études thermodynamique et cinétique permet d'avancer que l'adsorption est de nature physisorption obéit au type isotherme de Langmuir. Les analyses de surface au microscope électronique à balayage (MEB) ont confirmé la formation des couches protectrices sur la surface de cuivre dans les conditions d'inhibition.

Mots clés : Cuivre, Corrosion, acide sulfurique, inhibiteur, acide 4 –aminobenzoïque.

CHARACTERIZATION AND TREATMENT OF TEXTILE WASTEWATER

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ABSTRACT

Dyestuffs and surfactants are widely used in various branches of the textile industry, the tanning industry, paper manufacture, the paint industry, food technology, photoelectrochemical cells, cosmetic industry, etc. . In developing countries many dyes and environmentally toxic surfactants are used while their use in developed countries is prohibited. Under these conditions, the contamination due to the release of these pollutants poses serious problems for the environment, in particular surface water and groundwater.

Dyestuffs and other commercial colourants are the prominent source of aesthetic and chemical induced pollution of water bodies. The removal of colourants and chemicals from aqueous streams is the foremost focus of remediation efforts to protect different segments of environment.

In order to preserve the environment and water resources in particular, traditional treatment techniques have already been implemented in the past. They involve several physicochemical processes, such as: adsorption chemical oxidation, coagulation flocculation, etc. and biological processes in aerobic and anaerobiosis; Given the very heterogeneous composition of dyes and surfactants, their elimination often a chain of physical-chemical and biological treatment ensuring the elimination of the different pollutants in successive stages whose investment and exploitation cost exceeds the financial capacities of the industrial units, especially in the developing countries.

The objectives of the present work are characterization and Treatment of Textile Wastewater used coagulation and flocculation process for removal of COD, BOD and color.

Keywords: Dyestuffs, pollution, treatment.

**WEATHERING TYPES OF STONES USED IN ABDÜLMÜMIN MASJID
(KONYA, TURKEY)**

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Abstract

Located in the center of Anatolia, Konya has hosted many civilizations from ancient times to the present day. Among these civilizations, Konya became the capital during the Anatolian Seljuk period and the city experienced its brightest period. The monuments built during this period have shaped the cultural texture of the city today. However, due to the rapid population growth in recent years and unconscious planning decisions, some Anatolian Seljuk monuments were left between high-rise buildings and this caused the deterioration of the urban texture. In addition to the deterioration of the urban texture, shadow regions caused by high-rise buildings accelerate the weathering processes in monuments and threaten cultural heritage. In this study, the types of anomalies in Abdülmümin Masjid, where the effects of weathering are high due to environmental effects, have been investigated. The data obtained from the study will constitute an important basis for the protection-restoration of the masjid.

Keywords: Abdülmümin Masjid, weathering, weathering processes.

APPLICATION OF IMIDAZOLE DERIVATIVES AS CORROSION INHIBITORS FOR COPPER IN ACIDIC MEDIUM: EXPERIMENTAL AND THEORETICAL STUDIES

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ABSTRACT

Combined computational and experimental studies of the corrosion inhibition potentials of some imidazole derivatives for copper in acidic medium were carried out. The inhibitory efficiencies of the molecules tested are determined using weight loss measurements, potentiodynamic polarization and electrochemical impedance (EIS).

These imidazole derivatives are heterocyclic organic compounds containing nitrogen atoms and are of great interest because of their multiple pharmacological activities.

A theoretical simulation is carried out for the series of systems studied using ab initio and density functional theory (DFT) to determine their electronic, structural and energetic properties. Monte Carlo simulation approach was performed to know well of the relationship between the inhibition ability and molecular structure of imidazol derivatives.

The results of the potentiodynamic polarization indicate that the imidazole derivatives are mixed type inhibitors. These reduce the speed of the corrosion process for an optimal concentration of 10⁻³M. Electrochemical impedance spectroscopy (EIS) shows the presence of a single capacitive loop in favor of the charge transfer mechanism. A good agreement is observed between the results obtained by the different experimental techniques. Theory-experience correlations are established.

STUDY OF THE CATALYTIC ACTIVITY OF THE COMPOUNDS HYDROTALCITE TREATED BY MICROWAVE IN THE SELF-CONDENSATION OF ACETONE

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ABSTRACT

Microwave technology has been widely used in applications such as industrial, medical, and domestic. In recent years, microwave irradiation has attracted the attention of chemists because of its heating capacity to obtain rapid reactions with good efficiency. The objective of this work is to compare the catalytic activity of commonly used catalysts based on Mg-Al synthesized by the co-precipitation method with that of catalysts treated by the microwave. For this purpose, we have synthesized Mg-Al hydrotalcite with a molar ratio 3 obtained either after conventional heating or after microwave irradiation with an influence of 100 W during three minutes. All the compounds obtained were characterized by X-ray diffraction and infrared spectroscopy. These catalysts were also tested in the condensation reaction of acetone at 273 K in the liquid phase without solvent, a reaction that requires a high degree of basicity. The microwave treatment improves the activity of the catalyst, the conversion of acetone to diacetone alcohol (DAA) increase from 13 % to 18 % after 8 h reaction time. In addition, the microwave-treated hydrotalcite catalyst, calcined at 723 K and rehydrated under an N₂ flow, make to obtained in the same conditions of reaction 50 % of acetone conversion.

Keywords: Hydrotalcite, Microwave, Catalytic activity, Self-Condensation, Acetone, Diacetone alcohol (DAA).

TRAFFIC SIGNS RECOGNITION BASED ON DEEP NEURAL NETWORKS TECHNIQUES

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ABSTRACT

In order to save many lives of drivers in the world every day, many solutions and approaches to increase road safety have been proposed. In this paper, we have proposed an approach for the detection and recognition traffic signs. This approach is based on deep learning techniques using convolutional neural networks CNN, with Transfer learning and Training from Scratch, to train a CNN model. A comparison between the two methods based on model size, accuracy and training time has also been made. The proposed algorithm was trained and evaluated by the German Traffic Sign Recognition Benchmark (GTSRB) dataset available at Kaggle to improve the robustness and efficiency of the proposed approach. The extracted model can achieve an accuracy of more than 95% and can be saved as a file and classify traffic signs into 43 different classes with the predicted label and probabilities for each class.

Keywords: Traffic Signs, road safety, Convolutional Neural Networks, Transfer Learning, Training from Scratch.

FOTOTERMAL LAZER UYGULAMALARI İÇİN SICAKLIK ÖLÇÜM SİSTEMİ TASARIMI

DESIGN OF A TEMPERATURE MEASUREMENT SYSTEM FOR PHOTOTHERMAL LASER APPLICATIONS

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ÖZET

Lazer cihazları klinikte tedavi amacıyla sıklıkla kullanılan cihazlardır. Özellikle fototermal etkileşimler hem teşhis hem de tedavi amaçlı önemi nedeniyle büyük ilgi görmektedir. Bu etkileşimler doku sıcaklığını arttırabilir ve protein denatürasyonu ile birlikte geri dönüşü olmayan doku hasarları olarak kabul edilebilecek koagülasyon ve karbonizasyona neden olabilir. Bu nedenle klinik lazer uygulamaları sırasında sıcaklık takibi büyük önem taşımaktadır. Farklı sistemler yaklaşımlarına bağlı olarak farklı ölçümler verebilmektedir. Bazıları lazer uygulamaları sırasında ve sonrasında kesin ölçümler verebilmek için hassas kameralar kullanır. Ancak bu sistemler fiber optik, çeşitli kamera sistemleri ve spektrometri gibi özel ekipmanları ile birlikte oldukça pahalıdır. Bu çalışmanın amacı, lazer uygulamaları sırasında ve hemen sonrasında sıcaklık ölçümü için K-tipi ısılıçift ile uygun bir sistem tasarımı gerçekleştirmektir. Isılıçift bir yüzeye temas ettirildiğinde iki telin uçlarında sıcaklığın ölçülebildiği bir voltaj farkı oluşur ve bu şekilde sıcaklık ölçümü yapılır. 2 W çıkış gücüne sahip 808-nm lazer uygulamalarının sebep olduğu sıcaklığı okumak için test edildiğinde ilk 3 dakika sıcaklık artışı oldukça hızlı gerçekleşmiş olup, 9 dakikadan sonra maksimum sıcaklık 55°C olmuştur. Maksimum çıkış gücü 550 mW olan 655-nm diyot lazer kullanıldığında 9 dakikadan sonra maksimum sıcaklık 33.5°C olarak ölçülmüştür. Bu ısılıçift sistemi, yüzeydeki sıcaklık değişimini ölçmek için nesne ile temas ettirilmelidir. Sistemin yüzeye teması sıcaklık okumasını olumsuz olarak etkileyebilmektedir. Bu sistemin temel avantajları olarak düşük maliyet, kolay kullanım ve gerçek zamanlı ölçümden bahsedilebilir. Belirtilen bu avantajların yanında, uygulama sırasında ısılıçiftin yüzeye temasından dolayı sıcaklığın tam olarak ölçülememesi ve ölçüm sırasında harcanan zaman gibi çeşitli dezavantajlar da söz konusudur.

Anahtar Kelimeler: Fototermal etkileşim, Termokupl, Sıcaklık değişimi, kırmızı ışık, yakın-kızılaltı ışık

ABSTRACT

Lasers are broadly used for therapeutic applications in Clinics and especially the photothermal interactions are of big interest because of its significance in both diagnostics and curative purposes. These interactions can increase the tissue temperature and result in denaturation of proteins that will lead to coagulation or carbonization which can be regarded as irreversible tissue damages. Thus, the monitoring temperature has great importance during the clinical laser applications. Different systems give different measurements depending upon their approach. Some may use sensitive cameras to give exact measurements during and after the

laser application. But these systems are quite expensive with their specific equipment such as fiber optics, camera systems, spectrometry, etc. The goal of this study is to design a proper system with K-type thermocouple for the temperature measurement during and after the laser applications. When a thermocouple is brought into contact with a surface, a voltage difference arises at the ends of its two wires from which the temperature can be measured. When tested to read the temperature of 808 nm laser applications with 2W output power, the temperature increase for the first 3 minutes was quite fast, after 9 minutes the maximum temperature was 55°C. When 655 nm of wavelength was used with a maximum output power of 550 mW, the maximum temperature after 9 minutes was around 33.5°C. A thermocouple needs to come into contact with the object in order to measure the temperature from its surface, this contact slightly affects the temperature reading. As the main advantages of this system we can mention; low cost, easy use, and real time demonstration. Despite having the aforementioned advantages, it also has some disadvantages such as; time taken to read the exact temperature, and the need for coming into contact with the object which this will affect the reading itself.

Keywords: Photothermal interactions, thermocouples, temperature change, red light, near-infrared light

DISCOVERY OF NEW GLYCOGEN SYNTHASE KINASE-3 BETA (GSK-3B) INHIBITORS THROUGH STRUCTURE-BASED VIRTUAL SCREENING

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ABSTRACT

Glycogen synthase kinase-3 beta (GSK-3 β) is implicated in abnormal hyperphosphorylation of tau protein and its inhibitors may be a promising therapeutic approach for treating Alzheimer's disease. Here, a series of compounds as GSK-3 β inhibitors was selected to perform two-dimensional quantitative structure activity relationship (2D-QSAR) method. The 2D-QSAR model was generated and validated using a dataset of 23 compounds and a test set of 5 compounds, respectively. The best selected model by partial least squares (PLS) regression method revealed regression coefficient (r^2) value of 0.85 and the mean square error (MSE) value of 0.04. The predictive ability and stability of the generated model was verified by external and internal validations, gave the regression coefficient values of 0.93 and 0.72 respectively. Based on the obtained results, a novel series of compounds was designed and their biological activity were predicted. The generated work may help to design new compounds as GSK-3 β inhibitors with higher inhibitory activities.

Keywords: QSAR, GSK-3 β , Alzheimer disease, molecular descriptors, PLS, LOO, external test.

POSITIVE SKEWNESS IN PANEL DATA STOCHASTIC FRONTIER ANALYSIS

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ABSTRACT

This paper is a contribution to frontier analysis. It focuses, for panel data, on solving the estimation of the technical efficiency problem when residuals are right skewed. Indeed, there is an ambiguity in the Stochastic Frontier Analysis (SFA) approach when the residuals of the OLS estimates are right-skewed (positive skewness), this might indicate that there is no inefficiency, so all Decision Making Units (DMUs) are efficient, or that the model is misspecified. To overcome and avoid the problem, we have investigated a model in which the inefficiency term u_i of the DMU i is an extended exponential or an extended half-normal distributions having the “wrong” skewness. This work is an extension of Daniel et al (2011) and Hafner et al. (2018) to the panel data case for the time varying inefficiency term. For the two papers extended distribution is considered as a distribution mirrored at zero (i.e. $\mu < 0$) and then shifted to the right by 2 times its mean such that it has the same mean $|\mu|$ as the original distribution. It is characterized by a negative skewness as opposed to the positive skewness of the original distribution. Hence, the error term is given by $\varepsilon = v - u + 2E(u)$ where v is the statistical noise term and u is the inefficiency term.

Hafner et al. (2018) defines the extended exponential distribution as $f_{\tilde{\mu}}(u_i) = \frac{1}{\tilde{\mu}} \exp\left\{-\frac{|u_i|}{\tilde{\mu}}\right\}$ where $\tilde{\mu} = -\mu$; and the extended half-normal distribution as the usual half-normal $f_{\tilde{\mu}}(u_i) = \frac{2}{\tilde{\mu} \sqrt{\pi/2}} \cdot \Phi\left(\frac{u_i}{\tilde{\mu} \sqrt{\pi/2}}\right)$ with $\tilde{\mu} = -\mu = \sqrt{2/\pi} \sigma_U$ and Φ is the standard normal probability density function. Thus, the first aspect of our research consists in the proposal of the panel data version of the extended exponential and extended half-normal distributions of Hafner et al. (2018) under the independence of the error terms hypothesis. Indeed, theoretical expressions of the error term densities $g(\varepsilon_i) = \int_{-\infty}^0 f(\varepsilon_{i1}, \dots, \varepsilon_{it}, \dots, \varepsilon_{iT}, u_i) du_i$ and those of the technical efficiencies $TE_{it} = E[\exp\{-u_{it}\} | (\varepsilon_{i1}, \dots, \varepsilon_{it}, \dots, \varepsilon_{iT})]$, where T is the time period, are provided for both distributions.

After application with simulated and real data which is in progress, we plan in a second aspect, as an alternative to the first one, to answer the question: Could the consideration of the dependence hypothesis between the error term components as in El Mehdi and Hafner (2014) in the case of panel data reduce or eliminate the positive skewness problem for panel data characterized by this feature?

Keywords: Extended exponential, Extended half-normal, Panel data, Positive skewness, Stochastic frontier analysis

TRITON WR-1339 ile İNDÜKLENMİŞ RATLARDA *Centranthus longiflorus* ve β -SİTOSTEROLÜN KORUYUCU ETKİLERİNİN HİSTOPATOLOJİK OLARAK İNCELENMESİ

HISTOPATOLOGICAL INVESTIGATION OF THE PROTECTIVE EFFECTS OF *Centranthus longiflorus* and β -SITOSTEROL IN RATS INDUCED WITH TRITON WR-1339

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ÖZET

Hiperlipidemi, lipid metabolizmasının primer bozukluğu şeklinde veya sekonder bozukluklara bağlı olarak görülebilmektedir. Primer bozukluklar tek başına hiperkolesterolemi ve hipertrigliseridemi veya hiperkolesterolemi+hipertrigliseridemi kombinasyonu ve HDL kolesterol düşüklüğü şeklinde seyredilmektedir. Sekonder bozukluklar ise; Diabetes mellitus, nefrotik sendrom, hipotroidizm, alkolizm, kronik karaciğer hastalığı (obstruktif), protein yapı bozuklukları ve bazı ilaçlarla uzun süren ilaç tedavileri (oral kontraseptifler, tiazid diüretikler ve glukokortikoidler) sonucu ortaya çıkmaktadır. Günümüzde statinler, kolesterol sentezinde ana enzim olarak işlev gören 3-hidroksi-3-metilglutaril koenzim A redüktazı (HMG-CoA redüktaz) inhibe ettiği için kardiyak problemleri ve mortaliteyi azaltmak için anti-hiperlipidemik ilaçlar (statinler) olarak kullanılmaktadırlar. Statinler karaciğerde kolesterol sentezini durdurarak kan kolesterol düzeyini değiştirirler. Bazı çalışmalar statinlerin, başta akut vasküler hastalarda olmak üzere birçok olumsuz etkiye neden olabileceğini göstermiştir. Bu nedenle son çalışmalar, benzer lipid değişimlerini ve statinlerin yan etkileri olmaksızın olumlu etkiler sağlayabilen bir kolesteril ester transfer proteini (CETP) ni inhibe eden ilaçlara ve bitkisel doğal ürünler üzerine yoğunlaşmıştır. Bu çalışma ile Triton WR-1339 ile indüklenmiş ratların farklı dokularında (karaciğer ve böbrek) *Centranthus longiflorus* bitki ekstraktı ve beta-sitosterolün koruyucu etken olma

potansiyelleri histopatolojik açıdan araştırıldı. Bu amaç için 8 farklı deney grubu oluşturuldu. Bu gruplar sırasıyla; Negatif kontrol grubu (% 0,9 NaCl), *Centranthus longiflorus* grubu (100 mg/kg/gün), Beta-sitosterol grubu (% 0,4), Pozitif kontrol grubu (Anacetrapib 0,2 mg/ml, 2,5 ml/kg i.p), Triton WR-1339 grubu (400 mg/kg, 2,5 ml/kg, i.p), *Centranthus longiflorus* + Triton WR-1339 grubu, Beta-sitosterol + Triton WR-1339 grubu, Anacetrapib + Triton WR-1339 grubu. Çalışmada kullanılan materyallerden Sprague–Dawley dişi ve erkek ratlar, tyloxapol, anacetrapib ve diğer sarf malzemeler ve kitler satın alındı. *Centranthus longiflorus* bitki ekstraktının ve beta-sitosterol farklı konsantrasyonlarının hazırlanması, hiperkolesterolemiminin ratlarda deneysel induksiyonu gerçekleştirildikten sonra karaciğer ve böbrek dokularının alınıp histopatolojik inceleme için bu dokuların takip işlemi yapıldı ve dokular parafin bloklara gömüldü. Dokular histopatolojik işlemler için mikrotom ile kesitlere ayrıldı. Daha sonra dokular uygun boyalar kullanılarak boyama işlemleri gerçekleştirildi. Bu çalışma Atatürk Üniversitesi Fen Fakültesi Moleküler Biyoloji ve Genetik Bölümü Genetik Araştırma Laboratuvarında ve Elazığ Fırat Üniversitesi Tıp Fakültesi Histoloji ve Embriyoloji Anabilim Dalı'nda yürütüldü. Çalışma gruplarından elde edilen sonuçlar incelendiğinde kontrol grubunda hem erkek hem de dişi bireyler için karaciğer ve böbrek dokularında histopatolojik olarak herhangi bir hasar görülmemiştir. Uygulama gruplarımızdan *Centranthus* grubunda hem erkek hem de dişi karaciğer ve böbrek dokularında hafif düzeyde hasar; Beta-sitosterol ve Anacetrapib uygulama gruplarında ise hem erkek hem de dişi karaciğer ve böbrek dokularında orta düzeyde hasar görüldü (Anacetrapib erkek karaciğer dokusu hariç- bu grupta hafif hasar görüldü); Triton WR-1339 grubunda ise tüm örneklerde şiddetli hasar görüldü. Koruyucu etki çalışmalarında ise *Centranthus* + Triton WR-1339 uygulanan grupta; Triton WR-1339'un tek başına uygulandığı gruplarda oluşan şiddetli hasarın, hafif düzeyde hasar yönünde değiştiği tüm dokular için tespit edildi. Beta-sitosterol + Triton WR-1339 grubu ile Anacetrapib + Triton WR-1339 gruplarında; Triton WR-1339'un tek başına uygulandığı gruplarda oluşan şiddetli hasarın, orta düzeyde hasar yönünde değiştiği bulundu. Çalışmamızdan elde ettiğimiz sonuçlara göre; *Centranthus longiflorus* bitki ekstraktının, Beta-sitosterol etken maddesinin ve anacetrapib ilacının tek başına uygulandığı gruplarda ancak orta düzeyde hasar oluşturdukları; bu üç grubun Triton WR-1339'un oluşturmuş olduğu şiddetli hasara karşı birlikte uygulandıklarında önemli ölçüde koruyucu etki gösterdikleri tespit edildi. *Centranthus* ile Beta-sitosterol arasında bir mukayese edilmesi gerekirse bitki ekstraktının Beta-sitosterole göre çok daha iyi bir koruyucu etkiye sahip olduğu söylenebilir.

Anahtar Kelimeler: *Centranthus longiflorus*, β -Sitosterol, Anacetrapib, Triton WR-1339, Histopatoloji

ABSTRACT

Hyperlipidemia can be seen as a primary disorder of lipid metabolism or secondary disorders. Primary disorders may present as hypercholesterolemia alone and hypertriglyceridemia or combination of hypercholesterolemia + hypertriglyceridemia and low HDL cholesterol. Secondary disorders occur as a result of Diabetes mellitus, nephrotic syndrome, hypothyroidism, alcoholism, chronic liver disease (obstructive), protein structure disorders and long-term drug therapies (oral contraceptives, thiazide diuretics and glucocorticoids). Nowadays, statins are used as anti-hyperlipidemic drugs (statins) to reduce cardiac problems and mortality because they inhibit 3-hydroxy-3-methylglutaryl coenzyme A reductase (HMG-CoA reductase), which functions as the main enzyme in cholesterol synthesis. Statins stop cholesterol synthesis in the liver and change the blood cholesterol level. Some studies have shown that statins can cause many adverse effects, especially in acute vascular patients. Therefore, recent studies have focused on drugs and herbal natural products that inhibit similar lipid modifications and a cholesteryl ester transfer protein (CETP) that can provide

positive effects without the side effects of statins. In this study, the potential of protective agent of *Centranthus longiflorus* plant extract and beta-sitosterol in the different tissues (liver and kidney) of rats induced with Triton WR-1339 were investigated histopathologically. For this purpose, 8 different experimental groups were created. These groups are; Negative control group (0.9% NaCl), *Centranthus longiflorus* group (100 mg / kg / day), Beta-sitosterol group (0.4%), Positive control group (Anacetrapib 0.2 mg / ml, 2.5 ml / kg ip), Triton WR-1339 group (400 mg / kg, 2.5 ml / kg, ip), *Centranthus longiflorus* + Triton WR-1339 group, Beta-sitosterol + Triton WR-1339 group, Anacetrapib + Triton WR-1339 group. Sprague–Dawley female and male rats, tyloxapol, anacetrapib and other materials and kits were purchased from the materials used in the study. Preparation of *Centranthus longiflorus* plant extract and different concentrations of beta-sitosterol, after experimental induction of hypercholesterolemia in rats, liver and kidney tissues were taken and follow-up for histopathological examination and tissues were embedded in paraffin blocks. Tissues were sectioned by microtome for histopathological procedures. Later, the tissues were stained using suitable dyes. This study was carried out in Atatürk University, Faculty of Science, Molecular Biology and Genetics Department, Genetic Research Laboratory and Elazığ Fırat University, Faculty of Medicine, Department of Histology and Embryology. When the results obtained from the study groups were examined, there was no histopathological damage in the liver and kidney tissues for both male and female individuals in the control group. Mild damage to both male and female liver and kidney tissues in the *Centranthus* group of our application groups; In beta-sitosterol and Anacetrapib application groups, both male and female liver and kidney tissues were moderately damaged (except for Anacetrapib male liver tissue - mild damage was observed in this group); In the Triton WR-1339 group, all samples were severely damaged. In protective effect studies, *Centranthus* + Triton WR-1339 was applied in the group; Triton WR-1339 was detected for all tissues where severe damage occurred in groups where it was applied alone changed in the direction of mild damage. Beta-sitosterol + Triton WR-1339 group and Anacetrapib + Triton WR-1339 group; It was found that the severe damage that occurred in the groups where Triton WR-1339 was applied alone changed in the direction of moderate damage. According to the results we obtained from our study; *Centranthus longiflorus* plant extract, Beta-sitosterol active ingredient and anacetrapib drug alone are only moderately damaged in groups; These three groups were found to have a significant protective effect when applied together against severe damage caused by Triton WR-1339. If it is necessary to compare between *Centranthus* and Beta-sitosterol, it can be said that the plant extract has a much better protective effect than Beta-sitosterol.

Keywords: *Centranthus longiflorus*, β -Sitosterol, Anacetrapib, Triton WR-1339, Histopathology

**DERMINATION OF THE CHEMICAL PROFILE OF ROSMARY EXTRACTS
FROM THE TWO FOREST ZEKKARA AND AIN KERMA IN THE EASTERN
REGION OF MOROCCO****Imane ZIANI *¹, Hamza BOUAKLINE ¹, Mohamed TABIBI ¹, Abdesselam TAHANI ¹,
Ali EL BACHIRI¹**¹ LCAE Laboratory, Physical Chemistry of the Natural Resources and Environment Team,
University Mohammed Premier, BP 717, 60000, Oujda, Morocco**ABSTRACT**

Aromatic and medicinal Plants constitute an important source of active natural products which differ widely in terms of structures, biological properties and mechanisms of actions. Various photochemical components especially polyphenols (such as flavonoids, phenolic acids, tannins, etc.) are known to be responsible for the free radical scavenging and antioxidant activities of the plants.

The aim of our work is the valorization of the extracts (methanolic, aqueous and hexanic) of *Rossmarinus Officinalis* from Zekkara forest and *Rossmarinus Tournefortii* from Ain kerma forest in the Eastern region of Morocco by identifying their chemical composition by HPLC and quantification of the content of phenolic compounds, flavonoids for example as well as the evaluation of the antioxidant activity of those extracts.

The extracts of *R.Officinalis* and *R.Tournefortii* were submitted to a phytochemical test to investigate their highlight qualitative composition in secondary metabolites. The analysis results shows the presence of flavonoids, tannin, steroids and terpenoids, But the absence of alkaloids and saponins.

Quantitative estimation of flavonoids and total phenols by the colorimetric method has shown that extracts are rich in those compounds. The evaluation of the antioxidant properties using the DPPH free radical scavenging method indicate that the extracts methanolic products have shown higher antioxidant efficacy comparing with aqueous and hexanic extracts (24.15 µg /ml and 34.69 µg /ml for *R.Officinalis* from Zekkara forest and for *R.Tournefortii* from Ain Kerma forest respectively).

Keywords: Extracts, phytochemical test, polyphenols, flavonoids, antioxidant activity

PLASTİKLERİN SÜRTÜNME KARIŞTIRMA KAYNAK YÖNTEMİ İLE BİRLEŞTİRİLMESİNDE MEYDANA GELEN KAYNAK HATALARI VE NEDENLERİ

WELDING FAULTS AND CAUSES OF PLASTICS JOINING WITH FRICTION STIR WELDING

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ÖZET

Plastik malzemelere uygulanan sürtünme karıştırma kaynağında (SKK) kaynak performansına ve kaynak kalitesine etki eden bir çok faktör vardır. Bu faktörlerin birbirleri ile uyumlu olması gereklidir. Sürtünme karıştırma kaynak sürecine etkin kaynak değişkenlerinin fazla olması sebebiyle yüksek mukavemetli SKK bağlantıları, yüksek kaynak performansı elde etmek ve kaynak sürecini kontrol etmek oldukça zordur. Her parametre kaynağın birleştirilmesine farklı etki göstermektedir. Yapılan çalışmalarda, ilk yapılan sürtünme karıştırma kaynağında elde edilen çekme mukavemetinden yaklaşık % 47 oranında artış elde edilmiştir. Ayrıca bazı plastik malzemelerde (propilen, polietilen ve Akrilonitril Bütadien Stiren), birleştirme verimliliği yaklaşık % 95'lere kadar ulaşmıştır. Sürtünme karıştırma kaynağının temelini oluşturan kaynak değişkenleri, makine parametreleri, kaynak takım değişkenleri ve malzeme özellikleri olarak üç ana gruba ayrılmıştır. Bu çalışmada, makine parametreleri ve kaynak takım değişkenleri içerisinde seçilen faktörlerin kaynağın mekanik özelliklerine ve bu parametrelerin oluşturduğu kaynak hataları üzerine etkileri incelenmiştir. En uygun kaynak şartlarını elde etmek için makine parametreleri ve kaynak takım geometrileri geniş aralıkta irdelenmiştir. Yapılan birleştirmeler neticesinde kaynak kalitesi ve kaynak mukavemetleri: çekme deneyi, makroyapı ve SEM görüntüleri ile incelenmiştir. Başarılı birleştirmeler yapılmasına rağmen bazı kaynak parametrelerinde olumsuz sonuçlar elde edilmiştir. Bu çalışmanın esas amacı, olumsuz sonuçlar elde edilen birleştirmelerde meydana gelen kaynak hatalarının tespiti üzerinedir. Kaynak hatalarının nedenleri, önleme yöntemleri, kaynak parametrelerinin ve kaynak takımlarının hangi kaynak hatalarına sebep olduğu detaylı irdelenmiştir. Ayrıca kaynak şartlarının değiştirilmesi ile bu hataların nasıl önlenebileceği ile ilgili öneriler yapılmıştır.

Anahtar Sözcükler: Sürtünme karıştırma kaynağı, kaynak hataları, polietilen kaynağı, Sürtünme karıştırma kaynak değişkenleri

ABSTRACT

There are many factors affecting the welding performance and welding quality in friction stir welding (FSW) applied to plastic materials. These factors must be compatible with each other. It is very difficult to obtain high strength FSW connections, high welding performance and control the welding process, due to more number of effective welding variables in the friction stir welding process. Each parameter has a different effect on the weld joint. In the studies carried out, an increase of approximately 47% was obtained from the tensile strength obtained in the first friction stir welding. In addition, in some plastic materials (propylene, polyethylene and Acrylonitrile Butadiene Styrene), the joining efficiency has reached approximately 95%. Welding variables that form the basis of friction stir welding are divided into three main groups as machine parameters, welding tool variables and material properties. In this study, the effects of the factors selected from the machine parameters and welding tool variables on the mechanical properties of the weld and the welding errors caused by these parameters were examined. Machine parameters and welding tool geometries are examined in a wide range in

order to obtain the most suitable welding conditions. As a result of the joints made, the weld quality and weld strengths were examined with mechanical tests, macrostructure and SEM images. Despite successful joints, negative results were obtained in some welding parameters. The main purpose of this study is to detect welding errors that occur in joints with negative results. The causes of welding errors, prevention methods, welding parameters and welding errors caused by welding tools are examined in detail. In addition, suggestions have been made on how to prevent these errors by changing the welding conditions.

Keywords: Friction stir welding, welding defects, polyethylene welding, Friction stir weld variables.

**POLİETİLENİN SÜRTÜNME KARIŞTIRMA KAYNAK YÖNTEMİ İLE
BİRLEŞTİRİLMESİNDE KAYNAK TAKIM DEĞİŞKENLERİNİN İNCELENMESİ**
INVESTIGATION OF WELDING TOOL VARIABLES IN JOINING OF POLYETHYLENE
BY FRICTION STIR WELDING METHOD

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ÖZET

Plastiklerin endüstride kullanım alanı gün geçtikçe artmaktadır. Konstrüksiyon durumuna göre bazı yerlerde sürtünme karıştırma kaynağının avantajlarından dolayı birleştirme gereksinimleri oluşturmaktadır. Sürtünme karıştırma kaynağında en temel olay, sürtünme ısı ile karıştırma bölgesindeki sıcaklığı arttırmak ve burada ısınan deformasyona uğrayan malzemeyi kaynak hattı boyunca homojen ilerlemesini sağlamaktır. Kaynak takımı sürtünme sonucu ısı meydana getirir, malzemenin etrafa saçılmasını önler ve takımın etrafındaki malzeme hareketine yardımcı olur. Kaynak takımının omuz kısmı hem malzemeye basınç uygular hem de ısı üretir. Uç kısmı ise ısınan malzemeyi deforme eder ve uç etrafına yayılmasını sağlar. Kaynak takımındaki bu iki değişken birbiri ile uyumlu olması gerekir. Bu çalışmada; kaynak takımına ait değişkenler (omuz çapı, uç çapı ve uç uzunluğu) belirli aralıklarda tutulmak suretiyle farklı takımlar üretilmiştir. Bu takımlar ile yüksek yoğunluklu polietilen levhalar sürtünme karıştırma kaynak tekniği kullanılmak üzere birleştirilmiştir. Kaynak işlemlerinde kullanılan kaynak takımı her birleştirmeden sonra takım soğutulmuştur. Kaynaklı levhaların makroyapı görüntüleri ve mekanik testleri yapılmıştır. Kaynak performansını etkileyen mekanik özellikler hem kaynak takım değişkenleri hemde kaynak parametrelerine bağlı olarak incelenmiştir. Makroyapı görüntüleri ile kaynak dikişi, birleşme hattındaki değişimler, malzeme taşması ve nüfuziyet irdelenmiştir. Mekanik deneyler ile birleştirilen parçaların çekme mukavemet değerleri elde edilmiştir. Yapılan değerlendirmeler sonucunda kaynak takım değişkenlerinin hem çekme mukavemetine hem de kaynak bölgesinde etkili olduğu tespit edilmiştir.

Anahtar Sözcükler: Sürtünme karıştırma kaynağı, kaynak takımı, polietilen kaynağı, mekanik özellikler

ABSTRACT

The usage area of plastics in industry is increasing day by day. Depending on the construction situation, it creates joining requirements due to the advantages of friction stir welding in some places. The most basic issue in friction stir welding is to increase the temperature in the mixing zone with the friction heat and to ensure that the deformed material heated here moves homogeneously along the welding line. The welding tool generates heat as a result of friction, prevents the material from spilling around and helps the material movement around the tool. The shoulder part of the welding set both exerts pressure on the material and generates heat. The pin deforms the heated material and allows it to spread around the pin. These two variables in the weld set must be compatible with each other. In this study; different tools were produced by keeping the variables (shoulder diameter, pin diameter and pin length) of the welding tool in certain intervals. With these tools, high density polyethylene sheets were joined using the friction stir welding technique. The welding tool used in the welding process is cooled after each welding. The macrostructure images and mechanical tests of the welded plates were made. The mechanical properties affecting the welding performance were examined depending on both welding tool variables and welding parameters. With macrostructure images, weld seam, changes in the joint line, material overflow and penetration are examined. The tensile strength

values of the parts joined by mechanical tests were obtained. As a result of the evaluations, it has been determined that the welding tool variables are effective on both the tensile strength and the weld area.

Keywords: Friction stir welding, welding tool, polyethylene welding, mechanical properties.

ISOLATION AND IN VITRO STUDY OF 1-8, CINEOLE AGAINST THREE VIRULENT FUNGI RESPONSIBLE FOR POST-HARVEST CITRUS DISEASES

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ABSTRACT

In Morocco, the citrus sector is considered the most important agricultural export sector, as it is essential for the country's economic development. However, during storage and transport, citrus fruits are susceptible to blue, green and soft rot due to *Penicillium italicum*, *Penicillium digitatum* and *Geotrichum candidum* respectively.

Chemical treatments have many disadvantages, the most serious of which are the persistence of chemical residues on fruits, which leads to very serious problems for human health and also for the environment.

In this work, we had consisted of isolating and identifying some virulent molds responsible for post-harvest citrus diseases, and using them to evaluate in vitro the antifungal activity of some chemical antifungal, an herbicide (glyphosate) and a major compound of 1-8, cineole.

The results in vitro part showed that the three isolates: *Penicillium italicum*, *Penicillium digitatum* and *Geotrichum candidum* are sensitive to 1-8, cineole with a MIC value very low and lower than the authorized dose at packing stations compared to other chemical antifungal agents.

The results of the antifungal activity of 1-8, cineole obtained in vitro open the way for its use as an alternative to chemical fungicides in the post-harvest period.

Keywords: *Penicillium italicum*, *Penicillium digitatum*, *Geotrichum candidum*, fungicides, 1-8, cineole.

MINERALOGIE ET CARACTERISTIQUES DE CUISSON DES MATERIAUX ARGILEUX A BASE DE LAITIER D'ACIER

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Trois matières premières céramiques naturelles de deux régions du MAROC (Nador Tortonien, Messinien et Safi Miocène), utilisées dans l'industrie de la céramique, ont été étudiées dans le but de concevoir d'autres utilisations possibles ou d'optimiser le mélange et les conditions thermiques pour les fabricants en ajoutant un déchet industriel. Cette nouvelle voie de valorisation proposée consiste à utiliser des scories d'aciérie comme matière première dans la fabrication de briques cuites en utilisant des mélanges contenant des pourcentages différents des scories et d'argiles ainsi que des températures de cuisson différentes allant jusqu'à 1100°C selon la vitesse de 5°C/min et un palier de cuisson de 4h. Des techniques de caractérisation physicochimiques et minéralogiques (DRX, ATG, FRX, Granulo-laser, etc.) ont été appliquées soit pour comparer les matériaux en vrac, broyés et tamisés, soit pour comprendre leurs modifications chauffage. Les données indiquent que la minéralogie de l'argile du Messinien contient le plus grand pourcentage de quartz 45%, suivi par la calcite, les trois matériaux ont plus de 4% de dolomie, les minéraux argileux prédominent dans tous les échantillons sont la kaolinite, l'illite et la smectite. Les compositions chimiques indiquent que SiO₂, Al₂O₃ et Fe₂O₃ sont des éléments majeurs, tandis que K₂O et MgO sont moins abondants, Zn et Sr sont les éléments traces les plus remarquables dans les scories. Les matériaux argileux et le laitier d'acier sont pauvres en matière organique. Les caractéristiques technologiques des briques de test cuites montrent des couleurs variant entre le rouge brique, l'orange pâle et le blanc crème, avec une cohésion bonne à très bonne, le retrait à la cuisson diminue avec l'augmentation de la température, l'absorption d'eau et les paramètres associés montrent aussi de bons résultats au-delà de 1000°C. La classification de ces échantillons à l'aide de diagrammes ternaires appropriés présente des caractéristiques adéquates pour la production de céramiques structurales.

Mots clés: valorisation, scories, argile Tortonien et Messinien, fabrication des briques.

QSAR ANALYSIS OF NOVEL TRIAZOLE DERIVATIVES AS ANTIFUNGAL AGENTS USING COMFA, COMSIA AND MOLECULAR DOCKING METHODS

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ABSTRACT

Three-dimensional quantitative structure-activity relationship (3D-QSAR) and molecular docking were performed on series of 29 novel triazole derivatives as antifungal agents. CoMFA and CoMSIA models were developed using 23 molecules in the training set having pMIC₈₀ ranging from 5.096 to 7.204 gives high values of leave-one-out cross validation coefficient Q² (0.564 and 0.561 respectively) and significant coefficient of determination R² (0.805 and 0.787 respectively). The predictive ability of this model was evaluated by external validation using a test set of 6 molecules. The contour maps produced by CoMFA and CoMSIA models offer sufficient information to find out the regions are responsible for improving the activity. Based on these satisfactory results, we designed four new triazole derivatives with high predicted activities. Moreover, surflex-docking was carried out to confirm the stability of predicted molecules in the active site of receptor (PDB: 4UYM).

Keywords: CoMFA, CoMSIA, Molecular docking, antifungal, triazole.

MƏİŞƏT ZORAKILIĞININ SOSIAL-PSIXOLOJİ SƏBƏBLƏRİ VƏ NƏTİCƏLƏRİ

SOCIO-PSYCHOLOGICAL CAUSES AND CONSEQUENCES OF DOMESTIC VIOLENCE

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ÖZET

Məişət zorakılığı “yaxın qohumluq münasibətlərindən, birgə və ya əvvəllər birgə yaşamaqlarından sui-istifadə etməklə, bu qanunun şamil edildiyi şəxslərin birinin digərinə qəsdən fiziki və ya mənəvi zərər vurmasıdır”. Bundan əlavə deyə bilərik ki, məişət zorakılığı yeniyetmələr, gənclər və böyüklərin öz intim partnyorlarına qarşı törətdikləri fiziki şiddət, cinsi zorakılıq, psixoloji basqı, iqtisadi asılılıq və ya məhrumetmə kimi aşağılayıcı və zorakı davranışların törədilməsi ardıcılığıdır. Məişət zorakılığının bir neçə növü vardır: fiziki zorakılıq, psixoloji zorakılıq, sosial zorakılıq, iqtisadi zorakılıq, cinsi zorakılıq.

Ailədaxili zorakılığın səbəbləri araşdırıldıqda sosioloji və psixoloji səbəblər ayırd edilir. Təhsil səviyyəsinin aşağı olması, iqtisadi çətinliklər, mental adət və inanışlar sosioloji səbəblərdir. Qız uşaqlarının ibtidai siniflərdən məktəbdən uzaqlaşdırılması, valideynlər tərəfindən təhsilə biganə yanaşma halları ilə çox rastlaşırıq. Bundan əlavə, həddi-bülüğa çatmadan evlənməyə məcbur etməklə təhsildən yayındırma hallarını da gözdən qaçıрмаq olmaz. Ailə başçısının yəni, kişinin ailənin tələbatlarını maddi cəhətdən ödəyə bilməməsi və ya qismən ödəməsi ailədaxili münaqişələrin yaranmasında rüşeym rol oynayır. İqtisadi problemlər zəmnində yaranan münaqişələr kişinin həll yolu kimi şiddətə meyl etməsi ilə nəticələnə bilər. Mentalitet, köhnə vaxtların adət-ənənəsi, “kim nə deyər?” düşüncəsindən əmələ gələn sosial zorakılıq qadının və əsasən qız uşaqlarının cəmiyyətdən təcrid olunması, asosial vəziyyətə salınması kimi hallarla nəticələnir.

Problemin psixoloji səbəblər isə antisosial və narsissistik xarakter pozuntuları kimi qısqançlıq sayıqlamaları ilə gedən paranoid pozuntu və şizofreniya xəstəliyi, spirtli içki və narkotik vasitələrdən istifadə və digər halları göstərə bilərik. Qısqançlıq paranoiası olan insanlarda, əsassız aldatma şübhələri və ya sayıqlamalar yaranır. Bu insanlar şübhələrin dəqiqliyini yoxlamadan tam əminliklə buna inanmağa meylli olurlar. Qarşı tərəf belə bir şeyin olmadığına dair məntiqli izahlar gətirsə də, o insanların fikrini dəyişdirmək çox çətin və ya ümumilikdə mümkün olmur. Spirtli içki və narkotik vasitə istifadəsi, beynin prefrontal korteks dediyimiz bölümünə təsir edərək, mühakimə, analiz etmə, qərar vermə qabiliyyətini zəiflədir. Bu səbəbdən də bu maddələrin təsiri altındaykən düşünülmədən edilən kontrolsuz və zorakılıq hərəkətləri daha sıx görülür.

Zorakılıq səbəbləri ortadan qaldırılmadan, münasibətləri və evliliyi davam etdirməyə çalışıldıqda birgə həyat öz cazibəsini və harmoniyasını itirməyə başlayır, bununla da yeganə çıxış yolu boşanmalarda görülür. Çözülməyən, aradan qaldırılmayan ailədaxili zorakılıqların mütəmadi baş verdiyi ailələrdə böyüyən uşaqlarda psixoloji problemlərin olduğuna daha tez-tez rast gəlinir.

Sosial və psixoloji halların mövcudluğu isə məişət zorakılığı qurbanlarının nəticədə müdafiəsiz qalmalarına səbəb olur. Xüsusilə vurğulamaq yerinə düşər ki, məişət zorakılığı beynəlxalq ictimaiyyət tərəfindən ən çox yayılmış insan haqlarının pozuntusu hallarından biri hesab olunur.

Anahtar kelimələr: məişət zorakılığı, sosial səbəblər, psixoloji səbəblər, zorakılığın nəticələri.

ABSTRACT

Domestic violence is "the intentional physical or moral harm of one of the persons to whom this law applies by abusing close relationship, cohabitation."

Besides, domestic violence is a series of degrading and violent behaviors committed by adolescents, young people, and adults against their intimate partners, such as physical violence, sexual violence, psychological pressure, economic dependence, or deprivation. There are several types of domestic violence: physical violence, psychological violence, social violence, economic violence, and sexual violence.

Sociological and psychological causes are distinguished when investigating the causes of domestic violence. Low levels of education, economic hardship, mental habits, and beliefs are sociological reasons. We often see girls being expelled from primary school and parents are indifferent to education. Additionally, forcing people to marry before reaching puberty should not be overlooked. The inability of the head of the family, that is, the man, to meet or partially meet the needs of the family, plays a key role in the development of family conflicts. Conflicts over economic problems can result in a man's tendency to resort to violence as a solution. The mentality, the tradition of the old days, is "who says what?" Social violence arising from the idea that women and especially girls are isolated from society and placed in an antisocial situation.

Psychological causes of the problem include paranoid disorders and schizophrenia, alcohol and drug use, and other cases accompanied by jealous delusions, such as antisocial and narcissistic behavioral disorders. People with jealousy paranoia have unfounded suspicions or delusions of deception. These people tend to believe it with complete confidence without checking the accuracy of their doubts. Even if the other party gives logical explanations that such a thing does not exist, it is very difficult or impossible to change the opinion of those people. Alcohol and drug use affects the part of the brain called the prefrontal cortex, which impairs the ability to judge, analyze, and make decisions. Therefore, uncontrolled and violent acts committed unintentionally under the influence of these substances are more common.

When the causes of violence are not eliminated and the relationship and marriage are tried to continue, cohabitation begins to lose its charm and harmony, and the only way out is divorce. Psychological problems are more common in children growing up in families where persistent domestic violence persists.

The existence of social and psychological conditions makes victims of domestic violence vulnerable. It is important to note that domestic violence is one of the most widespread human rights violations by the international community.

Keywords: domestic violence, social causes, psychological causes, consequences of violence.

THE APPLICATION OF A NEW NUMERICAL METHODOLOGY TO ASSESS PIPELINE FAILURES

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ABSTRACT

In recent years, the use of natural gas as an energy source has been increasing. As a result, the need for pipelines to transport gas from a production site to a consumption site has greater than before. Even though the industrial revolution has given way to advanced technology in this field. However, like any structures pipelines break down. The failures of pipelines are mainly due to surface defects in the form of cracks (external, internal). They appear during manufacturing or service operations (corrosion, fatigue), which implies the reduction of their resistance. Indeed, it is necessary to know the evolution and the degree of harmfulness of defects. The difficulty of making an experiment to evaluate these kinds of defects makes several numerical procedures appear. In this work, we utilized a numerical simulation using Abaqus software to model cylindrical tubes under pressure. We have combined the extended finite element method (Xfem) and the volumetric method instead of using the classical finite method. The result based on this approach was used to estimate the stress intensity factors (SIFs). Then, this factor was employed to build the failure assessment diagram (FAD). The XFEM simulations enable us to provide a FAD curve that can be used as a practical reference for defect evaluation in pipeline systems in the industrial world.

Keyword: crack, pipeline, Failure

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**İNEKLERDE PROGESTERON KAYNAĞININ (CIDR) TEKRARLI
UYGULANMASININ KIZGINLIK BULGUSU VE GEBELİK ÜZERINE ETKİSİ**
THE EFFECT OF REPEATED APPLICATION OF PROGESTERONE SOURCE (CIDR) ON
ESTRUS FINDINGS AND PREGNANCY IN CATTLES

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ÖZET

Bu çalışmanın amacı, ineklerde uygulanan progesteron (CIDR) destekli senkronizasyon uygulamalarında, progesteron kaynağının steril hale getirilerek tekrar kullanımının kızgınlık ve gebelik üzerine etkilerini değerlendirmektir. Çalışmamız birinci laktasyonda inaktif ovaryumlara sahip inekler üzerinde gerçekleştirilmiş olup, suni tohumlama işlemlerinde sexed dişi sperma içeren payetler kullanılmıştır. İlk denemede 22 tane Holstein ırkı ineğe 0. gün GnRH uygulamasını takiben yeni CIDR uygulaması yapılmıştır. 7. günün sonunda progesteron kaynakları çıkartılmış ve PGF₂ alfa uygulaması yapılmıştır. Takiben, 48-72. saatlerde kızgınlık takibi gerçekleştirilmiştir. 2. ve 3. denemelerde ise, ilk denemelerde kullanılan progesteron kaynakları 121 °C de 15 dakika süre ile sterilizasyonları yapılarak sırasıyla 21 ve 22 tane ineğe aynı protokol ile tekrar kullanılmışlardır. Kızgınlığın tespiti amacıyla; dış kızgınlık bulguları ve folikül çapları değerlendirilmiş olup, ovaryumlarında 1,5 cm ve üzeri folikül bulunan inekler tohumlanmışlardır. Kızgınlık belirtilerini gösteren hayvan sayısı sırasıyla 20, 20 ve 19 olarak, tohumlama sonrası gebe kalan hayvan sayısı ise sırasıyla 16, 15 ve 14 olarak tespit edilmiştir. Gruplar arasında istatistiksel olarak bir farklılık gözlemlenmemiştir (p>0.05). Sonuç olarak progesteron kaynaklarının (CIDR) sterilize edilerek başarılı bir şekilde senkronizasyon amacıyla kullanılabileceği görülmüştür.

Anahtar Kelimeler: Senkronizasyon, CIDR, İnek

ABSTRACT

The aim of this study is to evaluate the effects of re-use of progesterone source by sterilizing it on heat and pregnancy in progesterone (CIDR) assisted synchronization applications in cattles. Our study was carried out on Holstein Cattles, in their first lactation, with inactive ovaries and straws containing sexed (female) sperm were used in artificial insemination. In the first trial, a new CIDR was applied to 22 Holstein cattles after GnRH administration on day 0. At the end of the 7th day, progesterone sources were removed and PGF₂ alpha was administered. Subsequently, estrus was monitored at 48-72. hours. In the 2nd and 3rd trials, the progesterone sources used in the first trials were sterilized for 15 minutes at 121 ° C and reused with the same protocol on 21 and 22 cattles, respectively. In order to detect heat; External estrus findings and follicle diameters were evaluated. Cattles with follicles of 1.5 cm or more in their ovaries were inseminated. The number of animals showing signs of estrus was 20, 20 and 19, respectively, and the number of animals conceived after insemination was 16, 15 and 14,

respectively. There was no statistically significant difference between the groups ($p > 0.05$). As a result, it has been seen that progesterone sources (CIDR) can be sterilized and successfully used for synchronization.

Keywords: Synchronization, CIDR, Cattle

ETUDE DE L'EFFET COMBINÉ DE L'HUILE ESSENTIELLE DE THYMUS SATUREIODES, L'ACTIVITÉ DE L'EAU ET LA TEMPÉRATURE SUR LA CROISSANCE FONGIQUE ET LA PRODUCTION DE L'OCHRATOXINE A PAR LA SOUCHE ASPERGILLUS.S2

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RESUME

L'objectif de ce travail vise à étudier l'influence de l'interaction de l'huile essentielle de Thymus satureioides à différentes concentration, température et l'activité de l'eau sur la croissance fongique et la production de l'OTA par l'isolat d'Aspergillus (LASSA S2).

L'effet inhibiteur de l'huile essentielle a montré une activité dose-dépendante sur le champignon testé. Les taux d'inhibition augmentent en fonction de l'activité de l'eau et la température. Le taux d'inhibition le plus élevé a été observé pour la concentration 100 µl/l, il atteint 75,44% à 0,93_{aw} et à 25°C. Une inhibition totale de la croissance fongique a été observée à une dose appliquée de 500 µl /l à 25 et 30°C, à 0,93_{aw} et à 0,99_{aw}. Nos résultats ont également montré que la réduction de la croissance fongique en présence de l'HE dépend de manière très significative de la dose appliquée. L'analyse des extraits de milieu de culture de la souche d'Aspergillus (LASSA S2) à 25 et 30°C à 0,99_{aw} par HPLC-FLD a montré que les concentrations de l'OTA dans le milieu de culture pour les essais témoins étaient différentes de ceux en présence d'HE dans la majorité des cas. L'inhibition complète de la biosynthèse de l'OTA a été observé à la dose 100µl/l de l'HE de Thymus satureioides à 30°C, mais l'inhibition totale de la production n'a été observée qu'à la concentration 200µl/l pour la température 25°C et à la même activité en eau.

Mots clés : Métabolites secondaires ; Moisissures toxigènes ; Ochratoxine A ; Activité de l'eau ; Thymus satureioid.

NEW APPROACH FOR THE EVALUATION OF THE RELIABILITY AND DAMAGE OF THE LIFTING WIRE ROPE

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ABSTRACT

In order to estimate the instantaneous reliability during a periodic inspection of a lifting wire rope, analytical methods based on experimental results have been developed. Our approach consists firstly in studying the influence of the rupture of the strands on the mechanical behavior of the cable, to do this, we estimated the damage of the cable through a damage model applicable in the treatment of the prediction of the service life of the steel cable. Thereafter, reliability by Weibull's law and finally to link the two parameters (damage and reliability) through the life fraction to follow the degradation of the cable and predict the moment of acceleration of the damage. In a second step, we will develop a probabilistic model describing the reliability of a lifting wire rope from the reliability of its components (wires, strand). The approach adopted is a multi-scale approach with total decoupling between the wire scale, the strand scale and the cable

Mots clés: Reliability; Weibull's law; Damage, lifting cable.

ELECTROMAGNETIC FILTERS BASED ON DEFECT MODES IN ONE-DIMENSIONAL PHOTONIC STAR WAVEGUIDES STRUCTURE**Youssef Ben-Ali^{a,b*}, Ilyas El Kadmiri^a, Younes Errouas^a, Abdelouahed Essahlaoui^b and Driss Bria^a**^aLaboratory of Materials, Waves, Energy and Environment, Team of Acoustics, Photonics and Materials, Faculty of Sciences, Mohamed First University, Oujda, Morocco^bEngineering Sciences Laboratory (LSI), Multidisciplinary Faculty of Taza, Sidi Mohamed Ben Abdellah University, B.P. 1223, Taza Gare, Morocco**ABSTRACT**

In this work, we investigate the existence of one or two defect modes in the photonic band structure of a one-dimensional photonic star waveguides structure. This structure exhibits large gap bands that originate both from the periodicity of the system and the resonance states of the grafted lateral branches which are play the role of the resonators. The defect modes result from the presence of defective backbone in the star waveguide structure and may occur in these gaps. We have shown that there are two electromagnetic filters (two defect modes) of maximum transmission and a very high quality factor with the presence of a geometrical defect. Also, we have studied the band structure with the presence of material defect, we can also find two electromagnetic filters of maximum transmission and high quality factor Q.

Keywords: Band gaps, Star waveguides, Green function, Electromagnetic filter.**References**

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**MODELISATION DE L'INCERTITUDE DE POSITION DU TERMINAL D'UN
SYSTEME ARTICULE AVEC JEU, FORME DE DEUX SEGMENTS****Bouhamza Abdelkader¹, Outemsaa Omar¹, EL Farissi Omar¹, EL Minor Hassan¹.**

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RÉSUMÉ

Les bras de mesure polyarticulés sont des appareils de mesure tridimensionnelle constitués de bras articulés. Du fait de leur portabilité, leur usage en métrologie des pièces mécaniques devient de plus en plus courant. Les mesures effectuées par ces bras sont moins précises que les machines à mesurer tridimensionnelle travaillant dans des laboratoires bien conditionnés.

Des travaux de recherche ont étudié l'incertitude de mesure de ces instruments due aux sources d'erreurs intrinsèques (codeurs angulaires, jeux dans les liaisons) et à des sources d'erreurs environnementales (température, vibrations, effort de l'opérateur, etc.), mais en considérant les liaisons sans jeu. Or les jeux dans les liaisons engendrent une importante erreur de mesure.

Dans ce document, le système étudié est formé de deux segments du bras polyarticulé dont la liaison est avec jeu. En effet, les mouvements aléatoires de translation et de rotulage dus au jeu engendrent une erreur de position de l'extrémité du deuxième segment. Il est donc nécessaire d'estimer l'incertitude sur cette position. Pour ceci, nous établissons pour le système articulé, un modèle géométrique parfait (sans jeu) basé sur la convention de Denavit-Hartenberg, puis un autre modèle géométrique tenant compte du jeu dans la liaison. On en déduit ensuite le modèle de l'incertitude de position.

Les résultats montrent la variation de l'incertitude dans l'espace de travail de ce système.

Dans la brève perspective, on va appliquer cette modélisation à toutes les liaisons du bras de mesure polyarticulé pour en déduire son incertitude de mesure.

Mots clés: bras polyarticulé, modèle géométrique, jeu, mesure, erreur, incertitude.

SELECTION ET DOMESTICATION DES PLANTES SPONTANNEES DE LA REGION DE L'ORIENTAL EN VUE DE LEUR INTEGRATION DANS LE CORTEGE DE PLANTES D'ORNEMENT

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RESUME

Contrairement aux plantes ornementales cultivées on trouve des plantes sauvages poussant spontanément et qui présentent un intérêt ornemental. Ces espèces végétales spontanées jouent un rôle important dans la planification environnementale des zones urbaines et rurales pour la réduction de la pollution, la foresterie sociale et rurale et le développement des terres incultes.

Le Maroc se classe parmi les pays les plus riches en biodiversité floristique à l'échelle du bassin méditerranéen. Cette richesse floristique se retrouve également dans la région de l'orientale et ce malgré un climat plutôt sec, semi-aride à aride pour l'essentiel.

Afin d'exploiter cette flore riche et variées, mon travail consiste à une mise en évidence des espèces ornementales sauvages recueillies dans la région de l'orientale après une sélection phénotypique des plantes à aspect décoratif et qui ont un potentiel esthétique les qualifiant pour une utilisation dans les espaces verts, ensuite l'optimisation de leur multiplication dans le but de les adopter et d'élargir la gamme des plantes d'ornement adaptées aux conditions locales. La bonne exploitation et la conservation de ces espèces ornementales traduit la conservation des plantes a intérêt aussi phytomédicale.

Mots clés : plantes spontanées, domestication, plantes ornementales.

LOCALIZED STATES IN GaAs/GaAlAs MULTI-QUANTUM WELLS WITH A GEO-MATERIAL AND MATERIAL DEFECT

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ABSTRACT

This paper represents a theoretical study of the transmission and the electronic band structure for a Multi-quantum wells, consisting of two periodic semiconductor materials, containing a geo-material and a material defect layer. The dynamic tuning of the defect layers nature, inserted into the structure in question, is carefully investigated, using the Green's function. Due to the defect layers, different kinds of localized modes are found and their properties have been studied. Results show that both the position and the thickness of the defect layers can play an essential role in the creation of localized states, which favors the transfer of electrons, without using a higher energy. Moreover, the thickness of the first and the second defects give possibilities to create states into the gap bands. These defect states show important variations inside the gap bands versus the physical parameters characterizing the defect layers.

Keywords: Transmission, Geo-material Defect, Material Defect, Electronic Band structure, Aluminum concentration, Localized states.

COVID-19 ‘UN OLFAKTÖR MUKOZA ÜZERİNE OLAN ETKİSİNİN ARAŞTIRILMASI

INVESTIGATION OF THE EFFECT OF COVID-19 ON OLFACTOR MUCOSA

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ÖZET

Dünya çapında halk sağlığı açısından büyük tehdit oluşturan üst solunum yolu enfeksiyonuna neden olan koronavirüslerin yirmi farklı türü bulunmakta olup insanlar ve hayvanlar arasında geçiş gösterebilmektedirler. Şu anda etkilerini gördüğümüz koronavirüs hastalığı, ilk olarak 2019 yılı aralık ayının başında Çin’in Wuhan şehrinde görülen, yüksek ateş ve nefes darlığı şeklinde semptomları olan bir hastalıktır. 2019 yılında tanımlanması nedeniyle, küresel olarak kabul gören adı koronavirüs hastalığı 19 (COVID-19) dur. COVID-19 belirtilerinde ateş, öksürük ve nefes darlığı belirleyici semptomlar arasında yer almaktadır. COVID-19’a enfekte ancak semptom göstermeyen kişiler de dahil olmak üzere birçok hastada tat ve koku kaybı meydana gelmektedir.

Koku alma işleminin geçici olarak bozulmasında, koku alma epitelinde iltihaplanma ve koku reseptörlerinde hasar gibi iki farklı sürecin oluştuğu ortaya konmuştur. Olfaktör mukoza üst konka nazaliste yerleşik koku reseptörlerini içeren özel bir bölümdür. Olfaktör epiteldeki olfaktör hücrelerin apikal sitoplazmasındaki silyumlarında koku reseptörleri vardır. Olfaktör epitelde oluşacak geçici ya da kalıcı hasarlanma koku duyusunun kaybı olan anosmiye neden olur. Anosmi, koronavirüs enfeksiyonlarında tanımlanmış olup, koronavirüslerin olfaktör hücre nöronlarına doğrudan bağlanarak koku alma reseptörlerine hasar verdiği ortaya konmuştur. Ayrıca olfaktör epiteldeki destek hücrelerinde oluşan hasar sonucu koku alma duyusunun azaldığı da yapılan çalışmalar arasındadır. Yapılan histolojik analizler sonucu COVID-19’un olfaktör epitelde atrofi ve lamina propria belirgin lökosit infiltrasyonu oluşturduğu belirlenmiştir. COVID-19 enfeksiyonunun ve vücuda girişinin ACE2 (anjyotensin dönüştürücü enzim 2 reseptör) reseptörüne bağlı olduğu bilinmektedir. Ayrıca olfaktör mukoza hücrelerinin ACE2 reseptörlerini eksprese ettiğine dair çalışmalar vardır. COVID-19 ‘un hedefi, olfaktör mukozadaki destek ve kök hücreleri, Bowman bezi hücreleri gibi ACE2 reseptörlerini eksprese eden hücreler olduğu ortaya konmuştur.

Yaptığımız literatür araştırması ile, COVID-19’un olfaktör mukozada hasar oluşturarak anosmiye neden olduğu sonucuna varılmıştır.

Anahtar Kelimeler: Anozmi, COVID-19, Olfaktör mukoza

ABSTRACT

There are twenty different types of coronaviruses that cause upper respiratory tract infections that pose a major threat to public health worldwide, and they can be transmitted between humans and animals. Coronavirus disease, which we are currently seeing, is a disease with symptoms in the form of high fever and shortness of breath, first seen in Wuhan, China at the beginning of December 2019. Due to its definition in 2019, its globally accepted name is

coronavirus disease 19 (COVID-19). Fever, cough and shortness of breath are among the determining symptoms of COVID-19 symptoms. Loss of taste and smell occurs in many patients, including people who are infected with COVID-19 but do not show symptoms.

It has been revealed that two different processes such as inflammation in the olfactory epithelium and damage to the olfactory receptors occur in the temporary impairment of the olfactory process. The olfactory mucosa is a special section containing scent receptors located in the nasalis of the upper concha. Olfactory cells in the olfactory epithelium have scent receptors in the cilium of the apical cytoplasm. Temporary or permanent damage to the olfactory epithelium causes anosmia, which is the loss of sense of smell. Anosmia has been identified in coronavirus infections, and it has been revealed that coronaviruses directly bind to olfactory cell neurons and damage olfactory receptors. It is also among the studies that the sense of smell decreases as a result of damage to the supporting cells in the olfactory epithelium. As a result of histological analysis, it was determined that COVID-19 caused atrophy in the olfactory epithelium and marked leukocyte infiltration in the lamina propria. It is known that COVID-19 infection and its entry into the body depend on the ACE2 (angiotensin converting enzyme 2 receptor) receptor. In addition, there are studies showing that olfactory mucosa cells express ACE2 receptors. The target of COVID-19 has been demonstrated to be cells that express ACE2 receptors, such as support and stem cells in the olfactory mucosa, bowman gland cells.

With the literature research we conducted, it was concluded that COVID-19 caused anosmia by damaging the olfactory mucosa.

Keywords: Anosmia, COVID-19, Olfactory mucosa

**RADYOTERAPİ UYGULANMIŞ SPRAGUE DAWLEY RATLARDA FARKLI
FLAVONOİD BİLEŞİKLERİN KORUYUCU ETKİSİNİN BİYOKİMYASAL
OLARAK ARAŞTIRILMASI**

**THE PROTECTIVE EFFECT OF DIFFERENT FLAVONOID COMPOUNDS ON
RADIOTHERAPY-SPRAGUE DAWLEY RATS AS A BIOCHEMICAL
INVESTIGATION**

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ÖZET

Fitokimyasallar; sindirim sistemi, göz, beyin, karaciğer ve deri gibi birçok organ ve dokuda radyokoruyucu etki göstermektedirler. Bunun yanı sıra, radyasyon kaynaklı mukozal ülserler, pulmoner fibrozis gibi organ fibrozisleri, göz yaralanmaları ve kemik hasarı sonucunda oluşan serbest radikal (reaktif nitrojen, hidroksil radikali, süperoksit vb.) türlerini temizleyerek radyasyona karşı koruma sağlayarak iyileştirebilmektedir. Fitokimyasallar arasında doğada en fazla miktarda bulunan flavonoidler, birçok bitki ve mantarda sekonder metabolit olarak bulunan polifenolik bileşiklerdir. İnsan diyetinin temel bileşenleri arasında bulunurlar ve besleyici özelliği olmayan bu bileşikler vitaminlere benzetilirler. Flavonoidler, antioksidan aktivite, antienflamatuvar, nörodejeneratif hastalıkların önlenmesi gibi insan sağlığı için terapötik özellikleri bulunan bileşiklerdir. Çalışmamızda hesperidin, kuersetin ve naringenin gibi bazı flavonoidlerin sıçanların beyin ve göz dokularındaki Malondialdehit seviyeleri (MDA), Süperoksit dismutaz enzim aktiviteleri (SOD), Glutatyon peroksidaz enzim aktiviteleri ve Toplam antioksidan kapasite (TAK) testi kullanılarak *in vivo* etkileri değerlendirildi. Hayvan deneyleri ve prosedürleri, laboratuvar hayvanlarının kullanımı ve bakımı için ulusal kurallara uygun olarak gerçekleştirilmiş ve Atatürk Üniversitesi Deney Hayvanları Etik Kurul Komitesi tarafından onaylanmıştır. (22.02.2018, 75296309-050.01.04). Bu amaçla; bir sağlıklı grup ve yedi deney (n=6) grubu (kontrol grubu, radyoterapi grubu, hesperidin grubu, kuersetin grubu, naringenin grubu, hesperidin+radyoterapi grubu, kuersetin+radyoterapi grubu ve naringenin+radyoterapi) oluşturuldu. Sıçanlar yedi gün boyunca uygulama bileşikleriyle beslendikten ve/veya Radyoterapi (RT) uygulandıktan sonra uygun şartlar altında beyin ve göz dokuları alınarak gerekli tüm işlemler gerçekleştirildi.

Uygulamalar sonucunda elde edilen bulgular, bu üç flavonoidin radyo-protektif etkisinin olduğunu gösterdi.

Anahtar Kelimeler: Flavonoidler, Radyo-Protektif Etki, Antioksidan Kapasite

ABSTRACT

Phytochemicals; They have radioprotective effects on many organs and tissues such as digestive system, eyes, brain, liver and skin. In addition, it can improve by protecting against radiation by scavenging free radical (reactive nitrogen, hydroxyl radical, superoxide, etc.) types of radiation-induced mucosal ulcers, organ fibroses such as pulmonary fibrosis, and eye injuries and bone damage. Among the phytochemicals, the most abundant flavonoids in nature are polyphenolic compounds found as secondary metabolites in many plants and fungi. They are among the basic components of the human diet and these non-nutritious compounds are compared to vitamins. Flavonoids are compounds that have therapeutic properties for human health, such as anti-oxidant activity, anti-inflammatory, prevention of neurodegenerative diseases². In our study, in vivo effects of some flavonoids such as hesperidin, quercetin and naringenin in Malondialdehyde levels (MDA), superoxide dismutase enzyme activities (SOD), Glutathione peroxidase enzyme activities and Total antioxidant capacity (TAK) test were evaluated. Animal experiments and procedures were carried out in accordance with national rules for the use and care of laboratory animals and were approved by the Atatürk University Experimental Animals Ethics Committee. (22.02.2018, 75296309-050.01.04). For this purpose; a healthy group and seven experimental (n = 6) groups (control group, radiotherapy group, hesperidin group, quercetin group, naringenin group, hesperidin + radiotherapy group, quercetin + radiotherapy group and naringenin + radiotherapy) were created. After the rats were fed with the application compounds and / or Radiotherapy (RT) for seven days, all necessary procedures were performed by taking the brain and eye tissues under appropriate conditions. Findings obtained as a result of applications showed that these three flavonoids have radioprotective effects.

Keywords: Flavonoids, Radio-Protective Effect, Antioxidant Capacity

THE ANDON SYSTEM DESIGN FOR FACTORIES

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ABSTRACT

Many organizations try many ways to achieve total quality management (TQM) within themselves. Andon systems, an element of total quality control, are used by many organizations to highlight problematic production locations within the factory. Andon means "light signal" in Japanese and it is an audible and light warning system that notifies the relevant person of a problem that occurs at any station or business unit in the assembly line[1]. While some Andon systems varieties only stimulate with light and sound, others can also be found as light boards showing the produced/targeted numbers in the production line. Andon systems originate from the Toyota Production System and have been used in many Japanese and American manufacturing environments to improve product quality[2]. In the study, an Andon system is proposed to monitor easily the production line in any factory. It is planned to transmit the data which is received from the production line by the proposed system to the server computer via wireless communication. This collected data will be saved in the database that is located on the server computer. The data collected from the environment will be displayed on both the Android screen and the mobile device that has an Android operating system. Since the data is kept in the database, problems such as later reporting, an instant connection of many devices, etc. have been solved. It is aimed to show the data collected instantly from the field on a mobile device with an Android operating system and Andon device with a Linux operating system. Data from the production line were collected by a simple electronic circuit developed. The results show that the proposed system can be applied to any production line located at any factory.

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EXTRACTION OF PHOTOVOLTAIC PARAMETERS UNDER DIFFERENT LEVELS OF IRRADIATION

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ABSTRACT

This work aims to presents a novel approach based on Trust-Region-dogleg algorithm (TRDLA) in order to extract accurately the parameters of photovoltaic (PV) module under different levels of irradiation. The simple model for the PV module is developed based on the single-diode model known as five parameters model, including the shunt resistance, the series resistance, the photocurrent, the saturation current and the ideality factor. The proposed method of parameters extraction incorporates a new simple analytical equation obtained at the maximum power point. This new established equation does not require any complex calculation. Moreover, it enables to reduce the number of non-linear equations to be solved by Trust-Region-dogleg algorithm in order to determine the five PV parameters. The new suggested approach is tested in Matlab/MathWorks environment, on a typical monocrystalline Silicon Shell (SQ150-PC) PV module for various levels of irradiation and fixed temperature.

The main results of simulation show a good agreement between the experimental and simulated current-voltage and power-voltage characteristics. This good agreement is also confirmed by the low statistical error values of root mean squared error (RMSE). Thus, the presented results confirm the validity and prove the effectiveness and accuracy of the proposed method in extracting the five parameters of the photovoltaic solar module for different irradiation levels.

Keywords: Irradiation levels, Matlab/MathWorks, PV module, PV parameters, RMSE, TRDLA;

PHARMACOKINETICS OF MELOXICAM, CARPROFEN AND TOLFENAMIC ACID AFTER INTRAMUSCULAR AND ORAL ADMINISTRATION IN JAPANESE QUAILS (*COTURNIX COTURNIX JAPONICA*)

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ABSTRACT

The aim of this study was to determine the pharmacokinetics of meloxicam (MLX), carprofen (CRP) and tolfenamic acid (TA) in Japanese quails (*Coturnix coturnix japonica*) following intramuscular (IM) and oral administration at doses of 1, 10 and 2 mg/kg, respectively. A total of 72 quails were randomly divided into 3 equal groups as MLX, CRP and TA. Each group

was separated to two sub-groups received IM and oral administration of each drug. Plasma concentrations of MLX, CRP, and TA were determined using HPLC-UV and analyzed by non-compartmental method. The $t_{1/2\lambda z}$ and MRT of MLX, CRP, and TA after oral administration were similar to those after IM administration. The V_{darea}/F of MLX, CRP, and TA after IM administration was 0.28, 2.05 and 0.20 L/kg. The Cl/F of MLX, CRP, and TA after IM administration was 0.12, 0.19 and 0.09 L/h/kg. MLX, CRP, and TA after oral administration showed significantly lower C_{max} and longer T_{max} compared with IM administration. The relative bioavailability of MLX, CRP, and TA following oral administration in quails were 76.13%, 61.46%, and 57.32%, respectively. The IM and oral route of MLX, CRP, and TA can be used for the treatment of various conditions in quails. However, further research is necessary to determine the pharmacodynamics and safety of MLX, CRP, and TA before use in quails.

Keywords: Carprofen, Japanese Quails, Meloxicam, Pharmacokinetics, Tolfenamic Acid

TEKSTİL SEKTÖRÜNDE KULLANILAN RAM MAKİNELERİNDE KUMAŞ KURUTMANIN VE KESİMİNİN OPTİMİZASYONU

**OPTIMIZATION OF FABRIC DRYING AND CUTTING IN STENTER MACHINES USED
IN TEXTILE INDUSTRY**

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ÖZET

Türkiye’de tekstil sanayi, tüm sanayi dalları arasında hem üretim hem de ihracat bakımından en ön sırada yer almakta ve ekonomi içinde en ağırlıklı payı oluşturmaktadır. Sektördeki enerjinin toplam maliyet içerisindeki payı %6 ile %14 arasında olup sanayi toplam tüketimi içerisindeki payı ise %7,2’dir. Tekstil prosesleri iplik, dokuma, örme, boyama, kurutma ve terbiye gibi birçok üretim sürecinden meydana gelmektedir. Tekstil prosesleri içinde enerjinin en fazla kullanıldığı proses kurutma işlemidir. Kurutma ve fikse prosesi tekstil terbiye işlemlerinde kullanılan enerjinin yaklaşık yarısını tüketmektedir. Kurutma süresince tüketilen bu enerji kumaştaki suyun buharlaştırılması ve kurutma havasının ısıtılması için kullanılmaktadır.

Bu proje tekstil endüstrisinde sıkça karşımıza çıkan iki farklı problemin çözümünü/optimizasyonunu içermektedir. Problemlerin ilki kumaş kurutma işlemi ile ilgilidir. Tekstil endüstrisinde yüksek enerji tüketimine sebep olan işlemlerden biri kumaş kurutma işlemidir. Kumaş kurutma işlemleri genellikle ram makinesi adı verilen makinelerde gerçekleşmektedir. Ram makinelerinde kumaşlar makineye paletler vasıtasıyla tutturulur ve kumaşın hareket etmesi sağlanır. Bu hareket esnasında kumaş yüzeyine sıcak hava çarptırılarak nemin kumaştan uzaklaştırılması sağlanır. Kumaş yüzeyine gönderilen sıcak hava fanlar tarafından beslenerek düze adı verilen delikli sac elemanların deliklerinden kumaşa püskürtülür. Bu çalışmanın ilk aşamasında; düzenin geometrik parametrelerinin ve ilgili diğer kurutma parametrelerinin (kumaş hızı, hava hızı ve sıcaklığı vb.) kurutma işlemi üzerindeki etkisi HAD (Hesaplamalı Akışkanlar Dinamiği) yöntemi ile incelenecektir. Projenin ikinci aşamasında ise ram makinelerinde kurutma işlemi sonrası kumaşın boyutlandırmasını sağlamak amacıyla, kenar kısımlarının kesiminde kullanılan kesici takımların geometrisinin ve kesme parametrelerinin takım aşınması üzerine etkileri araştırılacaktır.

Anahtar Kelimeler: Kumaş Kurutma, Ram Makinesi, Kesici Takım, HAD, Kesme Parametreleri

ABSTRACT

In Turkey, the textile industry production and across all industries constitute the most dominant share in both the front ranks in terms of exports and the economy. The share of energy in the sector in total cost is between 6% and 14%, and its share in total industry consumption is 7.2%. Textile processes consist of many production processes such as yarn, weaving, knitting, dyeing, drying and finishing. The process in which energy is used the most among textile processes is the drying process. The drying and fixing process consumes approximately half of the energy used in textile finishing processes. This energy consumed during drying is used to evaporate the water in the fabric and heat the drying air.

This project includes the solution/optimization of two different problems that we frequently encounter in the textile industry. The first problem is related to the fabric drying process. One of the processes that cause high energy consumption in the textile industry is the fabric drying process. Fabric drying processes are usually carried out in machines called stenter machines. In the stenter machines, the fabrics are attached to the machine by means of pallets and the movement of the fabric is provided. During this movement, moisture is removed from the fabric by hitting hot air on the fabric surface. The hot air sent to the fabric surface is fed by fans and sprayed onto the fabric through the holes of the perforated sheet elements called nozzles. In the first stage of this study; The effect of the geometric parameters of the layout and other related drying parameters (fabric speed, air speed and temperature, etc.) on the drying process will be examined by the CFD (Computational Fluid Dynamics) method. In the second phase of the project, the effects of the geometry and cutting parameters of cutting tools used in cutting edge parts on tool wear will be investigated in order to ensure the sizing of the fabric after drying in stenter machines.

Keywords: FabricDrying, StenterMachine, CuttingTool,CFD, CuttingParameters

SYNTHESIS, CHARACTERIZATION AND PHOTOCATALYTIC ACTIVITY ASSESS OF METAL IONS-DOPED-ZNO NANOMATERIALS

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ABSTRACT

The access to potable water is a major requirement for human survival and societal development. Under this optic and in order to overcome the leak of water in many countries, the recycling of wastewater seems to be necessary. At this point, heterogeneous photocatalysis raised to be one of the most promising process for water cleaning and decontamination. The application of the photocatalysis process for water decontamination requires the use of semiconductors such as metal oxides (ZnO, TiO₂, ...) and a source of light (UV and/or Visible).

In this work, ZnO based nanomaterials were synthesized and characterized using various techniques such as X-ray diffraction, Scanning Electron Microscopy coupled to Energy Dispersive Spectrometry, Fourier Transform Infrared spectroscopy and UV-Visible diffuse reflectance spectroscopy. The photocatalytic activity assessment was carried out in the presence of methyl orange (used as a organic pollutant model) under both visible and UV lights.

Keywords: Photodegradation, doped Zinc oxide nanomaterials, Methyl Orange

INNOVATION IN NANOSCIENCE AND NANOTECHNOLOGY: CASE OF NANOPARTICLES (QUANTUM DOTS)

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ABSTRACT

Nanoscience and nanotechnology represent an expanding research field. They can bring benefits to many areas of research and application, therefore, are attracting increasing investments from Governments. In this contribution, we have shown that Nanoscience and Nanotechnology, as a special field of scientific research, represent the human ability to control and manipulate matter at the nanoscale. We have shown also, that, although nanoscience and nanotechnology are tightly linked and one depends on one another, they are not interchangeable. They are two very different things. Nanoscience and Nanotechnology have progressed at a rapid rhythm thanks to advances in the innovative tools that allow to investigate and probed with great precision nanomaterials. Examples are given to illustrate these affirmations. Quantum confinement effects are the main reason of the appearance of novel properties of materials when their sizes become reduced to nanoscale. Early efforts research, have focused on quantum wells, then have progressed to quantum wires, finally to quantum dots. Each step constitutes an innovation compared to the step before. They have opened the miniaturization world with fabrication of nanomaterials and nanodevices. A lot of devices cheaper, smaller, lighter, more durable and better devices can be made with less materials and energy thanks to quantum dots applications.

Keywords: Nanoscience; Nanotechnology; Nanoparticles Quantum Dots; Nanoscale; Nanomaterials.

A NEW POWER TRACKING ALGORITHM BASED ON IMPROVED INCREMENTAL CONDUCTANCE ACROSS NEURAL NETWORKS FOR A WIND ENERGY CONVERSION SYSTEM

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ABSTRACT

In grid connected wind turbine (WT) systems, the maximum power point tracking (MPPT) algorithm has a crucial role in optimizing the wind energy efficiency. This work presents a new Maximum Power Point Tracking (MPPT) for the connection of the wind turbine system (WT) to the synchronous permanent magnet generator (PMSG). To search the maximum power of the wind turbine, we have proposed a new MPPT which combines two techniques: Artificial Neural Network (ANN) and incremental conductance (IncCond) method. The advantage of ANN-based WT model method is the fast MPP approximation base on the ability of ANN according the parameters of WT that used. The advantage of IncCond method is the ability to search the exactly MPP based on the feedback voltage. In our case the ANN is employed to predict the maximum voltage of the WT, under different values of wind speed, and the control of DC-DC boost converter operation is executed by applying incremental conductance (IncCond) technique. The proposed system includes a wind turbine associated to a permanent magnet synchronous generator (PMSG), a rectifier and a DC-DC converter with MPPT control. The proposed algorithm is tested under MATLAB SIMULINK.

Keywords: Turbine, WT, PMSG, ANN, incremental conductance, MPPT, DC-DC, Boost converter.

ELECTROSYNTHESIS OF STRICTLY α,α' -POLYTHIOPHENE CHAINS ON OXIDIZABLE METALS IN AQUEOUS MEDIA OF CONCENTRATED ACIDS

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ABSTRACT

Electropolymerization of thiophene has been performed in aqueous media on oxidizable metals using various electrochemical synthesis techniques. It has been shown that concentrated acids increase the solubility of monomer, lowers their oxidation potential and inhibits the dissolution of working electrode. Polythiophene (PT) films synthesized are homogeneous and have properties very similar to films formed in organic media. X-ray photoelectron and IR spectroscopy indicates that perchlorate and phosphate are involved in the polymer doping process. In particular, Fourier transform IR analysis showed that strictly α,α' -polythiophene chains are obtained with a degree of polymerization of about 40. SEM analysis showed that PT structure depends closely on the electrochemical conditions.

Keywords: Electropolymerization, aqueous media, polythiophene, oxidizable metals, electrochemical syntheses techniques, vibrational and elemental analyses.

BİR KÖPEKTE MEYDANA GELEN TİROİD KARSİNOMU OLGUSU

THYROID CARCINOMA IN A DOG

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ÖZET

Köpeklerde tiroid neoplazileri, en sık görülen endokrin tümörlerindedir. Tüm tümörlerin %1.2-3.8'ini oluşturur. Tiroid karsinomları adenomlara göre daha yaygındır. Oldukça agresif olabilen tiroid karsinomunun prognozu, kitlenin boyutuna, invazyonun kapsamına, metastatik durumuna bağlıdır.

Boyunda şişlik şikayetiyle Aksaray Üniversitesi Veteriner Fakültesi kliniklerine getirilen 6 yaşında, erkek, malaklı melezi ırk köpek bu çalışmanın materyalini oluşturdu. Anamneze göre başlangıçta küçük olan bu kitlenin zamanla büyüdüğü öğrenildi. Hastanın klinik muayenesinde sol mandibular bölgede dorsalden ventrale doğru uzanan lobuler yaklaşık 20 cm büyüklüğünde bir kitle bulunmaktaydı. Kitlenin ultrastrasonografik muayenesinde, solid yapıda ve kompartmanlara sahip olduğu görüldü. Toraks radyografisinde herhangi bir metastazik bulguya rastlanmayıp, kitlenin ekstripanyonuna karar verildi.

Hasta Ksilazin (2.2mg/kg, İM) ve Ketamin (11mg/kg İM) ile genel anesteziye alındı. İntraoperatif analjezi amacıyla 10ml/kg/saat CRI uygulaması yapıldı. Rutin asepsi ve antisepsi sağlandıktan sonra standart ventral orta hat servikal yaklaşımla deri ensizyonu yapıldı ve etraftaki dokulara invaziv olmayan kitlenin ekstripanyonu yapıldı. Uygun dikiş yöntemleri kullanılarak bölge kapatıldı. Kitle incelenmek üzere %10'luk formole alındı. Postoperatif dönemde bir hafta süreyle antibiyotik (Amoksisilin/Klavulanik asit 20 mg/kg, SC) kullanıldı. Hastanın postoperatif kontrolleri sırasında herhangi bir sorunla karşılaşmadı.

Histopatolojik incelemede tümör hücrelerinin polihedral şekilli, pleomorfik yapıda ve eozinofilik sitoplazmaya sahip oldukları belirlendi. Atipik hücrelerin belirgin olması sebebiyle kompakt tip tiroid karsinomu olduğu kamısına varıldı.

Köpeklerde ventral servikal bölgedeki şişliklerin ayırıcı tanısında kist, apse, tiroid veya paratiroid adenom veya karsinomu, yumuşak doku sarkomu bulunur. Tirod karsinomu köpeklerde oldukça sık görülen bir tümördür. Kitlenin nereden köken aldığıın anlaşılabilmesi için uygun görüntüleme yöntemleri kullanılmalı ve tedavi protokolü oluşturulmalıdır. Tedavi seçenekleri arasında ilk sırada cerrahi yöntemler yer almaktadır, ancak cerrahi sonrası hastaların yaşam süreleri yaklaşık olarak 38 ay olarak bildirilmiştir. Kranial ve kaudal tiroid venlerinin erken invazyonu ile tümör hücresi trombüsü oluşumu, retrofaringeal ve kaudal servikal lenf nodlarının tutulmasından önce bile pulmoner metastazlara yol açabilir. Bu nedenle primer kitlenin erken dönemde ekstirpasyonu hastalığın prognozunu olumlu yönde etkiler.

Anahtar Kelimeler: Cerrahi, Köpek, Tiroid Karsinoma

ABSTRACT

Thyroid neoplasms are the most common endocrine tumors in dogs. They constitute 1.2-3.8% of all tumors. Thyroid carcinomas are common than adenomas. Thyroid carcinomas can be aggressive and the prognosis depends on the size of the mass, the extent of invasion, and metastatic status.

The material of this study was a 6-year-old male, Malaklı- crossed breed dog brought to Aksaray University Veterinary Faculty clinics with a swelling in the neck. According to the anamnesis, the mass was small at the onset and got bigger over time. On clinical examination, there was a lobular mass approximately 20 cm in size in the left mandibular region extending from dorsal to ventral. The ultrasound examination of the mass revealed a solid structure with compartments. No metastatic finding was found in the thoracic radiography, and surgery was planned.

General anesthesia was provided to the patient by Xylazine (2.2 mg/kg, IM) and Ketamine (11 mg/kg IM). 10 ml/kg/hour CRI was administered for intraoperative analgesia. After providing routine asepsis and antisepsis, a skin incision was made with a standard ventral midline cervical approach and the non-invasive mass was extracted. The surgical site was closed routinely. The mass was fixed in 10% formaldehyde. In the postoperative period, antibiotics (Amoxicillin / Clavulanic acid 20 mg/kg, SC) were used for a week. The patient recovered without any complication.

Histopathological examination revealed that the tumor cells were polyhedral-shaped, pleomorphic, and had eosinophilic cytoplasm. Due to the prominence of atypical cells, the mass was diagnosed as compact type thyroid carcinoma.

Differential diagnosis of swelling in the ventral cervical region in dogs includes cyst, abscess, thyroid or parathyroid adenoma or carcinoma, and soft tissue sarcoma. Thyroid carcinoma is a common tumor in dogs. Appropriate imaging methods should be used to understand where the mass originates from and a treatment protocol should be established. Surgical methods are the first among the treatment options, but the life expectancy of patients after surgery has been reported as approximately 38 months. Tumor cell thrombus formation with an early invasion of cranial and caudal thyroid veins can lead to pulmonary metastases even before retropharyngeal and caudal cervical lymph nodes are involved. Therefore, extirpation of the primary mass in the early period positively affects the prognosis of the disease.

Keywords: Dog, Surgery, Thyroid Carcinoma

CONCEPTION D'UN CAPTEUR DE GAZ HAUTEMENT SENSIBLE BASE SUR L'ETAT DE TAMM DANS UN CRISTAL PHOTONIQUE UNIDIMENSIONNEL

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RESUME

Un capteur de gaz d'une ultra-haute sensibilité basé sur la résonance de Tamm est présenté. A cette fin, un semi-conducteur est utilisé dans un cristal photonique unidimensionnel. Le processus de détection est basé sur le déplacement de la résonance optique de l'état de Tamm dans la région du proche infrarouge. Tous les paramètres ont été optimisés pour obtenir les meilleures performances. Les résultats numériques ont été réalisés par la méthode de la matrice de transfert. Nous avons obtenu une sensibilité hautement élevée 10^5 nm/RIU. La conception du capteur proposé peut être d'un grand intérêt dans le domaine environnemental et même médical, car avec cette sensibilité, une pollution même infiniment petite dans l'air est détectable, sachant que la pollution d'air serait la cause de 8800 morts par an et aggrave l'effet des virus comme la COVID-19.

Mots clés Sensibilité, réflectance, résonance de Tamm, cristal photonique, capteurs.

BITKİ GELİŞİMİNİ TEŞVİK EDEN RİZOBAKTERİLERİN BITKİ HASTALIKLARI İLE MÜCADELEDE ÖNEMİ VE KULLANIMI

THE IMPORTANCE AND USE OF PLANT GROWTH-PROMOTING RHIZOBACTERIA TO CONTROL PLANT DISEASES

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ÖZET

Bitki hastalık ve zararlıları ile mücadelede en çok kullanılan yöntemlerinden biri kimyasal mücadeledir. Bu yöntemde kullanılan pestisitlerin, insan sağlığını tehdit etmesi yanında kalıntı problemi nedeniyle çevreye ve doğal yaşam üzerinde pek çok olumsuz etkileri bulunmaktadır. Pestisitlerin neden olduğu bu kalıntı sorunu nedeni ile günümüzde alternatif mücadele yöntemleri ön plana çıkmaya başlamıştır. Öncelikli olarak kimyasallara alternatif yöntemlerin kullanıldığı entegre mücadele yöntemleri arasında büyük önem arz eden biyolojik mücadele, bitki hastalık ve zararlıları ile mücadele de giderek önem kazanmaktadır. Dünya genelinde bitki hastalıklarını önlemek amacıyla yapılan biyolojik mücadele çalışmaları, bitki zararlılarını önlemek için yapılan biyolojik mücadeleye kıyasla daha geç başlamıştır. Ülkemizde örtüaltı, turunçgil, mısır ve buğday üretim alanlarında zararlılara karşı kullanılan biyolojik mücadele yöntemi başarılı ve aktif şekilde kullanılmaktadır.

Toprakta rizosfer bölgesinde kolonize olan ve bitki gelişimi üzerinde yararlı etki gösteren bitki gelişimini teşvik eden rizobakteriler (PGPR, Plant Growth-Promoting Rhizobacteria) doğrudan ve dolaylı etki mekanizmaları ile bitki gelişimi teşvik edebilmektedirler. Bununla beraber, ürettikleri bazı sekonder metabolitler ile patojenlerin gelişimini inhibe etmekte, bitki gelişimine destek olup bitkilerin daha sağlıklı/güçlü olmasını sağlayabilmekte ve böylece bitki hastalıkları ile biyolojik mücadelede kullanılmaktadır. PGPR'lerin ilk uygulamaları bitki gelişimini destekleyici amaçlı bir biyogübre olmasına rağmen, sonraki yıllarda yapılan çalışmalarda bu bakterilerin bitki hastalıklarına karşı biyolojik kontrol ajanı olarak da kullanım olanakları araştırılmıştır. Bilindiği gibi sürdürülebilir tarım ve kalıntısız üretim açısından biyolojik mücadele ajanlarının kullanımı büyük öneme sahiptir. Bu derlemede de, PGPR'lerin, bitki hastalıklarına karşı biyolojik mücadele ajanı olarak kullanımı ile ilgili yapılan çalışmalar incelenmiştir.

Anahtar kelimeler: PGPR, bitki hastalıkları, biyolojik mücadele

ABSTRACT

Chemical control is one of the most commonly used methods control plant diseases and pests. The pesticides used in this method have many negative effects on the environment and natural life due to the residue problem as well as threatening human health. Due to this residue problem caused by pesticides, alternative methods of struggle have started to come forward today. Biological control methods, using control to plant pests and diseases, great importance are included in the integrated pest management of which alternative methods to chemicals, Biological control studies conducted to prevent plant diseases worldwide have started later than

biological control to prevent plant pests. The biological control method used against pests in greenhouse, citrus, corn and wheat production areas in our country is used successfully and actively.

Rhizobacteria (PGPR, Plant Growth-Promoting Rhizobacteria) that colonize in the rhizosphere region in the soil and promote plant growth that have a beneficial effect on plant growth can encourage plant growth with their direct and indirect action mechanisms. In addition to this, with some secondary metabolites they produce, they inhibit the growth of pathogens, support plant growth and make plants healthier / stronger, and thus are used in biological control against plant diseases. Although the first applications of PGPR's were biofertilizer intended to support plant growth, in the studies carried out in the following years, the possibilities of using these bacteria as biological control agents against plant diseases are investigated. As is known, the use of biological control agents is of great importance in terms of sustainable agriculture and residue-free production. In this review, studies on the use of PGPR's as biological control agents against plant diseases have been examined.

Keywords: PGPR, plant diseases, biological control

BLOOD AND COMPUTED TOMOGRAPHY FINDINGS IN A DOG WITH METASTATIC LUNG TUMOR

METASTATİK AKCIĞER TÜMÖRÜ OLAN BİR KÖPEKTE KAN TABLOSU VE BILGISAYARLI TOMOGRAFI BULGULARI

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ÖZET

İzmir'de özel bir kliniğe getirilen 9 yaşında erkek melez ırk ve 14 kg ağırlığındaki Buffy isimli köpeğin anamnezinde sabahları normalden daha erken saatte ve sık idrara çıktığı, iştahsız olduğu, yürüyüş esnasında çabuk yorulduğu ve eve döndüğünde titreme belirtileri gösterdiği bildirildi. Bu belirtilerden yaklaşık 4 gün sonra hastanın öksürdüğü ve kusmaya başladığı belirtildi. Klinik muayenede oskültasyonda hırıltılı solunum ve konjonktivalarda anemi dikkati çekti. Olgunun radyografik muayenesinde multilober pnömoni teşhis edildi. Bu bulgulardan hareketle hastaya 0,2 mg/kg/gün dozunda subkutan metoclopramide, 5 mg/kg/gün dozunda peros doksisisiklin ve 1 ml/gün dozunda intramuskuler vitamin B12 uygulandı ve takibe başlandı. Tedavinin 3. gününde hastanın iyileşme göstermediği, hatta anemnezdeki belirtilerine ek olarak kusmuşunda kan görüldüğü ve kesik kesik nefes aldığı bildirildi. Daha sonra olgunun kan biyokimyası, hemogramı ve kan sürme frotisi yapıldı ve kontrastlı bilgisayarlı tomografisi (BT) çekildi. Kan biyokimyasında total protein (5.3g/dl), alkalin fosfataz (53 U/l), glukoz (89 mg/dl), alanin aminotransferaz (72 U/l), kreatin 0.93 (mg/dl), üre (20.3 mg/dl) olarak ölçüldü ve bu değerlerin referans aralıklarda olduğu tespit edildi. Hemogramda; beyaz kan hücreleri ($22.66 \times 10^9/L$) ve nötrofil ($19.69 \times 10^9/L$) sayılarının üst sınır değerinden fazla olduğu tespit edilirken, lenfosit yüzdesi (%4.7), alyuvar sayısı ($2.42 \times 10^{12}/L$) ile hematokrit (%17.4) alt sınır değerinden az olduğu belirlendi. Kan sürme frotisinde mikrositik hipokromik anemi teşhis edildi. Kontrastlı BT'de metastatik akciğer tümörü odakları tespit edilerek teşhis netleştirildi. Hasta teşhis konulduktan 6 gün sonra hayatını kaybetti. Sunulan bu vaka ile ülkemizde ilk kez bir köpekte metastatik akciğer tümörünün tanısında laboratuvar bulguları ile kontrastlı BT birlikte kullanılmıştır. Bu çıktılarından hareketle, rutin klinik ve laboratuvar muayenelerine ek olarak BT kullanımının tümöral hastalıkların erken tanısında önemli katkılar sağlayabileceği düşünülmektedir.

Anahtar Kelimeler: Bilgisayarlı Tomografi, Köpek, Metastatik Akciğer Tümörü

ABSTRACT

In the anamnesis of a 9-year-old male hybrid breed and a dog named Buffy, weighing 14 kg, brought to a private clinic in Izmir, it was reported that it urinated more frequently in the mornings, anorexia, got tired quickly during walking, and showed signs of tremor when it returned home. It was stated that approximately 4 days after these symptoms, the patient started coughing and vomiting. Clinical examination revealed wheezing on auscultation and anemia in the conjunctivae. In addition, multilobar pneumonia was diagnosed in the radiographic examination of the case. Based on these findings, the patient was administered subcutaneous metoclopramide subcutaneously at a dose of 0.2 mg/kg/day, doxycycline per os at a dose of 5 mg/kg/day, and intramuscular vitamin B12 at a dose of 1 ml/day, and follow-up was initiated. On the 3rd day of the treatment, it was reported that the patient did not improve, and in addition to the symptoms in its anamnesis, blood was seen in its vomit and it breathed intermittently. Afterward, the patient's blood biochemistry, hemogram, blood smear and contrast-enhanced computed tomography (CT) was performed. In blood biochemistry, total protein (5.3 g/dl), alkaline phosphatase (53 U/l), glucose (89 mg/dl), alanine aminotransferase (72 U/l), creatine (0.93 mg/dl), urea (20.3 mg/l dl) and it was determined that these values are within the reference ranges. In the hemogram; white blood cells ($22.66 \times 10^9/L$) and neutrophils ($19.69 \times 10^9/L$) were found to be higher than the upper limit value, while the percentage of lymphocytes (4.7%), red blood cell count ($2.42 \times 10^{12}/L$) and hematocrit (%17.4) were found to be less than the lower limit. Microcytic hypochromic anemia was diagnosed in the blood smear. The diagnosis was clarified by detecting metastatic lung tumor focus on contrast-enhanced CT. The patient died 6 days after the diagnosis. With this case presented, for the first time in our country, contrast-enhanced CT was used together with laboratory findings in the diagnosis of a metastatic lung tumor in a dog. Based on these outputs, it is thought that the use of CT in addition to routine clinical and laboratory examinations can make important contributions to the early diagnosis of tumoral diseases.

Keywords: Computed Tomography, Dog, Metastatic Lung Tumor

VETERİNER HEKİMLİĞİNDE PROBİYOTİKLER

PROBIOTICS IN VETERINARY MEDICINE

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ÖZET

Probiyotikler yeterli miktarda alındıklarında beslenme ile ilgili yaygın olarak bilinen faydaları yanında sağlık üzerine olumlu etkileri olan bakterilerin ve bazı mayaların da bulunduğu canlı mikroorganizmalar olarak tanımlanmaktadır. En çok kullanılan probiyotikler; Laktobasiller, Enterokoklar, Basiller, Sakkaromiçes ve Bifidobakterilerdir. İyi bir probiyotik, patojen ve toksik olmamalı, bağırsak florasına tutunabilmeli, mide asidine, safraya ve lizozim enzimine karşı dayanıklı olmalı, hızlı aktivite olarak yüksek çoğalma oranı gösterebilmelidir. Probiyotikler için istenen ideal temin sistemi; üretim, ulaşım ve saklama işlemleri sırasında gerekli karakteristik özelliklerini kaybetmemesidir. Farmasötik tekniklerdeki gelişmeler, organizmaları zararlı in vitro (ışık, hava, nem) ve in vivo durumlardan koruyarak, istenen dozda kullanıma hazır hale getirilmesinde büyük katkıya sahiptir. Probiyotiklerin sağlığa olumlu katkıları sağlayabilmesi için vücuda canlı olarak 10^6 - 10^9 kob/g sayıda alınması gerekmektedir. Probiyotik mikroorganizmalar, patojen bakterilerin gelişmelerini, asetik asit ve laktik asit gibi organik asitler sentezleyip ortamın pH'sını düşürerek ve H_2O_2 'yi sentezleyerek engellerler. Probiyotiklerin etki şekilleri; probiyotik mikroorganizmaya ve suşuna, miktara, hayvanın türü ve fiziksel kondüsyonuna, olumsuz çevre koşulları gibi hayvanda stres yaratan bir durum bulunup bulunmamasına göre değişiklik göstermektedir. Probiyotik olarak kullanılacak mikroorganizmalar, hayvanlara çeşitli şekillerde verilebilir. Yemlerine katılabildiği gibi dozu ayarlanarak kapsül, pasta, toz ve granül şeklinde hayvanlara doğrudan da verilebilir. Probiyotikler fermente süt ürünlerinin yapımı, silaj yapımı ve verim arttırmaya yönelik uygulamaların yanısıra enfeksiyöz bağırsak hastalıklarına karşı dayanıklılığı artırma, ishali ve alerjiyi azaltma, akyuvar fagositozunu artırma, tümörü önleme, hayvanlarda taşıma öncesi ve stresi ortadan kaldırma amacıyla kullanılmaktadır. Bu sunu kapsamında probiyotik kaynakları, üretimleri, etkileri, yaygın olarak kullanılan çeşitleri ve evcil hayvanlarda kullanımlarına yönelik bilgiler verilmiştir.

Anahtar Kelimeler: Laktik Asit Bakterileri, Maya, Bağırsak, Fermentasyon, Probiyotik

ABSTRACT

Probiotics defined as living organisms that contains yeast and bacteria which has favorable effects on health besides associated with widely known benefits of nutrition with taken an adequate amount. The most commonly used probiotics are; Lactobacilli, Enterococci, Bacilli, Saccharomyces and Bifidobacteria. A good probiotic should not be pathogen and toxic, should be able to hold in the gut flora, and should be resistant to stomach acid, bile and lysozyme enzyme, also is able to show high growth rates as fast activity. Desired ideal delivery system for probiotics is not to lose its essential characteristics during transport, storage and production. Developments in pharmaceutical techniques, by preserving organisms harmful in vitro (light, air, humidity) and in vivo situation has a major contribution in making available a desired dose. In order for probiotics to contribute positively to health, 10^6 - 10^9 cfu / g must be taken alive into the body. The probiotic microorganism inhibit development of pathogenic bacteria by lowering the pH of the environment with synthesize organic acids such as acetic acid and lactic acid and synthesizing H₂O₂. The effects of probiotics vary according to strains, quantity, species of the probiotic microorganisms, physical fitness of the animals and presence or absence of a stressful situation, such as adverse environmental conditions in animals. Microorganisms used as probiotic, administered in various ways to animals. Beside attending the animal feed, by adjusting the dose, can be submitted directly to the animals in capsule, cake, powder and granular form. Probiotics are used in production of fermented milk products, silage and to improve productivity applications as well as increase resistance against infectious intestinal diseases, diarrhea and allergy reduction, increase the phagocytosis of white blood cells, tumor prevention and eliminate the stress before transport in animals. The scope of this presentation, probiotic sources of production, the effects were given information regarding the use of widely used varieties and domestic animals.

Keywords: Lactic Acid Bacteria, Yeast, Intestine, Fermentation, Probiotic

**FAST AND HIGHLY EFFICIENT REMOVAL OF OG DYE IN WASTEWATER
USING A SUPERB ECO-FRIENDLY BIOCOMPOSITE****Hamza Ighnih^{*1}, Abdelghani Hsini², Abelaziz Imghrane², Mohamed Laabd²,
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Agadir, Morocco**ABSTRACT**

The industrial effluents resulting from the textile activities of the tannery or the printing industry often present an important dyes pollutant load which is difficult to biodegrade. Their removal from aqueous solutions by conventional techniques proves in certain cases ineffective. In this work, we studied the adsorption process in dynamic regime for the elimination of a synthetic dye using a new granulated PANI@AS biocomposite, synthesized by oxidative chemical polymerization method. The synthesized adsorbent was characterized by various analytical techniques such as Fourier Transform Infrared Spectroscopy (FTIR), X-ray Energy Dispersive Spectroscopy (EDS) and Scanning Electron Microscopy (SEM). The continuous adsorption test was applied to study the ability of the adsorbent to remove Orange G (OG) dye from aqueous solution. The obtained results revealed that the adsorption process was highly dependent on physicochemical parameters such as the mass of adsorbent, flow rate, concentration and pH of the solution. The adsorption process of OG dye by granular PANI@AS adsorbent was described by the kinetic model pseudo-second order and Langmuir isothermal model. The calculated of the maximum adsorption capacity was found to be 8,945g.g⁻¹. Thus, these results show that the PANI@AS biocomposite can be used as a superb adsorbent of hazardous dyes in wastewater.

Keywords: Adsorption, biocomposite, orange G, PANI@AS, kinetics, isotherm, column, dynamics.

**EVALUATION METHOD FOR THE INITIAL AND PROGRESSIVE FAILURE OF
AN OPEN HOLE COMPOSITE LAMINATE BASED ON SEVERAL FAILURE
CRITERIA AND DAMAGE DEGRADATION MODELS USING FINITE ELEMENT
METHOD****Dr.H.ELIDRISSI**

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ABSTRACT

Composite materials are widely used in aerospace, automotive and marine structures because of their great robust specific stiffness and strength, fatigue and corrosion resistance, light weight, and their ability to be adapted to different engineering designs. The combination of the matrix with the reinforced fiber provided the requested final properties.

Nevertheless, the design of composite laminates still fairly conservative in engineering practice. A large amount of costly and time-consuming testing must be carried out to achieve structural safety. In order to effectively reduce time and cost and to fully exploit the benefits of composite structure, there is an imperative need for more reliable failure theories and damage propagation methodologies that will accurately predict the complex failure mechanisms theoretically and analytically in composite structures, due to their inherent anisotropy and the various failure modes. This complexity is overcome using powerful computational systems, which enable failure approaches to be implemented and modeled using finite element method software.

For structural design, it is necessary to study geometrical discontinuities such as holes and notches. Discontinuities in materials can give advantages in areas such as sound diffusion. However, they can also create critical problems as they may cause stress concentrations in the structural design. One of the main obstacles to a more wide use of laminated composite structures is the difficulty to detect the failure process phenomena that can be divided into two stage which are the initiation of damage in a ply, and then progressively propagates through the laminate until the structure reaches the ultimate failure load, furthermore, these composite materials generally exhibit brittle damage behavior, where there is a little plastic deformation and failure occurs suddenly.

The objective of the current research aims to assess the initiation and progression of damage under tensile loading in order to describe the behavior for open hole unidirectional CFRP included failure load and failure mode, this is achieved by implementing a user-defined subroutine UMAT in the commercial finite element software Abaqus to allow simple and accessible use of failure analysis. Hashin and puck criteria to predict the initial failure as well as the Constant Stress Exposure and Matzenmiller's approach built-in Abaqus to model material properties degradation. Furthermore, the results were compared to test failure of composite laminate reported in the literature in order to validate the proposed methods.

Keywords: open hole fiber-reinforced composite laminates, failure criteria, damage mechanics, user-defined material model, progressive failure analysis

MISE À JOUR DES SYSTÈMES DE DÉTECTION D'INTRUSION POUR IoT PAR APPRENTISSAGE EN PROFONDEUR

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Résumé

Ces dernières années, l'apprentissage en profondeur (DL) a connu des performances exceptionnelles dans divers domaines tels que le traitement d'images médicales, le traitement du langage naturel, la cybersécurité... Dans la cybersécurité IoT [1], la machine s'entraîne sur diverses attaques collectées et étiquetées ainsi que sur le trafic normal, dans un processus d'apprentissage supervisé. Ces données sur le trafic avec ou sans attaques proviennent de différents ensembles de données (dataset) disponibles. Cependant, le domaine de la cybersécurité est toujours confronté à de nombreux défis pour la détection d'attaques en perpétuelle évolution. Les modèles des systèmes de détection d'intrusion (IDS) basés sur l'apprentissage profond obtiennent d'excellents résultats. Cependant, ces résultats dépendent directement de l'ensemble des données utilisé dans l'entraînement [2] [3]. Le problème est que ces nouvelles attaques changent de comportement de manière à ce que le modèle soit incapable de les détecter. L'IDS devient alors obsolètes [4] [5].

Le modèle de ce dernier a donc besoin d'être ré-entraîner pour apprendre ces nouvelles attaques et en faire une mise à jour. L'idée de ré-entraîner ces modèles DL avec de nouvelles données est très coûteuse, à la fois en temps et en ressources [6].

L'apprentissage par transfert est une technique qui permet de transférer des connaissances déjà entraînées sur un grand ensemble de données vers un autre modèle à ré-entraîner [7] [8]. Il s'avère une solution plus appropriée pour accélérer la mise à jour du modèle que son réentraînement depuis le début [9].

Dans ce travail, nous présentons une méthodologie pour mettre à jour un modèle DL d'IDS à l'aide de la technique d'apprentissage par transfert qui peut nous donner la possibilité de recycler et d'ajuster des modèles pré-entraînés sur de petits ensembles de données avec de nouveaux comportements d'attaques. Dans nos expérimentations, nous avons initialement construit un modèle DL d'IDS basé sur les réseaux de neurones convolutionnels (CNN) [10] et entraîné sur un ensemble de données nommé Bot-IoT [11]. Bot-IoT contient une variation d'attaques IoT, que nous avons légèrement renforcée à partir d'un nouvel ensemble de données nommé TON-IoT [12]. Par cette approche, il s'agit de geler la base convolutive [13] (les couches convolutives et de pooling) dans leur forme d'origine, puis d'utiliser ses sorties pour alimenter le classificateur (généralement les couches entièrement connectées).

Nous avons comparé le modèle original sur de nouvelles données du dataset du réseau TON-IoT et obtenu une diminution depuis 99% vers 56% sur la métrique de la F1 score, et en particulier pour les classes normale et de l'attaque de vol de données, où ils n'ont obtenu respectivement que 3% et 27% sur la métrique de la F1 score, la diminution était due au fait que nous avons testé notre modèle sur des données équilibrées pour chaque classe, et cela démontre aussi qu'il y a de nouveaux comportements ou mutations dans les attaques de l'ancien au nouvel ensemble de données.

Après avoir mis le modèle à jour, nous avons atteint une précision de 99,47% et une perte de 0,23%, un F1 score de 99%. Nous notons une légère amélioration pour les attaques DoS, DDoS et Scan, et une plus grande pour les classes restantes (vol et trafic normal), ce qui signifie que notre IDS a non seulement été mis à jour, mais surmonte également le manque de données étiquetées dans ces classes.

Après l'obtention de ces résultats prometteurs, nous pouvons conclure que la technique d'apprentissage par transfert peut être une solution idéale non seulement pour compenser le manque de données dans certaines classes d'attaques, mais aussi pour mettre à jour les IDS avec un minimum de ressources.

Mots clés: Apprentissage par transfert, apprentissage en profondeur, IoT, IDS, CNN.

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ÉTUDE COMPARATIVE DES MODÈLES D'APPRENTISSAGE AUTOMATIQUE DES REPRÉSENTATIONS LINGUISTIQUES

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RESUME

Le traitement automatique du langage naturel (NLP) vise à convertir le langage humain en une représentation formelle en utilisant différentes techniques [1][2]. Ce domaine progresse rapidement en raison de l'intérêt croissant pour les communications homme-machine, de la grande quantité de données textuelles stockées sur le Web, de la disponibilité d'algorithmes adaptés et de puissants systèmes informatiques [3]. Ces dernières années, les algorithmes et les architectures d'apprentissage en profondeur (DL) ont fait l'objet de progrès remarquables dans le domaine de l'analyse des textes. À cet égard, les modèles d'apprentissage de la représentation du langage ont évolué des méthodes qui incorporent les mots dans des représentations distribuées et utilisent l'objectif de modélisation du langage pour les ajuster en tant que paramètres du modèle comme c'est le cas de Word2vec [4][5], GloVe [6] et fastText [7][8], aux modèles d'apprentissage par transfert [9], comme BERT [10], ELMo [11], ULMFiT [12], GPT-2 [13] et XLNet [14]. Ces derniers utilisent des corpus plus grands, avec plus de paramètres et plus de ressources informatiques, et au lieu d'affecter à chaque mot un vecteur fixe, ils utilisent des réseaux de neurones multicouches pour calculer les représentations dynamiques des mots en fonction de leurs contextes.

Dans ce travail, nous montrons l'application de modèles d'apprentissage de la représentation linguistique basés sur l'apprentissage profond pour la classification de cinq types de sentiments [15][16] en utilisant un ensemble de données combinées [17][18][19][20]. Nous avons observé que les approches d'apprentissage par transfert atteignent les meilleurs résultats en utilisant les données d'entraînement et de validation et avec moins d'époques que celles par intégration de mots, car elles bénéficient des connaissances d'autres modèles, mais il leur faut plus de temps pour s'entraîner en raison du très grand nombre de paramètres.

Parmi ces approches d'apprentissage par transfert, nous avons relevé que la meilleure d'entre elles est l'algorithme BERT. Celui-ci atteint les meilleurs scores dans la plupart de nos métriques, avec 35,51% de perte, 85,89% d'exactitude, 86,12% de rappel et 85,96% de F1-score en 495 min (2 époques). Selon-uniquement la métrique de précision, le modèle RoBERTa en est le meilleur, avec 86,22% en 579 min (3 époques). D'un autre côté, les techniques basées sur les Transformers [21] atteignent effectivement leurs meilleurs résultats, mais en plus de temps (plus d'une heure pour s'entraîner) par rapport aux autres modèles.

En somme, le modèle BERT a donné des meilleurs résultats par rapport aux autres méthodes, car il prend tout en compte afin de prédire le vrai sens des phrases. Cela signifie que les algorithmes d'apprentissage par transfert peuvent obtenir de meilleurs résultats de classification en apprenant des corrélations supplémentaires. Mais en temps de calcul, ils consomment plus parce que plus de paramètres sont nécessaires. En fait, la plupart des architectures DL utilisent des éléments de calcul similaires, par conséquent, on peut utiliser le nombre de paramètres comme substitut de la complexité, bien que ces réseaux puissent avoir le même nombre de paramètres mais nécessitent différents nombres d'opérations.

Comme travail futur, nous comptons appliquer le modèle BERT pour créer un système d'analyse des sentiments autonome capable de détecter une éventuelle menace de sécurité en temps réel.

Mots clés : Traitement du langage naturel (NLP), modèles de représentation du langage, Analyse des sentiments, Apprentissage en profondeur (DL), Word2vec, BERT, GPT-2, XLNet, ELMo, ULMFiT

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**THE *IN VITRO* AND *IN VIVO* INHIBITORY ACTIVITY OF MOROCCAN
NIGELLA SATIVA EXTRACTS ON PANCREATIC α -AMYLASE**

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Diabetes mellitus is considered abnormal glucose homeostasis that is characterized by an increase in blood sugar. This serious disease affects a large number of populations in the world.

Due to their large spectrum of effects medicinal and aromatic plants become one of the best alternatives to treat this pathology.

Nigella sativa or black cumin is a plant belonging to the Ranunculaceae family widely distributed in the Middle east north Africa and India. It is used in folk medicine to treat various diseases such as cough, asthma, fever, eczema, also for its antioxidant and antidiabetic effect. So, it was logical to investigate the antihyperglycemic effect of the different extracts of *Nigella sativa* seeds.

The results of this study demonstrate that the aqueous, methanolic, and ethanolic extract of black cumin gave the best results with an IC_{50} between 0.10 mg/ml and 0.31 mg/ml, which was lower than that obtained by acarbose ($IC_{50} = 0.35$ mg/ml) used as a control. While the dichloromethane extract ($IC_{50} = 1.39$ mg/ml) and essential oils ($IC_{50} = 0.82$ mg/ml) gave an IC_{50} higher than that of the control.

The extracts with the best IC_{50} s were selected to evaluate the *in vivo* activity on normal and diabetic rats. The results obtained showed that the extracts tested *in vivo* are endowed with an inhibition potential of pancreatic α -amylase.

This study demonstrated that the different *Nigella sativa* extracts exhibited a significant *in vitro* and *in vivo* effect on pancreatic α -amylase in normal and diabetic rats.

Keywords: *Nigella sativa*, Morocco, Antidiabetic, α -amylase, *In vitro*, *In vivo*.

**PHYTOCHEMICAL STUDY OF ROASTED/UNROASTED ARGAN OILS
AND THEIR EFFECT ON INTESTINAL GLUCOSE ABSORPTION ACTIVITY *IN SITU***

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ABSTRACT

Argan oil considered as one of the important products that known in Morocco by its beneficial properties on human health. It contains many substances, which have an antihyperglycemic effect. Our work aims to determine the phytochemical composition of roasted and unroasted Argan oil and evaluate their effect on intestinal glucose absorption activity *in situ*. The results showed that roasted and unroasted Argan oil contain respectively 2.32, 4.39 eq AG/mg of total polyphenol, 0.051, 0.075 eq Quercetin/mg of flavonoids, 0.040, 0.36 µg eq catechin/mg of tannins, 0.340, 1.87 mg pheophytin/Kg oil, of chlorophyll and 0.490, 1.005 of carotenoids. Moreover, we found that 1 mL/Kg of roasted and unroasted Argan oils reduce significantly ($p < 0.001$) the intestinal glucose absorption *in situ*, with inhibition percentage of 50.99% and 57.97%, respectively. As a conclusion, Argan oils possess antihyperglycemic activity that may be explained by the reducing of intestinal glucose absorption and this effect is due to the presence of several bio-compounds as polyphenols, tannins and carotenoids.

Keywords: *Argania spinosa*, Intestinal absorption, Antihyperglycemic effect, Phytochemical, Roasting process, *In situ*.

**COMBINED EXPERIMENTAL AND COMPUTATIONAL
STUDIES ON CORROSION INHIBITION OF JUJUBE SHELL
EXTRACT FOR COPPER IN HCL MEDIUM**

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ABSTRACT

An eco-friendly Jujube shell (JS) extract was studied as a corrosion inhibitor for copper in 1M hydrochloric acid. This work was investigated by potentiodynamic polarization (PDP), electrochemical impedance spectroscopy (EIS) and weight loss (WL) coupled with atomic absorption spectroscopy (AAS) techniques. Atomic force microscopy (AFM), Scanning electron microscopy (SEM) and energy dispersive X-ray spectrometry (EDS) revealed the surface morphology in the presence and absence of inhibitor on the metal surface. The experimental results reveal that the JS extract act as a cathodic-type. In addition, this extract shows good inhibitory activity at a wide range of temperatures. The thermodynamic parameters were determined and discussed. Meanwhile, Monte Carlo simulation and Quantum chemical calculations by application of density functional theory (DFT) were carried out to help better understand the inhibition mechanism of this extract on the copper surface. The results indicated the feasibility of using the Jujube shell (JS) extract as a corrosion inhibitor in acid environment.

Keywords: Corrosion, Inhibition, Hydrochloric acid, Copper, Jujube shell extract, Zizyphus Lotus.

DIVERSITY OF “BELDI” ALMOND FROM MOROCCAN SEEDLINGS TREES: FRUIT PHYSICAL TRAITS AND OIL QUALITY

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ABSTRACT

Almond is one of the most important nut crops in the world, and Morocco is also an important world producer of almonds since it ranks 4th globally. In the present study, four indigenous genotypes with favorable traits were selected for the investigations of fruit quality by pomological and biochemical characterization of their oils. Genotypes were evaluated according to the Gülcan descriptor (1985). The experimental design was completely randomized with 30 repeats for the pomological study and 3 repeats for the biochemical one. Both Data were analyzed with SPSS software.

Nut weight ranged between 3.20 and 6.12 g, and kernel weight between 0.86 and 1.16 g. Although the physical quality of the kernels of these populations was low as most accessions were characterized by small kernels, pronounced wrinkles, and double kernels, they have shown a richness in tocopherol (Melhaoui et al., 2018, Houmy et al., 2016) which indicates a great potential of these almond populations. Moreover, these accessions show the possibility of some specialized uses, such as vegetable oil extraction, which according to the high oil yield obtained ranging between 38,14 and 47.35%, and the richness in polyphenol content

ranging between 353.58 and 437.85 mg/Kg, it could be possible to improve their marketable value. The genotypes with favorable values were selected for potential incorporation into almond breeding programs as parents to increase the kernel quality

Keywords: Almond, Genotypes, Pomological characterization, Fruit quality, Polyphenol content.

KONYA (TÜRKİYE) BÖLGESİNDEKİ BAZI YENİLEN MANTARLARIN DOĞAL VE YAPAY RADYOAKTİVİTE DÜZEYLERİ ÜZERİNE ÇALIŞMA**STUDY ON NATURAL AND ARTIFICIAL RADIOACTIVITY LEVEL OF SOME EDIBLE MUSHROOMS IN THE REGION OF KONYA (TURKEY)****Afife AKKAYA**

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ÖZET

Mantarlar yüzyıllar boyunca gıda maddesi olarak önemli bir yere sahip olmuşlardır. Dünyanın birçok yerinde hem yabani hem de ticari olarak kullanılan birçok türü bulunmaktadır. Bünyelerinde protein, karbonhidrat, lif gibi maddeler biriktirdikleri gibi ağır metal ve radyonüklidleri de barındırabilirler. Mantarlar bu biriktirme özelliklerinden dolayı biyoindikatör olarak kullanılırlar. Radyoaktif element birikimi havadan veya topraktan kaynaklanabilir. Sonuç olarak, mantar tüketen kişiler, iç radyasyona maruz kalmaktadır. Bu maruziyet doğal veya yapay kaynaklardan olabilmektedir. Bu nedenle insanlar tarafından tüketilen mantarların, radyoaktivite seviyelerinin belirlenmesi halk sağlığı açısından önemlidir. Konya bölgesinden toplanan beş çeşit mantar türünde, HpGE gama-ışını spektroskopi sistemi ile ^{238}U , ^{232}Th , ^{40}K doğal radyoaktivite ve ^{137}Cs yapay radyoaktivite analizini gerçekleştirdik.

^{238}U spesifik aktivitesi $2,5\text{Bq kg}^{-1}$ ile $20,9\text{Bq kg}^{-1}$ arasında, ^{232}Th $2,3\text{Bq kg}^{-1}$ ile $13,6\text{Bq kg}^{-1}$ arasındadır. ^{40}K spesifik aktivitesi $801,7\text{Bq kg}^{-1}$ ile $1240,6\text{Bq kg}^{-1}$ ve ortalama spesifik aktivite değeri $997,22\text{Bq kg}^{-1}$ 'dir ve ortalama değeri UNSCEAR tarafından bildirilen dünya çapında ortalama 400Bq kg^{-1} değerinden daha yüksektir. Ayrıca ^{137}Cs 'nin spesifik aktivite değerlerinin $2,6\text{Bq kg}^{-1}$ ile $62,7\text{Bq kg}^{-1}$ arasında değiştiği bulunmuştur.

Anahtar Kelimeler: Konya, Yenilebilir Mantar, Doğal Radyoaktivite, Yapay Radyoaktivite, Halk Sağlığı

ABSTRACT

Mushrooms have had an important place in food for centuries. In many parts of the world, both wild and commercially used species are widely consumed. Preferred mushrooms for their rich ingredients as they accumulate proteins, carbohydrates, and fibers, they can also contain heavy metals and radionuclides. Mushrooms are also used as a good bioindicator due to their accumulating properties. Radioactive element accumulation may originate from air or soil. Consequently, people that consume fungi are exposed to internal radiation due to ingestion of it. This exposure can be from natural and artificial sources. For this reason, determination of radioactivity in mushroom that is ingested by people is important for public health. We carried out the analysis of natural radioactivity from ^{238}U , ^{232}Th , ^{40}K and artificial

radioactivity from ^{137}Cs in five kinds of mushroom sample collected from the region of Konya using a HpGE gamma-ray spectroscopy system.

Specific activities of ^{238}U range from 2,5 Bq kg^{-1} to 20,9 2,5 Bq kg^{-1} while for ^{232}Th the values range from 2,3 Bq kg^{-1} to 13,6 Bq kg^{-1} . Specific activities of ^{40}K range from 801,7 Bq kg^{-1} to 1240,6 Bq kg^{-1} and mean specific activity value of ^{40}K is found 997,22 Bq kg^{-1} . The mean value is also higher than worldwide average value of 400 Bq kg^{-1} reported by UNSCEAR. It is also found that specific activities of ^{137}Cs range from 2,6 Bq kg^{-1} to 62,7 Bq kg^{-1} .

Keywords: Konya, Edible Mushroom, Natural Radioactivity, Artificial Radioactivity, Public Health

TRANSPORT PHENOMENA IN AMORPHOUS THIN FILMS AT VERY LOW TEMPERATURES

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ABSTRACT

In this work, we study the electrical conductivity behaviors on the both sides of the metal–insulator transition (MIT) in $\text{Re}_x\text{Si}_{1-x}$ amorphous thin films at very low temperature. In fact, our investigation re-analyzed the experimental measurements of $\text{Re}_x\text{Si}_{1-x}$. On the insulating side of the MIT, the electrical conductivity can be interpreted by the existence of the variable range-hopping regime. However, on the metallic side of the MIT, the electrical conductivity is mainly due to electron–electron interactions and low localization effects.

Keywords: transport phenomena, electrical conductivity, low temperatures, variable range hopping, metal–insulator transition.

LOG FILES ANALYSIS USING HADOOP HIVE-BASED DATA WAREHOUSES

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ABSTRACT

The global volume of digital data production is growing at a fast pace [1, 2], and IT security has become increasingly important for businesses and organizations that constantly store and transfer a huge pile of critical data across their local or wide area networks. These data come from different sources, namely social networks, climate information, GPS signals, sensors and log files [3, 4].

In particular, Servers, firewalls, and other IT equipment keep updated log files where are recorded all events and transactions. Event logs retrace the history of events occurring on a server or an application, provide interesting information about the internal processes, and give a comprehensive view of the performance of the system. It is challenging to store and analyze these huge volumes of log files in order to extract some knowledge about security issues [5, 6, 7,8].

To analyze such large log files, we need parallel processing system and reliable data storage mechanism. In this communication, we propose a methodology for analyzing log files using Apache Hive on Hadoop [9], that offers petabytes of storage in Hadoop HDFS and more optimized techniques for running complex analytical queries [10]. The goal of this methodology is to collect log file events from different sources and save the necessary data to a data warehouse in order to extract security knowledge, monitoring, reporting, get operational information, and determine and control key performance indicators to make better security decisions.

As illustration, we considered a concrete case study on web server log files based on Data Warehousing with Apache Hive to diagnose the state of the server security, to track key performance indicators, and to identify abnormal behavior and detects some malicious events in the hope of taking counter-measures against them. The obtained results are promising, we can easily collect the events from several log files, saved and exploited them to extract useful security knowledge, such as attempted attacks (DDOS, SQLI) [11, 12], and error detection. It makes easier performing some system tasks like monitoring, diagnosis, and creating reports about the current state of server's health.

Keywords: Hadoop, Hive, Data warehouse, security, log files, BI, DDOS, SQLi.

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PREPARATION AND CHARACTERIZATION OF LOW-COST CERAMIC-ZEOLITE MEMBRANE FOR DEHYDRATION OF ALCOHOLS**Fatima Zohra Charik*¹, Abdessamad Belgada¹, Brahim Achiou^{1,2}****Saad Alami Younssi¹, Mohamed Ouammou¹**

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In the last two decades, zeolite membranes have attracted a lot of interest, not only for their well-defined channels structure and uniform pore size, but also for their high thermal and excellent chemical stability. Additionally, zeolite membranes are characterized by high performance in terms of selectivity and separation factor, which make them very demanded in industrial applications, such as dehydration of acids and alcohol, organic/organic and gas separation, as well as desalination..

In this work, a systematic approach is described for the preparation of NaA zeolite membrane on inexpensive ceramic kaolinite support through hydrothermal synthesis. Firstly, ceramic support was prepared from local kaolinite clay via uniaxial pressing method, followed by sintering. Secondly, the zeolite layer was grown on the substrate via in-situ crystallization and secondary growth methods. The prepared membrane was deeply characterized using several techniques in order to investigate the layer deposition as well as the membrane hydrophobicity.

To evaluate its performance, NaA zeolite membrane was tested for alcohol dehydration via pervaporation process. It is worth to mention that preliminary results showed that zeolite membrane exhibited high permeate flux and selectivity. Thus, the prepared membrane proved to be promising for ethanol/water separation

Keywords | zeolite; ceramic membrane; hydrothermal synthesis; pervaporation.

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EVALUATION OF POMOLOGICAL CHARACTERISTICS AND TOCOPHEROL CONTENTS OF SOME ARGANIA SPINOSA GENOTYPES GROWN IN EASTERN MOROCCO**Dr AZIZI Salah-eddine**

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ABSTRACT

Argania Spinosa L. Skeels is an endemic specie of Morocco that belongs to the Sapotaceae family that recommends a warm climate and most of them live in tropical regions. This population is highly concentrated in the southwest of Morocco but is also found as a relic in the eastern region of the country.

The objective of this work is to study the variability of some genotypes of argan tree originating from two regions (Oujda, Chouihya), by the evaluation of their pomological characteristics, as well as the phytochemical characterization of their oils based on the quality and the quantity of tocopherols, and finally the establishment of the existing correlation between the studied parameters.

The results showed that the difference between the studied genotypes was significant for the majority of the evaluated parameters. The G-CHU3 genotype from Chouihya showed the best almond yield with a value of 18.66%, followed by the G-OJD3 genotype from Oujda 14.48%, while the lowest value was recorded in the genotype from Oujda G-OJD4 with an almond yield of 8.91%. On the other hand, the qualitative analysis showed that the total tocopherol content was dominated by gamma-tocopherol 83,6 %, followed by alpha-tocopherol 9,7 %, and finally delta-tocopherol 6,6 %. Concerning the quantitative analysis of the total tocopherol content, the G-CHU3 genotype from Chouihya gave the highest value of 496.9 mg/kg, while the lowest value was recorded in the G-CHU2 genotype 398.1 mg/kg from the same region.

In addition, the statistical study of the correlation between the different parameters showed that the total tocopherol content was significantly correlated with the weight and width of the almonds, while the alpha-tocopherols correlated positively with the almond yield.

Keywords: *Argania spinosa*, pomological characterization, tocopherol content, eastern Morocco.

IDENTIFICATION DE L'ORIGINE DE LA SALINISATION DES EAUX SOUTERRAINES DU MASSIF DE BOKOYA (RIF CENTRAL, MAROC) PAR L'UTILISATION DES OUTILS HYDROCHIMIQUE ET GEOCHIMIQUE

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RÉSUMÉ

La sécheresse récurrente que connaît la région du Rif, Nord du Maroc, et spécifiquement le massif de Bokoya, situé dans le Rif central, a conduit à une importante exploitation des eaux souterraines pour répondre aux besoins humains et aux objectifs socio-économiques. Dans ce contexte, une étude hydrochimique et géochimique a été menée afin d'identifier l'origine des éléments dissous et les processus contribuant dans l'augmentation de la salinisation de ces eaux souterraines. Pour atteindre cet objectif, des analyses physico-chimiques des eaux ont été réalisées sur 96 échantillons distribués entre puits et sources, prélevés durant le mois d'Avril 2018.

Les résultats trouvés montrent que les échantillons d'eau étudiés sont caractérisés par une salinité élevée supérieure à 8000 $\mu\text{S} / \text{cm}$, et que les zones de forte salinité distinguées par les cartes de distribution spatiales, sont conforme avec la distribution des formations triasique. La projection des résultats des analyses sur le diagramme de Piper montre trois faciès associés aux eaux souterraines de la zone d'étude : le premier faciès correspond aux eaux chlorurées, qui font ressortir deux familles, chlorurées sodiques, les plus fréquentes englobent 73% des points d'eaux étudiées (premier faciès), et chlorurées et sulfatées calciques (deuxième faciès, 22%), le troisième faciès est représenté par les eaux bicarbonatées sodiques (5%). Nos résultats montrent aussi que cette salinisation était due à la dissolution de l'halite, à l'échange de cations et à la précipitation de minéraux carbonatés tels que la calcite et la dolomite combinée à la dissolution du gypse.

Mots clés : Eaux souterraines, Salinisation, Rif, Bokoya, Maroc.

COMPOSITION PHYTOCHIMIQUE, TOXICITE AIGÛE ET EFFET ANTIOXYDANT DES DIFFERENTS EXTRAITS DE *DYSPHANIA AMBROSOIDESE* L.

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Dysphania ambrosoidese L. (Zygophyllacées), est une plante largement utilisée en médecine traditionnelle marocaine pour traiter une variété de troubles. De ce fait, nous nous sommes intéressés à l'étude de sa composition phytochimique, de sa toxicité aigüe chez les souris et de l'activité antioxydante de ses extraits par la méthode du *DPPH*.

Les résultats de l'étude phytochimique des différents extraits ont révélé la présence des composés cardiotoniques, Anthocyane, Alcaloïdes, Tanins, Flavonoïdes et Coumarine avec des teneurs différentes.

La mortalité produite chez les animaux par l'extrait hydro éthanolique a été exploitée pour calculer la DL_{50} , qui est de 5 g/kg.

Les résultats de l'activité antioxydante ont montré que l'extrait hydro éthanolique ($IC_{50} = 72.64 \mu\text{g/ml}$), chloroforme ($IC_{50} = 69.37 \mu\text{g/ml}$), acétate d'éthyle ($IC_{50} = 63.6 \mu\text{g/ml}$) de *Dysphania ambrosoidese* possèdent un pouvoir antiradicalaire important, avec une concentration significative par rapport au contrôle positif (acide ascorbique $IC_{50} = 32.14 \mu\text{g/ml}$).

Au terme de nos recherches les extraits de *Dysphania ambrosoidese* sont riches en métabolite secondaire tel que les composés : cardiotoniques, Anthocyane, d'alcaloïdes, tanins, flavonoïdes et Coumarine, ils ont aussi une forte capacité de piéger les radicaux libres.

Mots clés : *Dysphania ambrosoidese*, métabolite secondaire, toxicité aigüe, *DPPH*, Activité antioxydante.

ANIZ YAKMANIN TOPRAK VERİMLİLİĞİ VE EROZYONA ETKİSİ
EFFECT OF STUBBLE BURNING ON SOIL PRODUCTIVITY AND EROSION

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ÖZET

Erozyon; toprağın çeşitli nedenlerle aşınıp taşınmasıdır. İnsan etkisi olmadan erozyonun miktarı ve etkisi çok düşüktür. Erozyon yanlış arazi kullanımı ile ortaya çıkan toprak bozulmasıdır.

Özellikle tarımsal üretimde, çiftçilerin ürün hasadından sonra ikinci ürün elde etme istekleri, birinci hasattan sonra tarlada kalan bitki artıklarını en ucuz maliyetle ortadan kaldırmak, toprak işlemede kolaylık sağlamak, hastalık ve zararlılarla mücadele etmek, yabancı ot kontrolünü sağlamak amacıyla anız yakmaları hem toprak-su-rüzgâr erozyonuna hem de gelecek yıllardaki verim azalmasına sebep olmaktadır.

Anızların yakılması, çiftçinin arazideki kazancının azalmasına neden olmaktadır. Bir toprakta ne kadar çok ve çeşitli türde bitkisel ve hayvansal canlı yaşıyorsa, toprağın verimliliği o kadar artar. Anız yakılırken toprağın yüzeyinde ve 2-3 santimetre derinliğindeki bütün canlılar yok edilmektedir. Anız yakılan yerlerde, toprağın tarımsal üretime katkı sağlayan katmanı zamanla kaybolmakta verim azalmaktadır. Yakma sonucu toprakta organik madde azalmakta bunun sonucu tarım topraklarımız yok olmaktadır.

Anahtar kelimeler: anız yakılması, erozyon, tarım, verimlilik

ABSTRACT

Erosion is that soil damages and transports due to various causes. Without human's effect, effect and amount of erosion are low. Erosion is a soil failure resulted from fault land use.

Especially, stubble burning for farmers who are willing to obtain the second product after product harvest in agricultural production, to remove plant residues over field after the first harvest with the cheapest cost, to make it convenient in soil tillage and to make disease and pest control and weed control causes both soil-water-wind erosion and decrease of yield for future years.

Stubble burning causes the reduction of farmer's income in land. Soil productivity remains increasingly so much as plant and animal species live in a soil. During stubble burning, all creatures are destroyed in soil surface and depth at 2-3 cm. Soil stratum contributing to agricultural production in lands where stubble is burned becomes lost and thus yield decreases over time.

Keywords: Stubble burning, erosion, agriculture, productivity

**THE STRONG CONSISTENCY OF QUASI-MAXIMUM LIKELIHOOD
ESTIMATORS FOR P-ORDER RANDOM COEFFICIENT AUTOREGRESSIVE
(RCA) MODELS**

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ABSTRACT

In this paper, we investigate the strong consistency of the quasi-maximum likelihood estimators derived through the Kalman filter for stationary random coefficient autoregressive RCA models. The estimators in question are obtained by an algorithm based on the Kalman filter and the simulated annealing method which has shown its performance by simulations. Our goal is to provide theoretical evidence to support the practical results in Benmoumen, Allal and Salhi (2019) work.

Besides, the ergodic theorem, the proof suggested here is based on the fact that the Kalman filter asymptotically reaches the equilibrium state under fixed conditions.

Keywords: RCA models, Maximum Likelihood, Kalman Filter, strong consistency.

LES ETATS LOCALISES DANS LES MULTI PUIITS QUANTIQUES GAAS/GAALAS CONTENANT DEUX DEFAUTS GEOMETRIQUE

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RESUME

Dans ce travail, nous avons étudié les états électroniques dans un multi-puits quantiques finie constitué par une succession périodique des cellules, chaque cellule est composée par deux matériaux de type GaAs/GaAlAs. Ce système parfait (sans défauts) permet de créer des régions permises et des régions interdites dans lequel les électrons ne peuvent pas de se propager et par conséquent notre système proposé se comporte comme un filtre par réflexion totale des électrons.

Perturbé ce système parfait par deux défauts géométriques l'un au niveau de puits GaAs d'épaisseur d_{01} et l'autre au niveau de la barrière avec une épaisseur d_{02} , permet de créer des états localisés dans les bandes interdites. Les résultats montrent que les modes de défauts dépendent des paramètres comme l'épaisseur de défaut, la position de défaut, la concentration molaire d'aluminium. Nous avons trouvé que lorsque les deux défauts s'éloignent, les états localisés se rapprochent entre eux, et quand l'épaisseur de défaut augmente l'énergie des modes diminue avec un écart presque constant de 19mev.

Mot clés: multi puits quantique, transmission, défauts géométrique, structure électronique, mode de défaut

MOULOUYA POTATO WEEDS: DIVERSITY-DISTRIBUTION AND THREAT IN THE CULTURE

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ABSTRACT

The description of the botanical, biogeographic attributes and ethological of the floristic heritage of the weeds of the potato of Moulouya in North-East Morocco is based on 31 surveys, the study we encountered 172 weedy species belonging to 22 botanical families.

Six families alone provide 63% of the species: Poaceae (15), Asteraceae (10), Liliaceae (11), Lamiaceae (17), Solanaceae (4), and Apiaceae (2). These families alone account for 69 species.

The abundance and frequency of perennial species has resulted in the identification of 14 noxious species.

The five most noxious species are respectively, *Convolvulus arvensis*, *Cyperus rotundus*, *Cynodon dactylon*, *Rubia peregrina* and *Paspalum paspalodes*.

The ecological study based on the soil texture and the rainfall allowed characterizing four ecological groups: Species of non-calcareous heavy soils, rainy areas, Species of medium soils, limestones, poorly rainy areas, Species of light soils, little limestone, rainy areas and Species of light soils, limestones, poorly rainy areas.

Keywords: Potato, Moulouya, Weeds

AUGMENTED BINARY MULTI-LABELED CNN POUR LA CLASSIFICATION PRATIQUE DES ATTRIBUTS FACIAUX

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RESUME

Au cours de ces dernières années, l'intelligence artificielle a pris le monde par surprise, plongeant dans des progrès miraculeux dans tous les domaines, mais en particulier dans le domaine de l'apprentissage profond, comme la classification des attributs faciaux (FAC) et les problèmes de reconnaissance faciale. Ces progrès reflètent un rôle important dans la sécurité de notre société [1] dans de nombreux domaines comme le contrôle d'accès pour PCs ou smartphones, la vidéo surveillance, l'identification criminelle par le biais des portraits physiques du visage [2] pour les applications policières [3]. La propriété principale des algorithmes FAC [4] est de prédire les caractéristiques de plusieurs visages sur une image ou bien un portrait donné.

Différents algorithmes ont atteint un excellent résultat à plusieurs niveaux pour FAC, soit par l'application directe des modèles CNN [5] pour extraire les traits du visage, soit par l'utilisation des méthodes en vue d'améliorer l'apprentissage. Nous citons quelques exemples ci-dessous ayant réussi des scores phénoménaux dans la classification des visages. L'algorithme appelé Deep multitâche multilabel CNN (DMM-CNN)[6], il divise les attributs du visage en deux catégories :(i) objectifs, comme porter un chapeau, des lunettes ou avoir une frange..., et (ii) subjectives, comme le sourire, de grandes lèvres, jeunes..., il parvient à exécuter deux différentes architectures de réseaux de neurones référentes tirant parti de l'apprentissage multitâches, en adoptant un schéma de pondération dynamique pour résoudre le problème des diverses complexités d'apprentissage.

Dans ce même domaine, une approche d'apprentissage multitâches des attributs du visage, basée sur des caractéristiques partagées entre ces derniers, en utilisant la machine restreinte multitâche de Boltzmann (MT-RBM)[7] [8]. Cette méthode se base sur une représentation conjointe des caractéristiques à partir des points de repère du visage [9] pour tous les attributs. L'approche subsiste d'une passe ascendante / descendante pour l'apprentissage de la représentation partagée des modèles multitâches, et d'une passe ascendante pour la prédiction des attributs. Une autre méthode fondée sur l'apprentissage multitâches des attributs de visage utilisant la méthode de réseau neuronal à transfert profond nommé Face multi-label Transfer Network (FMTNet) [10]. Cette méthode consiste en 3 sous-réseaux majeurs : (1) Réseau de détection de visage (FNet), (2) Le réseau d'apprentissage multiétiquettes (MNet) qui consiste à prédire plusieurs attributs faciaux simultanément et augmenter les performances, en plus de la redondance des fonctionnalités avec le schéma de perte de poids, (3) Le réseau d'apprentissage par transfert (TNet) est un apprentissage non supervisé destiné à l'adaptation de la classification des attributs faciaux non étiquetés. Tandis que d'autres méthodes consistent à regrouper certains attributs en fonction de la corrélation entre eux [3], certains auteurs se focalisent sur la localisation des points de repère du visage, en réduisant le bruit pour mieux optimiser l'apprentissage.

Dans cette communication, nous allons présenter une nouvelle méthode Augemented binary multilabel CNN (ABM-CNN) pour traiter différents aspects de FAC pour une image réelle ou un portrait du visage. D'abord, nous transformons notre problème multilabel en un problème binaire [11] ; pour cela, nous développons un algorithme de fractionnement, et ce, dans l'objectif de transformer notre problème en mini problèmes de classification binaire.

L'ensemble des données de chaque attribut sera fractionné en deux classes (0 ou 1) ; si l'attribut existe dans l'image, on l'affecte à la classe 1, et vice versa pour 0 ; ensuite, on utilise un algorithme d'augmentation des données [12] ; pour multiplier les données pour un apprentissage solide, nous transformons chaque image de l'ensemble de données en 8 images en changeant de perspectives. En raison du manque d'images de portraits, nous décidons de transformer nos images réelles en portraits [13].

Dans notre approche, nous allons utiliser deux datasets : CelebA [14] et WLF[15], et pour les tests de prédictions du portrait de visage, nous utiliserons le dataset CUHK [16]. Nous exécutons notre modèle CNN pour les images réelles et les images portraits, ensuite, nous combinons le résultat de prédiction pour chaque attribut. Nos modules de prédiction dans ABM-CNN produisent 40 attributs faciaux, tels que, la couleur des cheveux, l'identification du sexe, le sourire, l'attraction... Enfin, nous créons notre propre dataset basé sur de fausses images générées en utilisant le modèle style-GAN [17], nous utilisons le modèle pour créer les visages générés, puis nous appliquons notre modèle ABM-CNN pour extraire les attributs et les enregistrer dans un fichier CSV, au service de nos prochaines recherches sur la reconnaissance et la génération des images [18]. Nous avons mené l'expérience avec 70% de notre dataset pour l'entraînement, 15% pour le test et le même taux pour la validation, une taille de batch de 32, et un nombre d'épochs entre 15 et 20. Pour tous les attributs, nous avons presque 4 millions de paramètres entraînaibles, nous avons choisi (adam) comme un optimiseur, et accuracy, loss, f1-score, re-call, précision comme métriques. D'après les résultats obtenus par notre approche, on remarque une meilleure performance, une moyenne de tous les attributs qui atteint 90.05% d'accuracy, ce qui nous donne un très bon résultat de prédiction. Quelques attributs dépassent le cap de 96% d'accuracy comme (gender, baldness, eyeglass, pale skin, hair color), alors que les autres ne baissent pas sur 75.61% d'accuracy ; ce pourcentage qui revient à l'attribut visage ovale, tandis que la moyenne de la durée d'un epoch est d'environ 10 min, soit presque 4h pour 20 epochs avec 140ms/step.

En dépit de leur large application, les méthodes FAC restent un défi pour les chercheurs, en raison de quelques difficultés, à savoir, la reconnaissance de nouveaux attributs qui n'existent pas sur les datasets comme le masque ou bien le foulard chez les femmes, plus des différents attributs du visage sur une image donnée, et le manque de bases de données volumineuses pour les portraits. Chaque information supplémentaire peut être efficace pour augmenter la précision d'apprentissage, pour cette raison les chercheurs se dirigent vers le chemin de génération de données, des apprentissages non supervisés tel que GAN et ses variantes [19].

Mots clés: Deep Learning, CNN, Portrait, Classification des images, Apprentissage multitâches, Attributs faciaux.

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THE ACADEMIC BURNOUT AMONG CRMEF TRAINEE TEACHERS
LE BURNOUT ACADÉMIQUE CHEZ LES ENSEIGNANTS STAGIAIRES DU
CRMEF

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ABSTRACT

Training period is the most important period of the teacher's career. Doubtlessly, trainee teachers are exposed by high requires may developed subsequently to academic burnout. At the beginning of his career, the trainee teacher must have a certain number of cognitive, affective and motor resources in order to mobilize them to deal with several problem situations. This can lead to a high level of stress, which, depending on the context, can eventually worsen to academic exhaustion. **Objective:** the objective of this research is to assess the academic burnout levels of trainee teachers during the training period and measure the internal reliability of the MBI-SS scale and each dimension. **Materials and methods:** A cross-sectorial study took place between January and March 2020. Seven hundred and thirty-nine trainee teachers affiliated to Rabat-Salé-Kénitra Regional Center of Education and Training (CRMEF) responded to the French version of the MBI-SS instrument. **Results:** This sample is divided into 52,5 % Men et 47,5 % Women. The average age is $27,4 \pm 4,9$ years. The burnout scores conclude that more than 50% of participants are the moderate to severe levels of emotional exhaustion and cynism. Moreover, the internal reliability was calculated to test the homogeneity into the different dimensions. The Cronbach's alpha value for all items was 0.75. **Conclusion:** this preliminary study can be applied to other specific samples in other regional centers.

Keywords: Trainee teacher, CRMEF, academic burnout, reliability.

MULTI-CHANNEL FILTERS BASED ON DEFECT MODES IN ONE-DIMENSIONAL SERIAL ASYMMETRIC LOOPS AND COMB-LIKE PHONONIC SYSTEMS**Ilyass El kadmiri^{a,1}, Younes Errouas^{a,2}, Youssef Ben-Ali^{a,b,3}, Jamal Barkani^{b,4}, Aissam Khaled^{a,c,5} and Driss Bria^{a,6}**

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ABSTRACT

In this work, we show a comparative study between two systems in the case of the presence of a single defect at the segment level. On the one hand, we show analytically that we can obtain double frequencies filtering using a one dimensional comb-like phononic structure containing one defect at the segment. This system contains a periodicity of segments and grafted in each site by one opened resonator. The perfect periodic structure presents wide pass bands separated by wide forbidden bands. The presence of a defect in this structure creates filtered frequencies which strongly depend on the defect length d_{01} and the position J of the defect. On the other hand, we investigate the propagation of acoustic waves in a periodic structure consisting of a segment of length d_1 and a loop (two waveguides) of lengths d_2 and d_3 . The presence of a defect inside this structure gives rise to the defect modes within forbidden bands. These localized states are very sensitive to the length of loops and the length of the defect segment. We see that the number of defect modes inside the band gap increases progressively from low to high frequencies with the variation of the defect segment. The transmission spectrum and the band structure of these phononic systems are theoretically presented using the Green function approach based on the formalism of the interface response theory. These structures can also be used as high performance and high transmittance acoustic filters when a defect cell is created into the finite periodic systems.

Keywords: Opened resonator, Asymmetric loop, Comb-like, Green function, Filter.

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GRAPHICAL USER INTERFACE APPLICATION FOR CALCULATING ADIABATIC FLAME TEMPERATURES OF COMMON FUELS

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ABSTRACT

Fast and robust graphical user interface (GUI) application is improved for calculating adiabatic flame temperature for common fuels by using MATLAB. The application is using thermophysical properties of fuels and air from thermodynamic tables then obtains the adiabatic flame temperature in a combustion chamber. Stoichiometric air ratio can also be changed. The code can compute combustion of fuels in the form of C_nH_m and some alcohols with air. Combustion reaction is also written on the screen and the whole calculation lasts less than a minute. Application can be useful for combustion calculations, combustion chamber design and combustion reaction courses. The calculation procedure can be extended for combustion with humidity, heat rate from the combustion chamber, entropy and exergy rate.

Keywords: Adiabatic Flame Temperature, Combustion, Fuel

IN VIVO TEST OF ANTIFUNGAL ACTIVITY BY *LACTOBACILLUS* AGAINST POTATO LATE BLIGHT *PHYTOPHTHORA INFESTANS*

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ABSTRACT

Potato late blight *Phytophthora infestans* is a dreaded potato disease where it occurs, the disease causes serious phytosanitary problems to the crop all over the world and precisely in Morocco.

Long before people were aware of the existence of lactic acid bacteria; they have been used only recently in the preservation of foodstuffs based on milk, meat, fish, vegetables and fruits. The genus *Lactobacillus* is the most found among lactic acid bacteria of antifungal character, followed by the genera *Lactococcus* and *Leuconostoc*.

The probiotic effect was carried out by two strains of lactic acid bacteria (*L.b plantarum* 62 and *L.b brevis* 14), in order to verify their antifungal effects on the tuber of potato (cv. Spunta).

The selected tubers are of the same variety, same size, same physiological age, uniform in shape, free from diseases and all external defects. The Results obtained of the in vivo test on potato tubers, showed that treatment with *L.b plantarum* and *L.b brevis* had a protective effect on tubers against rot caused by the fungus *P.infestans*, and that the characteristic lesions of the disease take a long time to appear on the tubers.

The proportion of necrosis inhibition compared to the positive control was 42.54%. The positive control untreated with suspension of *L.b* developed large lesions characteristic of late blight. No lesions developed on tubers of the negative control inoculated only with sterile distilled water.

Keywords: Potato, Antifungal Activity, *Lactobacillus*, *Phytophthora Infestans*

SYNTHESIS AND CHARACTERIZATION OF MODIFIED HELIOTROPE LEAVES WITH SUPERIOR CLEAN-UP ABILITY FOR CRISTAL VIOLET DYE FROM AQUEOUS MEDIA

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ABSTRACT

The dye-containing wastewater discharged from various industries such as textile, paper, cosmetic, paint, etc. severely contaminate surface water and have detrimental effect on the environment as well as living organisms. In the present work, we have successfully developed modified Heliotrope leaves for the effective removal of cristal violet (CV) dye from aqueous medium. The physicochemical and morphological composition of modified Heliotrope leaves were characterized by field emission scanning electron microscopy (FE-SEM), Fourier transform infrared (FT-IR) spectroscopy, thermogravimetric analysis (TGA), differential scanning calorimetry (DSC). A series of experiments were carried out in order to study the influence of certain parameters on the adsorption capacity in particular: the mass of the adsorbent, the initial

concentration of the dye, the contact time, the pH and temperature. The optimum adsorption capacity of cristal violet on modified Heliotrope leaves is in the order of 25.74 mg/g with a removal percentage of 96.54% for a CV concentration of 20 mg.L⁻¹, an amount of 0.75 g.L⁻¹ of the adsorbent, pH = 6 and a temperature of 298K. The results show that the kinetics of adsorption of the dye cristal violet by modified Heliotrope leaves is described by the second-order model, also the adsorption isotherms are described satisfactorily by the Langmuir model.

Keywords: Modified Heliotrope leaves, Adsorption, Isotherm, Kinetics ; Thermodynamic.

YATAK YÜZÜ DOKUMA KUMAŞLARIN ISIL KONFOR ÖZELLİKLERİNİN İNCELENMESİ

INVESTIGATION OF THERMAL COMFORT PROPERTIES OF MATTRESS TICKING WOVEN FABRICS

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ÖZET

Yatak yüzü kumaşları dokuma, örme veya dokusuz yüzey teknikleriyle üretilmektedir. Yatak yüzü olarak kullanılacak kumaşlar üretildikten sonra genellikle polyester, pamuk, yün vb. elyaf ve tela ile kapitone edilerek kullanılmaktadır. Kumaş üzerine çok sade veya karmaşık desenli kapitone uygulanabilmektedir. Kapitone işlemi ile kumaşa birleşen dolgu malzemesi sayesinde yatak yüzüne gramaj ve kalınlık verilmekte, sünger ve kumaş arasında hava sirkülasyonu sağlanmakta, terleme önlenmekte, basınç dağılımına destek olunmaktadır.

Bu çalışma kapsamında, farklı atkı iplikleriyle ve farklı atkı sıklıklarıyla üretilen dokuma yatak yüzü kumaşların ısı konfor özellikleri incelenmiştir. Bu amaçla, yatak yüzü üretiminde en çok kullanılan pamuk ve viskon liflerinden elde edilen ipliklerin yanında, yeni nesil liflerden olan bambu lifinden elde edilen iplikler kullanılmıştır. Deneysel kumaşların tamamında viskon çözgü ipliği kullanılmış olup bütün kumaşlar aynı çözgü sıklığında dokunmuştur. Kumaşların ısı direnç, ısı iletkenlik, ısı soğurganlık gibi ısı konfor özellikleri Lubos Hes tarafından tasarlanan Alambeta test cihazında, hava geçirgenliği özellikleri ise SDL Atlas hava geçirgenliği test cihazında ölçülmüştür. Elde edilen sonuçlara göre, en yüksek ısı iletkenlik değerlerini pamuk atkı ipliği ile dokunan kumaşlar, en düşük ısı iletkenlik değerlerini bambu atkı ipliği ile dokunan kumaşlar göstermiştir. Kumaşların atkı sıklıkları arttıkça ısı iletkenlik değerlerinin de arttığı görülmüştür. Kumaşların ısı dirençleri incelendiğinde, en yüksek ısı dirence bambu atkı ipliği ile en düşük ısı dirence viskon atkı ipliği ile dokunan kumaşların sahip olduğu gözlenmiştir. Pamuk ve viskon atkılı kumaşların ısı soğurganlık değerleri birbirine yakın olup bambu atkılı kumaşların ısı soğurganlık değerlerinden daha yüksektir. Bu durumda, pamuk ve viskon atkılı kumaşlar cilde ilk temas ettiğinde soğuk hissi verirken, bambu atkılı kumaşlar sıcak his vermektedir. Deneysel kumaşların hava geçirgenlikleri incelendiğinde, en yüksek hava geçirgenliğine pamuk atkılı kumaşların sahip olduğu, bu kumaşları viskon ve bambu atkılı kumaşların takip ettiği görülmüştür.

Anahtar Kelimeler: Yatak Yüzü Dokuma Kumaş, Isıl Konfor, Hava Geçirgenliği

ABSTRACT

Mattress ticking fabrics are produced through weaving, knitting or nonwoven techniques. After the mattress ticking fabrics have been manufactured, they are quilted with materials such as polyester, cotton, wool, fiber, and interlining. Quilting can be performed using fabrics with simple or mixed patterns. The weight and thickness of mattress ticking can be increased by combining the filling material with the fabric via quilting. Additionally, air circulation is

ensured between the sponge and fabric, and sweating is prevented while providing support to the distribution of pressure.

This study examined the thermal comfort characteristics of woven mattress ticking fabrics manufactured using yarns with different wefts and weft densities. Therefore, in addition to yarns obtained from cotton and viscose fibers, the two most commonly used materials for producing mattress ticking, yarns produced using new-generation bamboo fibers were also used. Viscose warp yarns were used in all experimental fabrics and all fabrics were woven to the same warp density. The thermal comfort characteristics of the fabrics, such as thermal resistance, conductivity, and absorptivity, were measured using an Alambeta test device designed by Lubos HES, while the air permeability characteristics were measured using an SDL Atlas air permeability test device. According to the results, the highest thermal conductivity values were exhibited by the fabrics woven with cotton weft yarn, while the lowest figures were found for the fabrics woven with bamboo weft yarn. The higher the weft density of the fabric, the higher the thermal conductivity. The thermal resistance of the fabrics was assessed, with the fabrics woven with bamboo weft yarn showing the highest thermal resistance, while the lowest thermal resistance was shown by the fabrics woven with viscose weft yarn. The thermal absorptivity values for the cotton and viscose weft fabrics were close; however, the bamboo weft fabrics displayed lower thermal absorptivity values. Cotton and viscose weft fabrics feel cold when contacted first, while bamboo weft fabrics feel warm. The air permeability of the experimental fabrics was examined, with the highest air permeability being displayed by the fabrics with cotton weft yarn, followed by the fabrics with viscose and bamboo weft yarn.

Keywords: Mattress Ticking Woven Fabric, Termal Comfort, Air Permeability

ETUDE DE LA QUALITE PHYSICO-CHIMIQUE DE LA NAPPE PHREATIQUE D'ASSA-ZAG (SUD DU MAROC)

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RESUME

La province d'Assa-Zag se caractérise par un climat désert-aride et ses cours d'eau sont temporaires et sont alimentés par des précipitations (La pluviométrie moyenne annuelle est 100 mm). De ce fait, l'impact des sécheresses dû à des pluies irrégulières sur les ressources hydriques nous oblige à protéger l'eau souterraine à cause de la principale source d'eaux pour la consommation et l'irrigation.

Dans le but de viser à fournir suffisamment d'informations sur la qualité des eaux souterraines en prélevant des échantillons d'eau dans des sites dispersés de notre zone d'étude pour évaluer la qualité physico-chimique des eaux en référence avec des normes marocaines et internationales (OMS), nous avons effectué, un suivi mensuel durant 6 mois.

Les résultats obtenus décrivent la situation préoccupante de l'état de la nappe phréatique, menacé particulièrement par les activités anthropiques.

Mots clés: Eau souterraine, Nappe phréatique, Qualité, Puits, Physico-chimie, Activités anthropiques..

CONTRIBUTION À L'OPTIMISATION DES PARAMÈTRES DES PROCESSUS DE LA FABRICATION ADDITIVE PAR L'UTILISATION DES OUTILS DE L'INTELLIGENCE ARTIFICIELLE

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RESUME

Dans la technologie de fabrication additive comme la modélisation de dépôt fondu (FDM : Fused Deposition Modeling), les paramètres de l'impression affectent la conception, la qualité, la fonctionnalité et les propriétés mécaniques de la pièce finale.

FDM est un processus complexe avec un grand nombre de paramètres qui influencent la qualité du produit, ainsi que la combinaison de ces paramètres est souvent difficile à comprendre.

Les outils d'intelligence artificielle montrent sa grande puissance de reconnaissance et d'apprentissage, qui peut trouver de meilleurs résultats à partir de ce grand nombre de paramètres, permettant ainsi la prédiction plus précise grâce à sa sélection efficace de fonctionnalités.

Le but de cette étude est de caractériser l'effet de l'orientation de construction, de l'épaisseur de la couche et du taux d'alimentation sur les performances mécaniques des échantillons fabriqués avec une imprimante 3D en utilisant les outils d'intelligence artificielle.

Des tests de traction et de flexion en trois points sont effectués pour déterminer la réponse mécanique des échantillons imprimés, et valider les modèles artificiellement construits.

Mots clés: Imprimante 3D, Fabrication additive, intelligence artificielle, extruder, FDM

PREDICTION DES EFFORTS DE COUPE, LA TEMPERATURE D'USINAGE, ET L'ÉPAISSEUR DE COPEAU A L'AIDE DE LA THEORIE PREDICTIVE D'OXLEY ET LE RESEAU DES NEURONES (BNN)

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RÉSUMÉ

Plusieurs études de recherche sont consacrées à étudier l'influence des paramètres de coupe sur la qualité d'usinage afin de l'améliorer, d'augmenter la productivité et la capacité des machines-outils, ces études ont pour objectifs de comprendre le processus de phénomène de coupe afin d'arriver à choisir les paramètres de coupe optimums, efficace et rentable.

Ce travail met en évidence une approche de l'intelligence artificielle en se basant sur la théorie prédictive d'Oxley en conjonction avec l'équation de comportement de Johnson-Cook pour prédire plusieurs effets de coupe à savoir la force de coupe, la contrainte de cisaillement dans la zone de coupe, la température dans la zone de coupe, et l'épaisseur de copeau produit, tout en considérant la vitesse de coupe, l'avance, la profondeur de passe, et l'angle de dépouille d'outil comme variables d'entrées. Cela va réduire le nombre des tests expérimentaux approfondis qui sont coûteux et réduire le temps pour faire le choix des paramètres de coupe optimums pour un usinage.

Mots clés : tournage, conditions de coupe, effort de coupe, formation de copeau, réseau de neurones, modèle d'Oxley, modèle de comportement de Johnson-Cook.

CHEMICAL COMPOSITION OF ESSENTIAL OILS AND ANTIMITOTIC ACTIVITY OF EXTRACTS OF *PISTACIA LENTISCUS* L FROM THE EASTERN REGION OF MOROCCO

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RESUME

La présente étude décrit la composition chimique des huiles essentielles et l'activité antimittotique de certains extraits de *Pistacia lentiscus* L. ; un membre aromatique de la famille des Anarcadiaceae de l'est du Maroc.

Les huiles essentielles des feuilles et tiges fraîches de *Pistacia lentiscus* L. ont été analysées par GC-MS. Parmi les composants identifiés au niveau des feuilles, on a la bêta-caryophyllène à 36,459% et l'alpha-Pinene à 23,472% ; alors qu'au niveau des tiges on a noté la présence de D-Limonene à 46,518% et l'alpha-Pinene à 28,863 %.

Les résultats obtenus ont révélé que les extraits aqueux et méthanoliques des feuilles et des tiges de *Pistacia lentiscus* ont un effet antimittotique sur la germination des graines de *Sorghum sp.*. La concentration inhibitrice des extraits utilisés est comprise entre 3 et 6mg/ml, ce qui a donné un indice de mitose inférieur à 1 et un taux d'inhibition compris entre 30% et 47% ; par rapport aux témoins positif (eau) (13%) et aux témoins négatif (la colchicine) (30% à 2mg/ml).

Mots clés : *Pistacia lentiscus*; composition d'huile essentielle; extraits aqueux ; extraits méthanolique ; Activité antimittotique.

ABSTRACT

The present study describes the chemical composition of essential oils and the antimittotic activity of certain extracts of *Pistacia lentiscus* L.; an aromatic member of the Anarcadiaceae family from eastern Morocco.

The essential oils of the fresh leaves and stems of *Pistacia lentiscus* L. were analyzed by GC-MS. Among the components identified at the leaf level are 36.459% beta-caryophyllene and 23.472% alpha-Pinene; while at the stems we noted the presence of D-Limonene at 46.518% and alpha-Pinene at 28.863%.

The results obtained revealed that the aqueous and methanolic extracts of the leaves and stems of *Pistacia lentiscus* have an antimittotic effect on the germination of the seeds of *Sorghum sp*. The inhibitory concentration of the extracts used is between 3 and 6 mg / ml, which gave a mitosis index of less than 1 and an inhibition rate of between 30% and 47%; compared with positive controls (water) (13%) and negative controls (colchicine) (30% at 2 mg / ml).

Keywords: *Pistacia lentiscus*; essential oil composition; aqueous extracts; methanolic extracts; Antimittotic activity.

INHIBITORY EFFECT OF *COCUS SATIVUS* STAMENS ON α -GLUCOSIDASE *IN VITRO* AND *IN VIVO*

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ABSTRACT

Intestinal α -glucosidases are the key enzymes responsible for starch digestion, absorption and their inhibition has been proven effective in both preventing and treating diabetes through the improvement of postprandial hyperglycemia.

This study, for the first time, identified that a *Crocus sativus* stamens extract significantly inhibited mammalian intestinal α -glucosidases. Five fractions of stamens were tested, in vitro and in vivo to elucidate the inhibition of α -glucosidase. The fractions induced, in vitro, significant inhibition of α -glucosidase. The hydrolyzed ethyl acetate fraction had high activity. methanolic extract at 250 mg/kg, significantly decreased postprandial hyperglycemia in vivo after sucrose loading in normal and diabetic rats.

These findings suggest that *Crocus sativus* stamens may have a unique property of suppressing postprandial blood glucose through a mechanism involving the inhibition of α -glucosidases, thereby providing a novel dietary opportunity for diabetes management.

Keywords: *Crocus sativus*; stamens; α -glucosidase; postprandial hyperglycemia; in vivo; in vitro.

ANTIMICROBIAL ACTIVITY OF *NIGELLA SATIVA L* ESSENTIAL OIL IN THE EASTERN REGION OF MOROCCO

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ABSTRACT

The plant *Nigella Sativa L* is a very interesting plant that has not finished giving extraordinary results.

Indeed, this plant has proven to be a mine of health benefits since it begins to be studied. *Nigella sativa* has also the merit of being available all the year, and inexpensive which allows its easy supply.

The work that I am going to share consists on calculating the yield of essential oil extraction by direct plant hydro-distillation and by using hexane extract. In addition, antimicrobial studies have been done using various strains like *Staphylococcus aureus* (SA), *Bacillus cereus* (BC), *Escherichia coli* and *Candida albicans*. Then, minimal bacterial inhibition concentration CMI and minimal fungal inhibition concentration CMF have been revealed for each strain.

This study has shown that direct plant hydro-distillation do not deliver a huge essential oil quantity (0.28%), consequently to obtain more quantity hexane extract has been used to increase the oil recuperation. In fact, hexane warm extract has given an important yield of 34.15%. With this percentage of hexane extract, *Nigella Sativa* essential oil recuperated by Hexane hydro-distillation represented 1.2%.

Furthermore, *Nigella*'s essential oil has proven its efficacy in both bacterial and fungal strains, but their different values in CMI results on bacterial strains are explained by the nature of molecular intervention and its modifications through time. We can also see that essential oil efficacy on fungal strain is extremely interesting. For all these reasons, we can say that *Nigella Sativa* can be used as a remarkable antimicrobial for immune defense.

Keywords: *Nigella Sativa L*, bacterial strain, fungal strain, Hexane extract, essential oil, and hydro-distillation

TÜRK TOPLUMUNDA COVID-19 AŞILARINA YÖNELİK TUTUMLAR ATTITUDES TOWARDS COVID-19 VACCINES IN TURKISH POPULATION

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ÖZET

Dünya Covid-19 salgınına maruz kalmaya devam ederken Türkiye de hastalığın olumsuz sonuçlarından etkilenmektedir. Bulaşıcı hastalıklardan korunmaya ve bu tür hastalıkların etkilerini en aza indirmeye yönelik koruyucu tedbirler hijyen, mesafe koyma ve aşılama. Covid-19 salgını için dünyada çok sayıda aşı geliştirme girişimleri mevcuttur. Ancak Covid-19 aşılarının hastalığı tamamen yok ettiğine dair henüz kesin bulguların olmaması toplumların bu aşılarla yönelik tutumları konusunu gündeme getirmektedir.

Bu çalışmada, dünya genelinde Covid-19 hastalığı için geliştirilen aşılarla yönelik Türk toplumunun tutumunun araştırılması amaçlanmaktadır. Bu amaçla çalışma kapsamında kartopu örneklem yöntemine göre seçilen 693 kişiye sanal ortamda anket uygulanmıştır. Çalışmaya katılmak için gönüllü olma ve 18 yaşından büyük olma koşulları aranmıştır. Soru formunun ilk bölümü katılımcıların “yaş, cinsiyet, eğitim, meslek ve yaşadıkları yer” gibi demografik bilgileri tespit etmeye yönelik ifadelerden oluşmaktadır. Formun ikinci kısmında katılımcıların, geliştirilen aşılarla yönelik tutumlarını tespit etmek amacıyla birtakım sorular yer almaktadır. Bu kapsamda katılımcılara *Türkiye, Çin, Almanya ve Rusya menşeli aşıları* sakıncalı bulup bulmadıkları ile tercih edip etmeyecekleri sorulmuştur.

Araştırma bulgularına göre Türk toplumu arasında en fazla sakıncalı görülen Çin ve Rus menşeli aşılar iken en fazla tercih edilen Türk ve Alman menşeli aşılar olarak tespit edilmiştir. Katılımcıların yaklaşık %65’i Çin menşeli aşığı, yaklaşık %60’nın da Rus menşeli aşığı sakıncalı gördüğü saptanmıştır.

Öte yandan, kişilerin aşığı karşı tutumları kişilerin demografik özelliklerine göre sınıflandırılarak da incelenmiştir. Buna göre katılımcıların standardize edilmiş eğitim gruplarında Çin, Rus ve Alman aşılarına yönelik birbirine yakın oranlarda her bir aşığı sakıncalı gördükleri tespit edilmiştir. Katılımcılar yaş gruplarına göre incelendiğinde en genç katılımcıların tüm aşıları sakıncalı gördükleri tespit edilmiştir. Meslek gruplarına göre yapılan incelemede genellikle birbirine yakın oranlar tespit edilmiştir ancak işsiz katılımcıların tüm aşıları diğer meslek gruplarına kıyasla daha fazla oranda sakıncalı bulduğu saptanmıştır. Katılımcıların cinsiyetine göre aşılarla yönelik tutumları incelendiğinde erkeklerin çoğunluğunun (yaklaşık %60) Çin ve Rus menşeli aşıları sakıncaları gördükleri saptanmıştır. Buna karşı kadınların çoğunluğunun (yaklaşık %60) ise Alman aşısını sakıncalı gördükleri belirlenmiştir.

Diğer taraftan, katılımcıların en çok Türk menşeli bir aşığı (%65) daha sonra ise Alman menşeli bir aşığı (%30) tercih edecekleri tespit edilmiştir. Katılımcıların aşığıya yönelik olumlu tutumları demografik özelliklerine göre araştırıldığı zaman standardize edilmiş eğitim gruplarında Türk aşığı olmak isteyenlerin daha çok düşük eğitilmiş katılımcılar oldukları saptanırken; Alman aşığı olmak isteyenlerin ise daha çok yüksek eğitilmiş katılımcılar oldukları tespit edilmiştir. Yaş gruplarına göre aşığı tercih etme kararı incelendiği zaman Türk aşığı tercih edenlerin eşit dağıldığı görülürken; Alman aşığı tercih edenlerin ise ileri yaş katılımcılar oldukları bulunmuştur. Katılımcıların cinsiyetlerine göre tercihleri incelendiğinde ise Türk ve Alman menşeli aşığıları daha çok erkeklerin tercih ettikleri bulunmuştur.

Bu çalışma ile Türk toplumunun Covid-19 aşığılarına yönelik tutumları ortaya konulmuştur. Çalışmanın bulguları, aşığıların isimlerinin daha çok menşe ülke ile anıldığı göz önünde bulundurulursa, Türk toplumunda ilgili ülke ürünlerine karşı tutumu hakkında da öngörü sağladığı için önem arz etmektedir. Bununla birlikte, Türk menşeli aşığısının çok fazla tercih edilmesinin Türk toplumu arasında yerli ürünlere duyulan güven dolayısıyla olduğuna inanılmaktadır. Bu bağlamda, geliştirilecek yerli COVID-19 aşığısının Türk toplumunda geniş karşılık bulacağı düşünülmektedir.

Anahtar Kelimeler: Covid-19, Türkiye, Aşığı, Tutumlar

ABSTRACT

The World has still been exposed to COVID-19 pandemic, with Turkey has significantly been affected. Preventive measures to protect from infectious diseases and to minimize their effects are declared as hygiene, distancing and vaccination. There are many vaccine development initiatives in the world for the Covid-19 outbreak. However, the lack of clear findings about complete eradication of the disease through COVID-19 vaccines raises the issues of attitudes towards the vaccines in societies.

In this study, it is aimed to examine the attitudes of Turkish society towards the vaccines developed for Covid-19 disease worldwide. For this purpose, data were collected from 693 people selected according to the snowball sampling method using an online questionnaire. Volunteering and being older than 18 years of age were required to participate to the study. The first part of the questionnaire applied consists of the expressions aiming to identify the demographics such as “age, gender, education, occupation and place of residence”. In the second part, there are some questions to determine the attitudes towards the developed vaccines. In this context, participants were asked whether they consider Turkish, Chinese, German and Russian originated vaccines are undesirable and whether they would prefer each.

According to the findings, Chinese and Russian originated vaccines are the most undesirable vaccines, while Turkish and German originated vaccines are the most preferred ones among Turkish society. It has been observed that almost 65% and almost 60% of the participants consider the vaccines originating in China and in Russia are undesirable, respectively. Additionally, the attitudes towards the vaccines were also examined according to the demographic characteristics. Accordingly, it has been detected that the participants in all standardized education groups consider Chinese, Russian, and German originated vaccines are almost equally undesirable. When the participants are examined according to age groups, it has been found that the youngest participants consider all vaccines as undesirable. As for occupational groups, the rates are close to each other, despite that unemployed participants assess all vaccines as more undesirable compared to other occupational groups. When examining the attitudes towards the vaccines according to gender of the participants, it has been found that the majority of men (about 60%) consider Chinese and Russian originated

vaccines are undesirable. On the other hand, it has been observed that the majority of women (about 60%) reckon that German originated vaccine is undesirable.

On the other hand, it has been determined that the participants would mostly prefer a Turkish origin vaccine (65%) and a German origin vaccine (30%) subsequently. When the positive attitudes of the participants towards vaccination are investigated according to their demographic characteristics, it has observed that those desiring to be vaccinated with Turkish origin vaccines are mostly low-educated participants in standardized educational groups; while those preferring the German originated vaccine are mostly high-educated participants. For the preferences according to age groups, it has been identified that those preferring the Turkish origin vaccine are equally distributed among age groups, whereas those preferring the German origin vaccine are found to be elderly participants. As for the preferences according to gender of the participants, it has been found that Turkish originated and German originated vaccines are mostly preferred by men.

The attitudes of Turkish society towards Covid-19 vaccines are revealed with this study. The findings are important as they provide insight into the attitudes towards the products of the relevant country in Turkish society, given that the names of the vaccines are mostly associated with the country of origin. Additionally, it is believed that the preference of Turkish origin vaccine owes to the trust in local products among Turkish society. In this context, it is thought that the developed domestic COVID-19 vaccine will find a wide response in Turkish society.

Key Words: Covid-19, Turkey, Vaccine, Attitudes

DIDACTIC SIMULATION OF INTERFERENCE PHENOMENA ON SMARTPHONES

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ABSTRACT

The purpose of this project is to develop interactive educational simulations of interference phenomena, aiming to allow students to make hypotheses, observe and analyze the obtained data, interpret the results, etc. We use the finite difference method to model this phenomenon and use Android Studio to develop it. Based on object-oriented computer languages (Java, JavaScript) and structured languages (HTML, CSS). Finally, we conducted two experimental simulations on the interference phenomena (lightwave interference and surface wave interference) on Android phones and tablets.

Keywords: Didactic simulation; New technology; Lightwave interferences; Mechanical waves interferences; M-learning; Artificial intelligence.

DOĞAL BİTKİSEL EKSTRAKT KARIŞIMININ (BROFIT 710®) BROYLER RASYONLARINDA KULLANILMASININ ETKİLERİ

THE EFFECT OF USING NATURAL HERBAL EXTRACT (BROFIT 710®) IN BROILER RATIONS

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ÖZET

Etlik piliçlerin hızlı, kaliteli, ucuz ve en az kayıpla yetiştirilmesinin önemi büyüktür. Ancak yoğun yetiştiricilikte stresin artmasıyla ortamda bulunan bakteriyel, viral ve paraziter hastalıklara karşı konak direncinin zayıflamasına ve kısa sürede hastalıkların şekillenmesine neden olabilmektedir. Önlem alınması bakımından hijyenik koşullar, izolasyonlar ve koruyucu antibiyotiklerin yeme ilavesi tek başına yeterli olmadığı gibi maliyeti de arttırmaktadır. Hayvan sağlığını koruma amaçlı antibiyotik kullanımı, antibiyotiklere dirençli mikroorganizmaların gelişmesine neden olabilirken insan sağlığına da zararlı etkiler yaratabilmektedir.

Tüm bunlar alternatif ürün etkinliğinin araştırılması konusunda yeni stratejiler geliştirilmesi gerektiğini göstermektedir. Verim ve bağışıklık artırıcı yem katkı maddeleri son yıllarda üzerinde sıklıkla çalışılan konular arasındadır. Antibiyotik yerine doğal ve insan sağlığına zarar vermeyen; etken madde yoğun bitkisel ekstraktların kullanımı antibiyotik kullanımına karşı bir alternatif olarak karşımıza çıkmaktadır.

Araştırmada kullanılacak BROFIT 710® nanoteknoloji ile üretilmiştir. Sözü edilen bu ürün adet bitki ekstrakt karışımı (anethol=Pimpinella anisum, limonene=Carum carvi L., citronella=cymbopogon nardus, sabinene=Levisticum officinale, carvacrol, thymol=Thymus vulgaris, y-terpinene=cuminum cyminum, glycyrhızın=Glycyhiza glabra L.) kısa zincirli trigliseritler ve humatların sinerjistik karışımından oluşmaktadır. Bu üründe, bir nano teknoloji yöntemi olan granülasyon ve mikroenkapsilasyonla bir araya getirilen ekstraktlar, kısa zincirli yağlar ve humatlar, aviamax her tanesinde eşit miktarda bulunmaktadır. Sonuç olarak yapılması düşünülen bu çalışma ile doğal bitkisel ekstraktların broyler rasyonlarında etkili bir şekilde kullanılması ana hedef olmuştur.

Anahtar Kelimeler: Bitkisel ekstrakt, broyler

ABSTRACT

It is important to raise broiler chickens fast, quality, cheap and with the least loss. However, with the increase of stress in intensive cultivation, it can lead to weakening of host resistance against bacterial, viral and parasitic diseases and formation of diseases in a short time. In terms of taking precautions, hygienic conditions, isolations and protective antibiotics are not enough alone to increase the cost. The use of antibiotics for protection may lead to the development of antibiotics resistant microorganisms, while creating harmful effects on human health.

All this suggests that new strategies should be developed to investigate alternative product

effectiveness. Yield and immune-enhancing feed additives are among the topics that have been frequently studied in recent years. Natural and not harmful to human health instead of antibiotics; The use of herbal extracts appears as an alternative to antibiotic use.

BROFIT 710® to be used in the research was produced with nanotechnology. This product contains a mixture of plant extracts (anethol, limonene, citronella, sabinene, carvacrol, thymol, γ -terpinene, glycyrrhizin), a short-chain triglycerides and a synergistic mixture of pharmacodetic activated humates. In this product, extracts, short chain oils and humates combined with a nanotechnology method, granulation and microencapsulation, are present in equal amounts in each of the aviamax. As a result, with this experiment, which is planned to be made, the main target was to use natural herbal extracts effectively in broiler rations.

Keywords: Herbal extract, broiler

THE STUDY OF A SYNTHESIZED INHIBITOR P1 ON THE CORROSION OF MILD STEEL IN H₂SO₄ ACID MEDIUM (0,5 M)

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So as to study the new molecules' inhibition {4-nonadecyl-2H-benzo[b] [1,4]thiazin-3(4H)-one} (P1) in corrosion inhibitors of the mild steel in H₂SO₄ acid medium (0,5 M) through gravimetric and electrochemical methods (stationary and transient). The concentration effect was investigated in two different mediums which are : HCl (1M) and H₂SO₄ (0,5M). Moreover, thermodynamic parameters were calculated using the variation of temperature in weight loss measurements. The inhibition efficiency increases with the concentration of the inhibitor to reach 90.6% at 10⁻³M. The polarization measurement also showed that this inhibitor acts essentially as a mixed one. EIS measurements have revealed that the charge transfer resistance increased with increase in inhibitor concentration. P1 was adsorbed on the surface of the steel according to the Langmuir adsorption model which was by chemisorption. The efficiency of P1 inhibitor in HCl (1M) medium was higher than IE% obtained in H₂SO₄ (0,5M) medium.

Keywords: Corrosion inhibition, sulfuric acid, mild steel, polarisation and electrochemical measurements

FATIGUE ANALYSIS TO A TUBE OF EXCHANGER HEAT

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ABSTRACT

The aim of this work is to predict the life fatigue of a heat exchanger subjected to variable thermo-mechanical loading. To achieve this object, we used the fracture mechanics model based on the continuous damage approach. This model takes into account the geometrical nonlinearity by the presence of a semi-elliptic crack [1-5] and the type of thermomechanical loading cyclic. The geometry studied in this manuscript is a cylinder carrying a semi-elliptical crack.

Initially, the structure under internal pressure is entirely at room temperature. The external surface of the cylinder is heated to a constant temperature, $T_{max} = 300^{\circ}C$. During the heating period, the temperature increases linearly from room temperature to the maximum temperature. Then it is kept constant during ulterior thermal cycles. The inner wall of the cylinder is cooled by forced convection during tempering and by free convection.

Keywords: thermo-mechanical loads, Finite Element, semi elliptic crack, Paris law, Damage, Linear Fracture mechanical

RESUME

Le but de ce travail est de prédire la durée de vie en fatigue d'un échangeur thermique soumis à un chargement thermomécanique variable. Pour atteindre cet objectif, nous avons utilisé le modèle de la mécanique de la rupture basé sur l'approche de l'endommagement continu. Ce modèle tient en compte du non linéarité géométrique par la présence d'une fissure semi-elliptique [1-5] et le type de chargement thermomécanique cyclique. La géométrie étudiée dans ce manuscrit est un cylindre portant une fissure semi-elliptique.

Initialement, la structure sous pression interne est entièrement à la température ambiante. La surface extérieure du cylindre est chauffée à une température constante imposée, $T_{max}=300^{\circ}C$. Pendant la période de chauffage, la température augmente linéairement de la température ambiante jusqu'à la température maximale, puis elle est maintenue constante pendant les cycles thermiques ultérieurs. La paroi interne du cylindre est refroidie par convection forcée pendant la trempe et par convection libre.

Mots clés: Charges thermomécaniques, Elément Fini, fissure semi elliptique, loi de Paris, Dégâts, Fracture linéaire mécanique

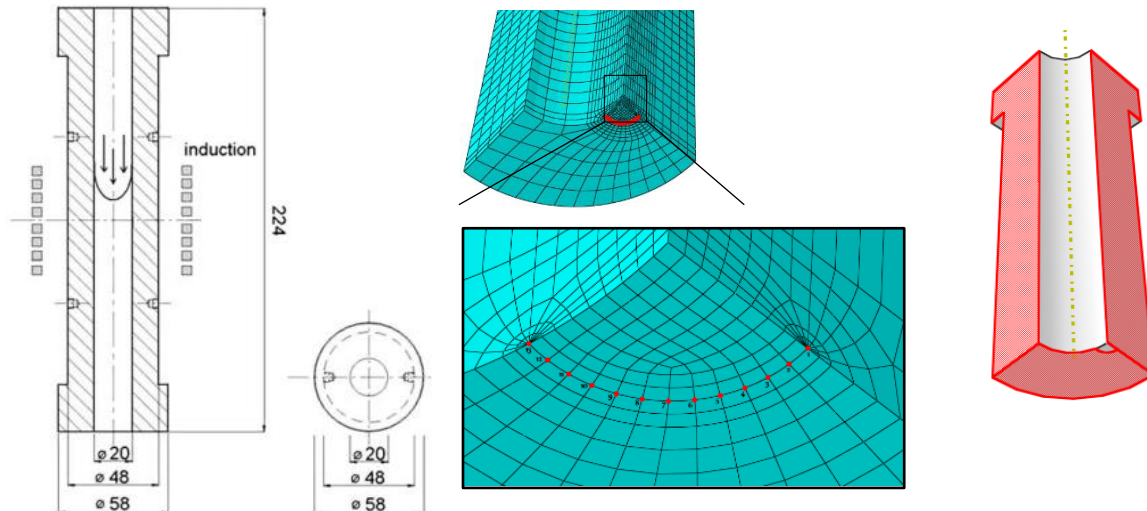


Figure 1: Etude de l'éprouvette de tube de l'échangeur thermique

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HAYVAN BESLEME ALANINDA SÜRÜ TAKİP SİSTEMİ UYGULAMASINDA SAHA ANALİZİ

COMPARATIVE ANALYSIS OF HERD TRACKING SYSTEM APPLICATION IN ANIMAL FEEDING AREA

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ÖZET

Çağdaş sürü takip sistemleri, sürünün değişik ölçütlere dayalı olarak performansını ölçmede ve yönetimle ilgili birçok konuda kullanıcı için son derece ayrıntılı bilgiler sağlamaktadır. Sistemin kullanıcıya çok geniş bir veri tabanı sağlamasının yanı sıra diğer bir özelliği, bu bilgileri anlık olarak değerlendirmesi ve şekiller, çizelgeler şeklinde yöneticinin kullanımına sunmasıdır. Sistem kullanıcıya çok yönlü değerlendirme sonuçları oluşturma olanağı tanımaktadır. Kullanıcı, sistem bünyesinde yer alan çeşitli verilerden istediklerini seçerek çok sayıda birleşim oluşturabilmekte ve kısa sürede yorumlanabilecek çizelge ve grafikler elde edebilmektedir. Bu sistemlerin en önemli bir diğer özelliği sürekli olarak geliştirilerek güncellenmeleri, gereksinim duyulan yeni bilgileri sağlayabilir duruma gelmeleridir.

Bu anlamda yapılması planlanan bu çalışmada süt ineklerinde sürü takip sistemi uygulaması yapılarak şu veriler kontrol grubu ile karşılaştırılmalı (kontrol grubu= sürü takip sistemi uygulanmayan) olarak analiz edilmiştir.

- * Elektronik tanımlama
- * Otomatik süt ölçümü ve kaydı (süt miktarı, sağım süresi, süt akış hızı (debis), sütün elektriksel iletkenliği ve sıcaklığı)
- * Otomatik hareketlilik ölçümü (kızgınlık, sağlık sorunları, yatma süresinin belirlenmesi)
- * Otomatik vücut ağırlığı ölçümü (hayvanların vücut ağırlıklarının günlük olarak izlenmesi),
- * Otomatik olarak yoğun yemle bireysel düzeyde yemleme sistemleri (süt verimi, canlı ağırlık ve laktasyon dönemine uygun yemleme olanağı, yem tüketiminin izlenmesi),
- * Sürü sağlığına yönelik erken tanı destek sistemleri (mastitis, metabolik arazlar, ayak arazları vb. sağlık sorunlarında erken tanı),
- * Otomatik ayırma ve işaretleme sistemleri

Anahtar Kelimeler: Sürü takip sistemi, hayvan besleme

ABSTRACT

Contemporary herd tracking systems provide extremely detailed information to the user in many aspects of management and in measuring the performance of the herd based on different criteria. In addition to providing a very large database to the user, another feature of the system is that it evaluates this information instantly and makes it available to the administrator in the form of figures and charts. The system allows the user to create versatile evaluation results. The user can create a large number of combinations by selecting the

desired data from the various data within the system and obtain charts and graphs that can be interpreted in a short time. Another important feature of these systems is that they are continuously developed and updated and can provide the new information needed.

In this study, which is planned to be done in this sense, the following data will be compared with the control group (control group = no herd tracking system is applied) by applying herd tracking system in dairy cows.

*Electronic identification

* Automatic milk measurement and recording (milk quantity, milking time, milk flow rate (debris), electrical conductivity and temperature of milk)

* Automatic mobility measurement (anger, health problems, determination of bed time)

* Automatic body weight measurement (animals daily monitoring of body weight)

* Automatically intensive feeding systems feeding the individual level (milk yield, proper feeding and lactation opportunity to live weight, feed consumption monitoring)

* Early diagnosis support systems for herd health (early diagnosis of health problems such as mastitis, metabolic symptoms, foot symptoms, etc.)

* Automatic separation and marking systems

Keywords: Herd tracking systems, animal feeding

PROPRIETES ANXIOLYTIQUES, ANTIDEPRESSIVES ET IMPACT SUR LA MEMOIRE DE L'EXTRAIT HYDRO-ETHANOLIQUE DE L'ORIGANUM MAJORANA L. SUR LES SOURIS

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L'infusion de marjolaine (*Origanum majorana* L.) a été utilisée comme médecine populaire contre la dépression et l'anxiété. Cependant, aucune étude n'a encore été réalisée pour prouver scientifiquement ces activités. Dans cette étude, l'impact anxiolytique, antidépresseur et mémoriel des extraits hydro-éthanoliques de marjolaine a été évalué chez la souris. Les extraits hydro-éthanoliques (250 et 500 mg/kg) ont été évalués pour leur effet sur le système nerveux central à l'aide de six tests comportementaux différents, tels que la chambre claire-obscur (LDB) et le champ ouvert (OF) pour l'anxiété, le test de nage forcée (FST) et le test de suspension de la queue (TST) pour la dépression, et le test de reconnaissance des objets (ORT), le labyrinthe aquatique de Morris (MWM) pour l'impact sur la mémoire. Les expériences ont été réalisées le 1^{er}, 7, 14 et 21^{ème} jour de traitement et comparées au bromazépam pour l'anxiété (1 mg/kg) et à la paroxétine pour la dépression (11,5 mg/kg). Le dépistage phytochimique a été effectué par HPLC, et les toxicités aiguës et subaiguës ont été réalisées selon les directives de l'OCED (N423 et 407) avec évaluation des paramètres biochimiques. L'administration orale d'un extrait hydro-éthanolique de marjolaine a induit des effets anxiolytiques et antidépresseurs importants sans altération de la mémoire, ce qui a augmenté l'exploration et le temps passé dans la zone de lumière dans le test LDB de manière similaire à celui du bromazépam. Dans la FST et la TST, l'extrait était aussi efficace que la paroxétine (11,5 mg/kg, p.o.) pour réduire l'immobilité. Le criblage phytochimique a montré la présence d'acide férulique, de naringine, d'hydroxytyrosol, de géraniol et de quercétine. Cette étude approuve l'utilisation traditionnelle de cette plante et encourage la poursuite des recherches sur ses composés bioactifs.

Mots clés : anxiolytique ; antidépresseur ; impact sur la mémoire ; *Origanum majorana* L.

AKIŞ ALANI TASARIMLARININ PEM YAKIT HÜCRESİ PERFORMANSI ÜZERİNDEKİ ETKİLERİNİN NÜMERİK OLARAK İNCELENMESİ

NUMERICAL ANALYSIS OF THE EFFECTS OF FLOW FIELD DESIGNS ON PEM FUEL CELL PERFORMANCE

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ÖZET

Proton exchange membrane (PEM) yakıt hücrelerinde akış alanı tasarımları, hücre performansını belirleyen en önemli parametrelerin başında gelmektedir. Bu çalışmada, özgün iki farklı akış alanı (model A ve model B) tasarlanmış ve literatürde kabul görmüş serpantin tasarımıyla basınç, sıcaklık dağılımları ve polarizasyon eğrisi üzerinden karşılaştırılmıştır. Akış alanları, ANSYS Fluent paket programında hesaplamalı akışkanlar dinamiği (CFD) yöntemi ile simüle edilmiştir. Analizler üç boyutlu olarak ve tek faz kabulü ile 50 cm² aktif alanda gerçekleştirilmiştir. Basınç ve sıcaklık değerleri 0.4V hücre geriliminden alınmıştır. Simülasyon sonuçları, farklı akış alanı tasarımlarının hücrenin sıcaklık ve basınç dağılımları değerlerinde de değişikliğe neden olduğunu göstermiştir. Serpantin tasarımına kıyasla, model B'nin membran yüzeyindeki ortalama sıcaklık dağılımı %2.19 oranında artış göstermiş, model A'da ise %4.34 oranında azalma görülmüştür. Hücredeki basınç farkları dikkate alındığında, kanal girişinden çıkışına doğru serpantin, model A ve model B sırasıyla 55.41, 16.58 ve 20.70 Pa basınç düşüşleri göstermiştir. Sonuçlar model B'nin, serpantin ve model A'ya kıyasla daha homojen bir sıcaklık ve basınç dağılımı sergilediğini göstermiş ve polarizasyon grafiğine göre de model B en yüksek, model A ise en düşük güç yoğunluğunu göstermiştir.

Anahtar Kelimeler: PEMFC, CFD, Bipolar Plaka, Performans

ABSTRACT

Flow field designs in proton exchange membrane (PEM) fuel cells are one of the most important parameters that determine cell performance. In this study, two distinct flow fields (model A and model B) were designed and compared over pressure, temperature distributions and polarization curves with the serpentine design accepted in the literature. Flow fields have been simulated by the computational fluid dynamics (CFD) method in ANSYS program. Analyzes were carried out in three dimensions with a single-phase assumption in an active area of 50 cm². Pressure and temperature results were obtained at a constant 0.4V cell voltage. Simulation results showed that different flow field designs caused changes in the temperature and pressure distributions of the cell. Compared to the serpentine design, the temperature distribution on the membrane surface of model B increased by an average of

2.19%, and the temperature distribution of model A decreased by 4.34% on average. Considering the pressure differences in the cell, the serpentine, model A and model B showed pressure drops of 55.41, 16.58 and 20.70 Pa, respectively. The results showed that model B displayed a more homogeneous temperature and pressure distribution compared to the serpentine and model A, and according to the polarization graph, model B showed the highest power density and model A showed the lowest power density.

Keywords: PEMFC, CFD, Bipolar Plate, Performance

PEM YAKIT PİLLERİNDE AKIŞ ALANI TASARIMLARININ SU ETKİNLİĞİ ÜZERİNDEKİ ETKİLERİNİN İNCELENMESİ

INVESTIGATION OF THE EFFECTS OF FLOW FIELD DESIGNS ON WATER ACTIVITY IN PEM FUEL CELLS

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ÖZET

Polimer elektrolit membranlı (PEM) yakıt hücrelerinde su yönetimi konusu hücre performansını etkileyen en önemli parametrelerden birisidir. Akış alanı kanallarında biriken su damlaları sistem kararsızlığına, akışın yanlış dağıtımına ve akış alanı boyunca fazla basınç farkına neden olarak elektriksel performansı düşürmektedir. Bu çalışmada, üç boyutlu olarak 50 cm² aktif alana sahip farklı iki akış alanı deseni (model I ve model II) tasarlanmış ve literatürde incelenen tek yönlü serpantin akış alanı ile su etkinliği üzerinden karşılaştırılmıştır. Akış alanları, hesaplamalı akışkanlar dinamiği (CFD) yöntemi ile ANSYS Fluent paket programında modellenmiştir. Analizler, reaktanların ideal gaz davranışı gösterdiği ve sıvı su fazının olmadığı kabul edilerek sabit giriş ve çıkış parametrelerinde gerçekleştirilmiştir. Katot gaz kanalından 0.4V hücre geriliminden alınan görüntüler H₂O Mass Fraction (Su Kütle Kesri) ve Liquid Water Activity (Sıvı Su Aktivitesi) simülasyonları kapsamında değerlendirilmiştir. Elde edilen sonuçlara göre her iki yeni tasarımın da serpantin akış alanına göre daha fazla su etkinliğine sahip olduğu tespit edilmiştir. Bu bağlamda model II'nin, serpantine göre %56.31 ve model I'e göre %30.30 daha fazla su etkinliği gerçekleştirdiği görülmüştür.

Anahtar Kelimeler: PEMFC, CFD, Su aktivitesi, Su kütle kesri

ABSTRACT

Water management is one of the most important parameters affecting cell performance in polymer electrolyte membrane (PEM) fuel cells. Droplets of water that accumulate in flow field channels cause system instability, improper flow distribution and excessive pressure differential across the flow area, reducing electrical performance. In this study, two different flow field patterns (model I and model II) with an active area of 50 cm² were designed in three dimensions and compared with the one-way serpentine flow field studied in the literature on water efficiency. Flow fields are modeled with the computational fluid dynamics (CFD) method in ANSYS Fluent package program. Analyzes were carried out with fixed input and output parameters, assuming that the reactants behave like ideal gases and that there is no liquid water phase. Images taken from the 0.4V cell voltage from the cathode gas channel were evaluated within the scope of H₂O Mass Fraction and Liquid Water Activity

simulations. According to the results obtained, it was determined that both new designs have more water activity than the serpentine flow area. In this context, it has been observed that model II performed 56.31% more water efficiency compared to serpentine and 30.30% more than model I.

Keywords: PEMFC, CFD, Water activity, Water mass fraction

AIR COOLING OF PHOTOVOLTAIC PANELS USING HEAT SINKS

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ABSTRACT

The increase in the temperature of photovoltaic (*PV*) panels caused by both high levels of solar radiation and ambient temperature has an observable effect on their efficiency as well as on their lifetime. This work involves studying the cooling of *PV* panels by natural convection using an air-cooled heat sink. The proposed heat sink was designed in the form of an aluminum plate with perforated fins attached to the back of the *PV* panel. To be more realistic, we developed a *UDF* subroutine written in *C++* to incorporate the unstable weather conditions in the Oujda region, which included average hourly weather data for the chosen day. This study was carried out by numerical simulations using the *ANSYS Fluent* software, an optimization of the air distribution and temperature during the cooling of the photovoltaic panel was carried out. The results showed that the proposed model can reduce the temperature of the panels by an average of 12°C while increasing the efficiency of the *PV* modules with a rate of 0.7%, which is a promising solution to the overheating of *PV* panels.

Keywords: *ANSYS Fluent*; Cooling; Heat sink; *PV* panels...

LOCALIZED STATES IN DEFECTIVE CDTE/CDZNTe MQWS, POSSIBLE EFFECTS ON THE LASING PHENOMENON

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ABSTRACT

The current paper presents a theoretical study of the transmission and the band structure for a multi-quantum well (MQW) composed of the periodic arrangement of $Cd_{1-x}Zn_xTe$ and CdTe, contains a barrier defect layer. The theoretical calculations of this study are based on the transfer matrix method formalism. Results show that the creation of one or more very narrow localized states in the band gaps to facilitate transition of electrons at lower energy depends clearly on the concentration and the thickness of the defect layer $Cd_{1-x}Zn_xTe$. These localized states shift to lower energy by increasing the defect thickness. Moreover, the transmission coefficients of these localized states reach maximum values when the defect layer is placed in the middle of the structure due to the symmetry of system. This finding will be useful for certain applications to light-emitting diodes, semiconductor micro-lasers or in infrared radiation detectors.

LES PETITS VERTEBRES QUATERNAIRE DE LA GROTTA DE GUENFOUDA (JERADA, MAROC ORIENTAL)

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ABSTRACT

Ce travail présente les résultats de L'étude préliminaire des petits vertébrés de la Grotte de Guenfouda. Le matériel étudié provenant de notre campagne de lavage-tamassage (missions de fouille 2016 & 2017). L'étude paléontologique a mis en évidence l'existence d'une communauté des petits mammifères hautement diversifiée composée de : Sciuridae, Gliridae, Gerbillinae, Murinae, Crocidurinae, Soricinae, Erinaceinae, Hystricidae, Macroscelididae, Vespertilionidae, Caméléonidae.

L'analyse quantitative de l'ensemble faunique du site, combinée à une description morphologique indique que l'environnement de la grotte de Guenfouda était composé d'une mosaïque de paysages [steppe sèche (60%), habitats rocheux (24%) prairies humides ouverte (9%), zones boisées de marge (7%)], avec une prédominance de steppe sèche ouverte, et un climat méditerranéen dominant.

Keywords: Micromammifères, paléoenvironnement, Quaternaire, Maroc Oriental.

**ACİL SERVİSTEN 2019-2020 YILLARINDA CERRAHİ KLİNİKLERE YATIŞ
YAPILAN HASTALARIN DEMOGRAFİK ÖZELLİKLERİ**
**DEMOGRAPHIC CHARACTERISTICS OF PATIENTS WHO TRANSFERRED IN
THE SURGICAL CLINICS FROM THE EMERGENCY SERVICE IN 2019-2020**

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ÖZET

Acil servis başvuruları içerisinde cerrahi bölümlerle ilişkili hastalar, acil servisteki kritik hasta tanımına uyan hastalar içerisinde önemli bir yere sahiptir. Cerrahi bölümler tarafından değerlendirilip acil cerrahi operasyon veya yatış gerektiren hastalar, travmatik hastalar ve non-travmatik hastalar olarak 2 grupta incelenebilir. Travma sadece acil tıp sorunu olmayıp artık önemli bir halk sağlığı sorunu olarak ele alınmaktadır. Acil cerrahi yatışların önemli bir bölümünü travma hastaları oluşturmakta olup bu hasta grubunu da ilgilendiren acil operasyonlar incelendiğinde, özellikle düşük ve orta gelirli ülkelerde, daha yüksek morbidite-mortalite ile sonuçlanmaktadır. Biz bu çalışmada aynı dönemde acil servise başvuran hastalarda ardışık 2 yılda acil cerrahi yatışı yapılanların demografik özelliklerini inceledik.

Çalışmamız Hitit Üniversitesi acil servise, 2019 sonbahar dönemi ile 2020 sonbahar döneminde başvuran hastalardan cerrahi kliniklere yatışı yapılanlar dahil edilmiştir.

2019 yılındaki cerrahi yatışlar incelendiğinde hastaların %59,4 erkek, %40,6 kadın olup yaş ortalaması $54,33 \pm 20,775$ (min:5, max:94)dir. Hastaların yatışı yapıldığı cerrahi servisler incelendiğinde ilk 3 sırada %54,2 genel cerrahi, % 24,9 ortopedi, % 4,9 beyin sinir cerrahi olarak karşımıza çıkmaktadır. Yatış tanıları incelendiğinde %16,2 apandisit, % 15,1 alt ekstremitte kırıkları ve %8,1 gis kanama tanıları ilk 3 tanı olarak karşımıza çıkmaktadır.

Aynı dönemi, bir sonraki yıl incelediğimizde hastaların %61,5 erkek, %38,5 kadındır. Yaş ortalaması $50,94 \pm 21,860$ (min:1, max:95) olup yatışı yapılan klinikler incelendiğinde hastaların %43,5 ortopedi, %38,2 genel cerrahi ve %4,4 beyin sinir cerrahi servislerinde en çok yatışı yapıldığı anlaşılmaktadır. Yatışa neden olan tanıları bakıldığında %17,7 alt ekstremitte kırıkları, %15,1 üst ekstremitte kırıkları, %15,1 apandisit tanıları ön plana çıkmaktadır.

Acil servisten yapılan yatışlar içerisinde hayati bir öneme sahip olan cerrahi kliniklere yatışlar incelendiğinde yıllar arasında yatış yapılan klinikler arasında oran olarak anlamlı fark bulunmuştur. Hastalık tanılarına bakıldığında artan travma hastalarının sonucu olarak travma tanılarından olan ekstremitte kırıkları oransal olarak arttığı görülmektedir. Söz konusu bulgular acil çalışanlarına yol gösterici olacaktır.

Anahtar Kelimeler: Kritik hasta, Acil servis, Acil cerrahi hastaları

ABSTRACT

Patients associated with surgical departments have an important place among patients who meet the definition of critical patients in the emergency service. Patients requiring emergency surgery or hospitalization and evaluated by surgical departments can be divided into 2 groups as traumatic patients and non-traumatic patients. Trauma is not only an emergency medicine problem, it is now considered as an important public health problem. Trauma patients constitute a significant portion of emergency surgical hospitalizations, and when emergency operations involving this patient group are examined, they result in higher morbidity-mortality, especially in low and middle-income countries. In this study, we examined the demographic characteristics of patients who were admitted to the emergency department during the same period of consecutive years (2019 and 2010) and who were hospitalized for surgical clinics.

In our study, patients who were admitted to the Hitit University emergency department and transferred to surgical clinics in the fall period of 2019 and 2020 were included.

When the surgical hospitalizations in 2019 are examined, 59.4% of the patients are male and 40.6% female, with an average age of 54.33 ± 20.775 (min: 5, max: 94). When the surgical services where the patients were hospitalized were examined, 54.2% general surgery, 24.9% orthopedics and 4.9% brain nerve surgery appear in the first three places. When hospitalization diagnoses are examined, the first three diagnoses are appendicitis 16.2%, lower extremity fractures 15.1% and gastrointestinal bleeding, respectively. When we examine the same period in the next year, 61.5% of the patients were male and 38.5% female. The average age is 50.94 ± 21.860 (min: 1, max: 95). When the surgical services where the patients were hospitalized were examined, 43.5% orthopedics, 38.3% general surgery, 4.4% brain nerve surgery were in the first three places. When the diagnoses that cause hospitalization were examined, 17.7% lower extremity fractures, 15.1% upper extremity fractures, 15.1% appendicitis come to the fore.

When hospitalizations to surgical clinics, which are of vital importance among hospitalizations from the emergency department, were examined, a significant difference was found between the hospitalization clinics over the years. Considering the diagnoses of the diseases, it is seen that the extremity fractures, which are among the trauma diagnoses, increase proportionally as a result of increasing trauma patients. The findings in the study will guide doctors who work in the emergency department.

Key words: Critically ill patient, Emergency room, Emergency surgery patients

EFFET DU PARAMÈTRE A SUR L'ÉVOLUTION DES SYSTÈMES DES GLISSEMENTS ACTIVÉ SOUS CHARGEMENT DE TRACTION MONOTONE

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RESUME

L'objectif principal de ce travail est d'étudier l'effet du paramètre viscoplastique sur l'évolution du nombre de systèmes de glissement cristallographiques activés par grain (SGA) pour les métaux CFC sous chargement de traction monotone. Le modèle est exprimé dans le cadre de l'approche auto-cohérente et de la plasticité dépendante du temps. En se basant sur le tenseur d'Eshelby, ce modèle considère que le comportement élastique est compressible.

Mot clé : plasticité , grain , ecrouissage , système de glissement

GÉNOMIQUE COMPARATIVE ET ORIGINES DU VIH COMPARATIVE GENOMICS AND HIV ORIGINS

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RESUME

Ce présent travail fait partie des travaux de recherche de la phylogénie moléculaire basée sur la génomique comparative. Pour différencier entre les deux types du VIH, agent étiologique du SIDA, d'une part, et pour établir l'homologie qu'il a avec le virus de l'immunodéficience simienne VIS d'une autre part, deux méthodes ont été utilisées.

A partir de 80 séquences génomiques correspondant à 38 génomes de VIH-1, 20 génomes de VIH-2 et 22 génomes de VIS, on a tenté de faire, dans un premier temps une comparaison des core-génomes. Or, à cause de leur grande divergence, la détection des gènes en commun entre ces trois espèces n'a pas été possible.

Dans un deuxième temps, une phylogénie à base des SNPs a été construite. Celle-ci a confirmé les résultats des études phylogénétiques précédentes en montrant que le VIH-1 et le VIH-2 seraient les résultats des transmission zoonotiques provenant du VIScpz et du VISgor pour le VIH-1 et du VISsm pour le VIH-2.

Mots-clés : phylogénie moléculaire – génomique comparative – VIH-1 – VIH-2 – VIS – core-génome – SNP.

ABSTRACT

This present work takes part of the research on molecular phylogeny based on comparative genomics. To distinguish between the two types of HIV, the etiological agent of AIDS, on the one hand, and to establish the homology it has with the simian immunodeficiency virus SIV on the other hand, two methods have been used.

Using 80 genomic sequences corresponding to 38 HIV-1 genomes, 20 HIV-2 genomes and 22 SIV genomes, an attempt was first made to compare the core genomes. However, because of their great divergence, the detection of genes in common between these three species was not possible.

In a second step, a phylogeny based on SNPs was constructed. It showed that HIV-1 and HIV-2 would be the results of zoonotic transmissions from VIScpz and VISgor for HIV-1 and VISsm for HIV-2, confirming thereby the results of previous phylogenetic studies.

Keywords: molecular phylogeny - comparative genomics - HIV-1 - HIV-2 – SIV - core-genome - SNP.

EFFET DE L'ARTEMISIA HERBA-ALBA ET THYMUS SSP SUR PSEUDOMONAS AERUGINOSA RESISTANT A LA CEFTAZIDIME

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La résistance aux antibiotiques constitue aujourd'hui l'une des plus graves menaces pour l'humanité face à une utilisation excessive et non contrôlée des antibiotiques. L'augmentation de cette résistance nécessite le développement de nouveaux moyens thérapeutiques et préventifs¹.

La présente étude a pour but de rechercher les potentialités antibactériennes des huiles essentielles et commerciales de l'*Artemisia herba-alba* et *Thymus ssp* sur *Pseudomonas aeruginosa* résistant à la ceftazidime.

Les méthodes de la diffusion en milieu gélosé et en milieu liquide par microdilution ont été utilisées pour le test de sensibilité et pour la détermination de la concentration minimale inhibitrice (CMI) et bactéricide (CMB). On a utilisé le *Pseudomonas aeruginosa* résistant à la ceftazidime isolées des patients malades au niveau du service de microbiologie du centre hospitalier universitaire Mohammed VI Oujda.

L'huile essentielle du *Thymus ssp* a montré sa capacité d'inhiber la croissance avec un diamètre de 17 mm. La CMI et la CMB sont de l'ordre de 600 µg/ml pour les huiles commerciales testées, tandis que la CMI et la CMB des huiles essentielles, sont de l'ordre de 200 µg/ml pour *Thymus ssp*, et de 400 µg/ml pour *Artemisia herba alba*.

Les résultats de cette étude ont montré que les huiles essentielles testées ont une activité antibactérienne intéressante qui peut être liée à l'existence du Carvacrol, le Limonène et le Thymol. En effet, ces composés peuvent être utilisés à des fins préventives ou curatives face à ce défi mondial.

Mots clés: Bactéries multi-résistantes, *Artemisia herba-alba*, *Thymus ssp*, *Pseudomonas aeruginosa* résistant à la ceftazidime, Huile essentielle, effets préventifs et curatifs.

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VASER LIPOSUCTION

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Introduction. In our fast-paced world, people simply do not have time to focus on their health and physical condition. However, both women and men want to have the right body structure. This is possible thanks to modern VASER liposuction.

What is VASER liposuction?

VASER is the brand name of an ultrasound liposuction system that uses ultrasound waves to selectively absorb adipose tissue. Ultrasound technology allows liposuction in both deep and superficial layers by emulsifying adipose tissue in areas where body contours will be corrected and with minimal damage to surrounding tissues, reduces blood and fluid loss, pain and trauma, and allows lipomodeling.

What is lipomodeling, lipoplasty?

Using this technology, the surgeon, like a sculptor, models the ideal proportions of the patient's body, creating a unique effect to emphasize the structure of the body's muscles. The method is based on the intensive removal of subcutaneous fat, which covers muscle mass. Working with superficial fat allows the surgeon to contour the body, transfer excess fat tissue to areas that require additional volume, and create an athletic male and female body.

3 benefits of VASER liposuction:

1. Maximum accumulation of skin, minimal tissue trauma.
2. Ability to contour the body with a high degree of relief.
3. High viability of extracted fat cells for lipofilling and liposcopy.

Technique. Initially, saline is injected into the problem area, which causes wear and tear. The solution also helps to remove oil more easily, reducing the risk of bruising and swelling. A thin ultrasound probe is then inserted directly into the adipose tissue, where high-frequency sound waves are received through minimal incisions. Ultrasound selectively destroys fat cells, but does not damage connective tissues, nerves and blood vessels.

The next step is to remove the melted fat tissue that has accumulated in the liquid through special cannulas.

The end. Vaser liposuction is not intended to treat obesity, but to achieve more appropriate body contours, giving them harmonious and beautiful proportions.

THIN PASS BANDS IN PHOTONIC STAR WAVEGUIDES STRUCTURE BASED ON FIBONACCI SEQUENCE OF GRAFTED RESONATORS

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ABSTRACT

We study the band structure and the transmission coefficient properties of electromagnetic waves in one-dimensional quasi-periodic Fibonacci structure. Our structure is composed of periodic waveguides in which the resonators having different lengths and depend on each other following a Fibonacci sequence grafted onto N equidistant sites. This study shows that Star waveguides structure of the Fibonacci sequence can exhibit localized pass bands with higher amplitude in the transmission spectrum. The variation between the resonator lengths give rise to new created gaps in the pass bands, called flat bands. This structure can be used in the electromagnetic telecommunications field, in the design of new filter, multichannel and even for multiplexing and other engineering devices.

Keywords: Quasi-periodic, Fibonacci, Star waveguide, Flat bands, Filtering, Multiplexing.

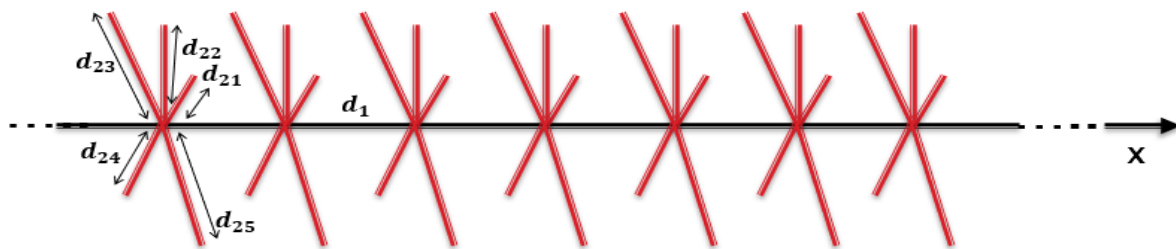


Figure. Schematic illustration of the one-dimensional Star waveguides structure with a periodic segment grafted in each other by side branches of lengths d_{2j} [$j = 1-5$], the resonators lengths depend on each other following a Fibonacci sequence with $D=d_1$ represents the period of the structure

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INDUCED DEFECT MODES IN A ONE-DIMENSIONAL SERIAL LOOP PHOTONIC CRYSTAL

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ABSTRACT

In this work, we investigate the effect of the insertion of two defects at the top part and segment levels in the one dimensional photonic serial loops structure. Our proposed perfect structure composed of alternating repetition periodic of asymmetric loops and segment. The insertion of the two geometrical defects gives rise to defect modes in the photonic band gaps. These modes are very sensitive to the variation of the geometrical parameters of the defective cell of the asymmetrical loop-shaped photonic structure. This structure has potential applications as very narrow band filters with a high performance.

Keywords: Photonic; Defect modes; Loop; Filter

COMPOSTING OF DATE PALM (PHOENIX DACTYLIFERA L.) BY-PRODUCTS: EVOLUTION OF PHYSICOCHEMICAL AND MICROBIOLOGICAL PROPERTIES**Bouziane O.*¹, Gagou E.¹, Abbas M.⁵, Bouakka M.¹, Massart S.², Lamkami T.³, El Jaziri M.⁴, Hakkou A.¹.**¹Laboratoire de Biochimie et de Biotechnologie, Faculté des Sciences de l'Université Mohammed I²Laboratoire de Phytopathologie Université de Liège Gembloux³Plateforme Analytique, Faculté de Pharmacie, Université Libre de Bruxelles⁴Laboratoire de Biotechnologie Végétale, Faculté des Sciences, Université Libre de Bruxelles⁵Station d'Expérimentation en Milieu Oasien, Figuig

A considerable quantity of non-valorized by-products is produced each year by date palm (*Phoenix dactylifera* L.). It was estimated at more than 8000 tons/year in Figuig's oasis. The accumulation of these by-products constitutes a major factor for the ecosystem pollution and plant diseases propagation. Composting might be an extremely potential way to increase their use, at the same time of decreasing their harmlessness. A better understanding of the evolution of these by-products, during the process, is much required. The quality of compost delivered to farmers must also respond to international standard criteria, such as physical, chemical, biological or phytosanitary criteria. This study aims to follow the evolution of date palm by-products in the composting process, by determining these physicochemical parameters: Temperature, moisture content, pH, electrical conductivity (EC), total organic matter, C/N ratio, total phosphorus fraction, granulometric repartition and water retention. These parameters were chosen to study their influence on *Fusarium oxysporum* f.sp. *albedinis* (FOA) behavior. The valorization of these organic by-products was carried out by the composting technique on windrows 50 m³ in the oasis of Figuig. The windrows were maintained under optimal aeration and moisture conditions throughout the composting process.

Three known phases were illustrated during the composting process for the internal and external temperatures: a 5 days mesophilic phase, where the temperature begins an ascending trend, followed by a thermophilic phase, which lasts about 120 days, at which the high temperatures remained between 47 and 63°C, then a cooling phase of about 40 days, during which the temperatures stabilize between 35 and 40°C, close to the ambient temperature of Figuig's site. The first results of the ongoing experiments showed a high elimination of FOA, during the first days of the thermophilic phase. The organic matter decreased from 70% to 40%. The C/N ratio decreased from 87 to 18, due to the increase in nitrogen levels (from 0.42 to 1.09%) and the decrease of carbon content (from 36.50% to 19.50%). The pH fluctuated between 8 and 8.7, and the humidity was maintained at a rate of 61 to 68%, while the conductivity decreased during composting from 9.2 to 7.1 ms/cm. Total phosphorus fraction had an increasing trend during the composting process, from 0.28% to 0.60%. The monitoring of the proportions relating to the distribution of particles in different size intervals shows a gradual decrease in large particles and an increase in the finest fractions. The water holding capacity by mature compost is in the range of 40 to 45%. The following steps are ongoing in order to determine the other maturity parameters, phytosanitary and agronomic values of our compost.

Key words: Compost, by-products, *Phoenix dactylifera* L., *Fusarium oxysporum* f.sp. *albedinis* (FOA), physicochemical parameters.

EVALUATION OF ALTERNATIVE PRODUCT POTENTIAL OF WEED NETTLE

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ABSTRACT

Nettle (*Urtica* spp.) is a weed species that is naturally found in the field and road coasts in the Urticaceae family and can grow in tropical and subtropical regions. It is an undesirable plant in terms of agriculture as it competes with cultivated plants in agricultural lands and is an intermediate host to plant diseases and pests. Stinging nettle has been used on an industrial scale throughout history. Although it has a lot of use in the industrial field, nettle production is very low in the agricultural field. Apart from the agricultural sector, it is an important raw material for the textile, pharmaceutical, food, paint, feed and cosmetics sectors. Agricultural systems have significant potential to contribute to greenhouse gas reduction measures on a global scale. Practices such as product diversification, perennial vegetation and soil conservation measures are very important in order to develop agricultural production in a sustainable way. Today's climate changes, the increasing concern of the public about the climate, the increase in the demand for sustainable materials for the manufacturing industries have created the need to grow different products. The economic and ecological advantages of nettle have been proven by many studies to have great commercial potential. Nettle is a perennial low-input crop with numerous uses in harvest that can be produced by seed or by growing seedlings, offering an attractive crop for farmers. Due to the emergence of the disadvantages of synthetic products in every field, searches for new herbal origin treatment, textile and food have begun. The purpose of this review is to reveal up-to-date data on the potential of nettle, which can adapt to different climatic conditions, can be grown on land that is not suitable for agriculture, helps prevent soil erosion in sloping lands, can be used in industry due to its versatile chemical richness, and can be an alternative product for farmers to put.

Keywords: Weed, Nettle, Alternative Product

YÜKSEK PERFORMANSLI HAFİF BETONLARDA DONATIDAKİ GERİLMENİN BASINÇ DAYANIMI İLE DEĞİŞİMİ

VARIATION OF STRESS IN REINFORCEMENT WITH COMPRESSIVE STRENGTH IN HIGH PERFORMANCE LIGHT CONCRETE

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ÖZET

Kalıcı ve uzun ömürlü yapılar inşa edebilmek için yüksek performanslı hafif betonlara (YPHB) ihtiyaç vardır. Hafif agregalı betonların hafif olma, ısı ve ses yalıtımı sağlama gibi üstünlükleri mevcuttur. Özellikle geleneksel normal betonlar ile kıyas yapabilecek kadar yeterli dayanım performansı sağlaması durumunda, bu betonların yapısal uygulamalardaki potansiyeli kritik bir öneme sahip olmaktadır. Betonarme yapı elemanlarında aderans sayesinde, donatıdaki gerilmeler ve yapı elemanında oluşan iç kuvvetler bir kesitten diğer kesite aktarılmaktadır. Eğilme altındaki betonarme bir yapıda momentin değişmesiyle donatıdaki gerilmenin de değişmesi söz konusudur.

Bu çalışmanın amacı YPHB'lerin beton-donatı aderansı arasındaki ilişkiyi basınç dayanımı ve kenetlenme boyu gibi değişim parametrelerini dikkate alarak belirlemektedir. Bu amaçla farklı büyüklükte pomza agregaları kullanılarak, farklı basınç dayanımı (20 MPa – 50 MPa) ve farklı kenetlenme boyu (10Ø, 20Ø, 25Ø ve 30Ø) için donatı çapı (Ø8) sabit tutularak bir dizi YPHB beton karışımlar hazırlanmıştır. Taze haldeki beton, aderans için 100x180x800 mm'lik özel kalıplara doldurulmuş ve 28 gün küre tabi tutulmuştur. Üretilen kiriş numunelerin aderans özellikleri Standart Standart Belçika Mafsallı Kiriş deneyi (BMK) ile belirlenmiştir.

Deneyler sonucunda okunan P yükü F kuvvetine dönüştürülmüş ve F kuvveti yardımı ile donatıdaki gerilme hesaplanmıştır. Elde edilen sonuçlara göre donatı gerilmesi ile basınç dayanımı ve kenetlenme boyu arasında oldukça iyi bir uyum gözlenmiştir. BMK numuneleri için donatıdaki gerilmenin hem beton basınç dayanımının artması ile hem de kenetlenme boyunun artması ile arttığı belirlenmiştir.

Anahtar Kelimeler: Yüksek Performanslı Hafif Beton, Belçika Mafsallı Kiriş, Donatı Gerilmesi, Basınç Dayanımı, Kenetlenme Boyu.

ABSTRACT

High performance lightweight concretes (HPLC) are needed to build permanent and long-lasting structures. Lightweight concretes have advantages such as being lightweight and providing heat and sound insulation. The potential of these concretes in structural applications is of critical importance, especially if they provide sufficient strength performance to compare with conventional concretes. Thanks to the bond properties in reinforced concrete building elements, the stresses in the reinforcement and the internal forces occurring in the building element are transferred from one section to another. In a reinforced concrete structure under bending, there is a change in the stress in the reinforcement as the moment changes.

The purpose of this study is to determine the relationship between the concrete-reinforcement bond of HPLCs, taking into account variation parameters such as compressive strength and embedding length. For this purpose, a series of HPLC mixes were prepared by utilizing different sized pumice aggregates, constant reinforcement diameter ($\emptyset 8$), different compressive strengths (20 MPa and 50 MPa), and different embedding lengths (10 \emptyset , 20 \emptyset , 25 \emptyset and 30 \emptyset). Fresh concrete with reinforcement was filled into special molds of 100x180x800 mm for bond test and cured for 28 days. The bond properties of the produced beam specimens were determined by the Standard Belgium Hinged Beam test.

As a result of the experiments, the load read was converted into the force and the stress in the reinforcement was calculated with the help of this force. According to the results, a very good consistence has been observed between the reinforcement stress and compressive strength of concrete and embedding length. For the specimens, it was determined that the stress in the reinforcement increased both with the increase of the concrete compressive strength and the increase in the embedding length.

Keywords: High Performance Lightweight Concrete, Beam Test, Reinforcement Stress, Compressive Strength, Embedding Length.

BİTKİ EKSTRAKTI VE SPURİLİNA PLATENSİS'İN BROYLER RASYONLARINDA KULLANILMASI

THE EFFECT OF PLANT EXTRACT AND SPURILINA PLATENSIS ON BROILER RATIONS

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ÖZET

Etlük piliçlerin hızlı, kaliteli, ucuz ve en az kayıpla yetiştirilmesinin önemi büyüktür. Ancak yoğun yetiştiricilikte stresin artmasıyla ortamda bulunan bakteriyel, viral ve paraziter hastalıklara karşı konak direncinin zayıflamasına ve kısa sürede hastalıkların şekillenmesine neden olabilmektedir. Önlem alınması bakımından hijyenik koşullar, izolasyonlar ve koruyucu antibiyotiklerin yeme ilavesi tek başına yeterli olmadığı gibi maliyeti de arttırmaktadır. Hayvan sağlığını koruma amaçlı antibiyotik kullanımı, antibiyotiklere dirençli mikroorganizmaların gelişmesine neden olabilirken insan sağlığına da zararlı etkiler yaratabilmektedir.

Tüm bunlar alternatif ürün etkinliğinin araştırılması konusunda yeni stratejiler geliştirilmesi gerektiğini göstermektedir. Verim ve bağışıklık artırıcı yem katkı maddeleri son yıllarda üzerinde sıklıkla çalışılan konular arasındadır. Antibiyotik yerine doğal ve insan sağlığına zarar vermeyen; etken madde yoğun bitkisel ekstraktlar ve medikal bitkilerin kullanımı antibiyotik kullanımına karşı bir alternatif olarak karşımıza çıkmaktadır.

Son zamanlarda yapılan araştırmalara göre *S. platensis* üretimi broyler beslenmesinde iyi bir protein kaynağı olabileceği öngörülmüştür. Üzerinde çalışılan birçok mikroorganizma arasında, mavi-yeşil alg *Spirulina* yüksek protein içeriği (% 65 - 70) ve yüksek miktarda vitamin ve mineral nedeniyle umut verici bir mikroorganizma olarak kabul edilir. Ayrıca, *Spirulina*'nın üreme hızı ve mısırın büyüme hızı belli bir dönem içerisinde kıyaslandığında mısırdan 125 kat daha fazla protein üretebileceği tahmin edilmektedir.

Sonuç olarak yapılması düşünülen bu çalışma ile doğal bitkisel ekstraktı ile mavi-yeşil alg *Spirulina platensis* broyler rasyonlarında kullanılması irdelenmiştir.

Anahtar Kelimeler: Bitkisel ekstrakt, broyler, *Spirulina platensis*

ABSTRACT

It is important to raise broiler chickens fast, quality, cheap and with the least loss. However, with the increase of stress in intensive cultivation, it can lead to weakening of host resistance against bacterial, viral and parasitic diseases and formation of diseases in a short time. In terms of taking precautions, hygienic conditions, isolations and protective antibiotics are not enough alone to increase the cost. The use of antibiotics for protection may lead to the development of antibiotics resistant microorganisms, while creating harmful effects on human health.

All this suggests that new strategies should be developed to investigate alternative product effectiveness. Yield and immune-enhancing feed additives are among the topics that have been frequently studied in recent years. Natural and not harmful to human health instead of antibiotics;

The use of herbal extracts and medical herbal appears as an alternative to antibiotic use.

According to recent researches, *S. platensis* production has been predicted to be a good source of protein in broiler nutrition. Among the many microorganisms studied, blue-green algae *Spirulina* is considered a promising microorganism due to its high protein content (65-70%) and high amounts of vitamins and minerals. In addition, it is estimated that *Spirulina's* growth rate and corn growth rate can produce 125 times more protein than corn in a certain period.

As a result, this study is intended to be used in the most effective use of natural herbal extract and blue-green algae *Spirulina platensis* in broiler rations and to determine the effects of the results.

Keywords: Herbal extract, broiler, *Spirulina platensis*

**TOXOPLASMA GONDII'YE KARŞI MİKROPARTİKÜL FORMDA AŞI
GELİŞTİRİLMESİ VE ANTİKOR YANITLARININ İNCELENMESİ**
DEVELOPMENT OF VACCINE IN MICROPARTICULATE FORMS AGAINST
TOXOPLASMA GONDII AND INVESTIGATION OF ANTIBODY RESPONSES

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ÖZET

Toxoplasma gondii geniş konakçı aralığına sahip olan zorunlu hücre içi bir parazittir ve dünyada oldukça yaygın görülen ciddi bir halk sağlığı problemi olan toxoplasmozis enfeksiyonuna neden olmaktadır. T. gondii bağışıklık sistemi zayıf insanlarda ve yenidoğanlarda yüksek bulaşma ve ölüm oranları ve çoğu konakçının beyin, omurilik, kalp gibi dokularda ömür boyu sürececek gizli bir enfeksiyon oluşturması hastalığın önlenmesine yönelik yeni stratejilerin geliştirilmesine gerek duyulmaktadır. T. gondii enfeksiyonunun tedavisine yönelik kullanılan ilaçların yan etkileri ve hastalığın nükse etmesi gibi nedenlerden dolayı T. gondii'ye güvenli ve etkili bir aşının geliştirilmesi enfeksiyon ile mücadelede son derece önemli bir strateji olacaktır. Fakat günümüzde insanlarda T. gondii enfeksiyonunun önlenmesine yönelik onaylı bir aşı çalışması bulunmamaktadır. Özellikle peptit bazlı epitop aşıları, bağışıklık sisteminin yalnızca spesifik epitoplara odaklanmasını sağlaması, canlı organizma barındırmaması ve otoimmünite gibi istenmeyen yan etkilere yol açmaması gibi avantajları sayesinde enfeksiyonların önlenmesinde geleneksel aşılar göre daha etkili ve güvenli bir seçenek sunarlar. Bu çalışmanın amacı; T. gondii'ye karşı parazitin yüzey antijenlerine ait multi-epitope bazlı spesifik peptit dizisini literatürde adjuvan etkisi bulunan PCPP mikropartikülüne enkapsüle ederek aşı formülasyonunun oluşturulması ve etkinliğinin in vivo ortamda antikor yanıtları incelenerek belirlenmesidir. Çalışmada, T. gondii'ye karşı spesifik peptit dizisi ile PCPP polimeri enkapsüle edilerek mikropartikül forma getirildi. Enkapsülasyon sonucu üretilmiş olan PCPP mikropartiküllerinin ve peptit yüklü PCPP mikropartiküllerinin karakterizasyon analizleri yapıldı. Daha sonra deney hayvanlarının enjeksiyon sonrası 6 hafta boyunca toplanan serumları, ELISA yöntemi kullanılarak IgG antikor yanıtları için incelendi. Peptit yüklü mikropartiküller boyut ve zeta potansiyel analizleri değerlendirilmiştir ve enkapsülasyon verimi ve SEM görüntüsü ile mikropartikül formları gösterilmiştir. Enjeksiyon sonrasında elde edilen sonuçlar, sadece peptit ve peptit yüklü PCPP mikropartikülleri ile immünize edilen hayvanlarda T. gondii parazitine

karşı IgG yanıtı oluştuğu görülmüştür. Ayrıca bağışıklık yanıtının peptit yüklü PCPP mikropartiküllerinde diğer gruplara oranla daha yüksek olduğu belirlenmiştir.

Anahtar Kelimeler: Enfeksiyon hastalıkları, Toksoplazma gondii, Peptit aşılarda, PCPP mikropartikülleri, Antikor yanıtı

ABSTRACT

Toxoplasma gondii is an obligate intracellular parasite affecting a wide host range and causes toxoplasmosis infection, a serious health problem in the world. High transmission and mortality rates of T.gondii in immunocompromised patients and newborns and a lifelong infection brain, spinal cord, and heart tissues require new strategies to prevent the disease. The development of a safe and effective vaccine against T. gondii will be an important strategy in combating infection, due to the side effects of drugs used for the treatment of T. gondii infection and potential disease recurrence. Currently, there is no approved vaccine study to prevent T. gondii infection in humans. Specifically, peptide-based epitope vaccines offer a more effective and safer option than traditional vaccines in preventing infections, thanks to the advantages such as allowing the immune system to focus only on specific epitopes, not containing living organisms, and not causing undesirable side effects such as autoimmunity. The aim of this study is the creation of a vaccine formulation against T. gondii by encapsulating the multi-epitope-based peptide sequence on the parasite's surface antigens into the PCPP microparticles, which has approved as an adjuvant and determining the efficiency of the formulation by examining antibody responses in vivo. In this study, a specific peptide sequence against T. gondii is encapsulated into PCPP microparticles and characterization analysis of microparticles was performed. Then, vaccine formulation was administered to experimental animals and their 6-weeks sera were analyzed for IgG antibody responses using ELISA method. As a result, formation of PCPP microparticles was observed by size, zeta potential analysis, and SEM analysis. Results obtained after injection showed that IgG response to the parasite was induced only in animals immunized with peptide and peptide-loaded PCPP microparticles. In addition, it was observed that immune responses was higher in peptide-loaded PCPP microparticles compared to other groups.

Keywords: Infectious diseases, Toxoplasma gondii, Peptide vaccines, PCPP microparticles, Antibody response

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GC-MS ANALYSIS, ANTIOXIDANT AND ANTI- α -GLUCOSIDASE ACTIVITIES OF POMEGRANATE PEEL HEXANE EXTRACT

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ABSTRACT

Pomegranate (*Punica granatum*) is a functional food of great interest, due to its multiple beneficial effects on human health. The objective of this research was to determine the chemical composition and to evaluate *in vitro* α -Glucosidase inhibition, antioxidant property of PPE.

Crude extract was prepared by Soxhlet extraction method, the obtained extract was evaluated for antioxidant using DPPH (2,2-diphenyl-1-picrylhydrazyl) radical scavenging activity. The results showed hexane extract exhibited radical scavenging ($IC_{50} = 12,271$ mg/ml), and inhibited α -Glucosidase with maximum value of 66% at $166 \mu\text{g/ml}$, and 57% at $322 \mu\text{g/ml}$. Acarbose was used as a standard drug. GC-MS analysis of PPE revealed the presence of different compounds with maximum amount of oleic acid. The results clearly indicated that pomegranate peel extract could be used in preventing the incidence of long term complication of diabetics.

Keywords: Pomegranate; peel extract; extraction; α -Glucosidase inhibition; GC-MS analysis, Antioxidants activity.

THE CURRENT STATUS OF ORGANIC ANIMAL HUSBANDRY PRODUCTION IN TURKEY

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ABSTRACT

Today, organic husbandry production is increasing all over the world. It is necessary for human nutrition in terms of protein in organic animal foods as in conventional animal foods. Organic livestock breeding; It is an activity carried out by applying the principles deemed to be appropriate by the organic agriculture regulation. Organic husbandry breeding; This activity has become widespread across the world, especially as it feeds animals with organic food, as antibiotics and additives are not used.

A total of 186 countries have practice organic agriculture around the world. Among these countries, 103 countries have organic regulations. According to 2018 data, 71.5 million hectares of organic farming exist in the world. Oceania ranks first with 36 million hectares, followed by Europe with 15.6 million hectares, and Latin America with 8 million hectares. There are 2.8 million organic farming producers in the world. Of these, 1.3 million producers are in Asia, 806,000 producers are in Africa, and 418,610 (Turkey 79.563) in Europe. Organic livestock activities have started with the first organic beekeeping in Turkey. It developed with organic cattle breeding and organic sheep farming and poultry breeding later on.

Organic Farming Information System in Turkey (OTBİS) According to the data of 2019 the number of organic sheep 17.184, 5.543 Number of cattle, poultry number is 848.619. Turkey has a total of 184 producers dealing with organic animal husbandry.

Turkey has a high potential for organic husbandry farming; Therefore, it can be expanded further with incentive packages and projects that can be made with the private sector. Animal husbandry are mostly carried small farming families living in rural areas in Turkey.

The ratio of organic husbandry products is low due to low-income consumers and the lack of awareness in the society about organic agriculture. Some activities should be carried out to increase the number of conscious consumers. In addition by increasing these incentives, migration from rural to urban can be reduced due to low family income in rural areas.

Key words: organic, organic husbandry, Turkey, organic husbandry production

YÜKSEK PERFORMANSLI HAFİF BETONLARDA ADERANS GERİLMESİ İLE DONATIDAKİ GERİLME ARASINDAKİ İLİŞKİNİN SAYISAL BİR YAKLAŞIMLA İNCELENMESİ

INVESTIGATION OF THE RELATIONSHIP BETWEEN BOND STRENGTH AND
REINFORCEMENT STRENGTH IN HIGH PERFORMANCE LIGHTWEIGHT CONCRETES
WITH A NUMERICAL APPROACH

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ÖZET

Mevcut çalışmada, seçilen Yüksek Performanslı Hafif Beton karışım oranları kullanılarak bir seri Belçika Mafsallı Kiriş numunesi hazırlanmıştır. Böylece, Yüksek Performanslı Hafif Beton kirişler için aderans gerilmesinin incelenmesi amaçlanmıştır. Bu kapsamda, Belçika Mafsallı Kiriş deneyinin bu konu için güncel ve güvenilir bir deney sistemi olduğu belirlenmiştir. Aderans gerilmesinin donatıdaki gerilme ile değişimini incelemek amacıyla, 12 mm çaplı S420 çelik donatı kullanılmıştır.

Standart Belçika Mafsallı Kiriş deneyi, kirişin ortasından uygulanan bir dış yük altında çekme bölgesindeki donatının betondan sıyrılmasının ölçüldüğü değeri belirlemek için yapılmaktadır. Yani, donatılara eğilme durumundaki mafsallı kirişler aracılığıyla çekme gerilmeleri vererek betondan sıyırmaya çalışan bir yük durumunda, beton-donatı aderansını belirlemek için kullanılan bir deney yöntemidir. Deneyde, düşey olarak uygulanan ve yük hücresi yardımıyla okunan yük değeri kullanılarak dolaylı olarak bulunan donatıdaki kuvvet değeri ile bu kuvvete karşılık gelen aderans kayıpları belirlenebilmektedir. Bu kuvvet değerleri ile donatıda oluşan gerilme değerinin donatıda meydana getireceği aderans gerilmesinin donatının üzerinde düzgün yayıldığı kabul edilerek hesaplama yapılmaktadır.

Deneyisel bulgular neticesinde, aderans gerilmesinin donatıdaki gerilme ile doğrudan ilişkili olduğu sonucuna varılmıştır. Bununla birlikte; aderans gerilmesi ile donatıdaki gerilme arasında oldukça iyi bir uyum gözlenmiştir. Belçika Mafsallı Kiriş numuneleri için donatıdaki gerilme artış oranı ile aderans gerilmesi artış oranının aynı olduğu gözlemlenmiştir. Bu çalışmada, deneysel olarak belirlenen aderans gerilmesinin donatıdaki gerilme ile değişimi için sayısal bir yaklaşım geliştirilmiştir. Geliştirilen yüksek doğruluklu metotla iş gücü, zaman ve ekonomik yarar sağlanması hedeflenmiştir.

Anahtar Kelimeler: Yüksek Performanslı Hafif Beton, Belçika Mafsallı Kiriş, Aderans Gerilmesi, Donatıdaki Gerilme, Sayısal Metot.

ABSTRACT

In the present study, a series of Belgium Hinged Beam specimens were prepared using the selected High Performance Lightweight Concrete mix ratios. Thus, it is aimed to investigate the bond stress for High Performance Lightweight Concrete beams. In this context, it has been determined that the Belgium Hinged Beam test is an up-to-date and reliable test system for this subject. In order to examine the change in bond stress with the stress in the reinforcement, 12 mm diameter S420 steel reinforcement was used.

The standard Belgium Hinged Beam test is performed to determine the value at which the stripping of the reinforcement from the concrete in the tensile zone is measured under an external load applied from the middle of the beam. In other words, it is a test method used to determine the concrete-reinforcement bond in the case of a load that tries to be stripped from the concrete by giving the reinforcements tensile stresses through the hinged beams. In the experiment, by using the load value applied vertically and read with the help of the load cell, the force value in the reinforcement found indirectly and the bond stress losses corresponding to this force can be determined. With these strength values, the calculation is made by assuming that the bond stress that will occur in the reinforcement will be spread evenly on the reinforcement.

As a result of the experimental findings, it was concluded that the bond stress is directly related to the stress in the reinforcement. In addition; a very good harmony has been observed between the bond stress and the stress in the reinforcement. For the Belgium Hinged Beam specimens, it has been observed that the rate of increase in the stress increase and the rate of increase in bond stress are the same. In this study, a statistical approach has been developed to change the experimentally determined bond stress with the stress in the reinforcement. With the high accuracy method developed, it is aimed to provide labor, time and economic benefits.

Keywords: High Performance Lightweight Concrete, Belgium Hinged Beam, Bond Stress, Stress in the Reinforcement, Statistical Method.