



INTERNATIONAL CONGRESS

MATERIALS, BIOMATERIALS ENVIROMENTAL SCIENCES AND TECHNOLOGY

FEZ
MOROCCO
CONFERENCE CENTER
USMBA

MAY
29-31
2024



<https://www.fsdm.usmba.ac.ma/ICMBEST>



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Scientific Program and Useful information



Participating Countries - Pays Participants

البلدان المشاركة



1st International Conference on Materials, Biomaterials, Environmental Sciences, & Technology

Under the theme:

< Fostering synergy between science and industry: Steering the future towards integrated solutions for renewable energy, water and food security, in line with the new development model >

Conference Center, University of Sidi Mohamed Ben Abdellah, Fez, Morocco

May 29 – 31, 2024

<https://www.fsdm.usmba.ac.ma/ICMBEST/>

WELCOME MESSAGE FROM GENERAL CHAIRS

Morocco's new development model was launched by His Majesty King Mohammed VI on 31 July 2019, on the occasion of Throne Day. Since then, major projects have been inaugurated, such as the new development strategy for the agricultural sector, dubbed "Green Generation 2020-2030", and the national water and forestry strategy, dubbed "Moroccan Forests", which will facilitate the movement of goods and people between Europe and Africa. To achieve this ambition, Morocco will have to rise to a number of challenges and catch up by making significant progress in areas where there are major deficits, such as the quality of education, the participation of women and water conservation, which would act as a brake on development if they were not significantly improved. It will also be necessary to boldly seize every opportunity available to Morocco to accelerate its development, by betting on the future and setting objectives of excellence in strategic and transformational areas, divided between the following sectors:



- ✓ Phosphates; Renewable energy; Electrical infrastructure; Road infrastructure; Ports; Water desalination, and drinking-water recovery; Minerals and hydrocarbons; Marine fisheries; Integrated and sustainable agriculture; Urban rehabilitation; Social sector; Circular and digital economy; Handicrafts; and Tourism.

The 1st International Conference on Materials, Biomaterials, Environmental Sciences, & Technology will take place on **May 29-31, 2024**, at the conference center of USMBA, Fez, Morocco. This face-to-face conference is co-organized by Sidi Mohamed Ben Abdellah University, Euromed University, and National Center for Energy, Nuclear Sciences and Technology.

ICMBEST-2024 will bring together more than 150 international experts from academia, industry, government, and state agencies. Researchers and professionals will be able to share their knowledge and experience in the field of environmental sciences. Participants will have the opportunity to discuss the most recent innovations as well as initiate potential complementary cooperation and collaboration through international programs by putting international experts in direct contact.

The congress will focus on scientific research, industry, and sustainable development in Africa, and will address topics such as energy security, environmental sustainability, biosaline agriculture, water treatment and reuse, process control systems for the food industry, and phosphate-based materials for energy and environmental sustainability, among others.

The program will include keynote lectures, oral presentations, and poster sessions over the course of the three days of the conference.

On behalf of the Conference Organizing Committee, we are pleased to invite you to contribute to the success of this event!

EXCERPTS FROM SPEECHES DELIVERED BY HIS MAJESTY

« ...Although Morocco has accomplished tangible and globally recognized progress, our National Development Model still fails to satisfy the urgent demands and needs of its citizens, to reduce the gap between social classes and regions and to achieve social justice.

In this regard, we invite the Government, Parliament and all institutions and bodies concerned to reconsider, in their respective fields of expertise, our development model in order to align it with the changes our country is undergoing... »

Excerpt from the Speech delivered by His Majesty the King Mohammed VI at the opening of the first session of the second year of the 10th legislature – 13th October 2017

« ...Last year I called for reassessing the national development model and for preparing a new approach focused on the needs of citizens, and tailored to reduce existing gaps and inequalities, strengthening social and regional justice and in the light of changes in the national and international environment.

Therefore, we decided to task an ad hoc mission to collect, arrange and structure all contributions and to draw conclusions in the framework of a strategic and global integrated vision.

This commission shall submit to Our High Approval the said New Development Model, specifying set objectives, introducing the selected change drivers and the implementation mechanisms... ».

Excerpt from the address delivered by His Majesty the King Mohammed VI Opening of the first session of the 3rd year of the 10th legislature – 12th October 2018

« ... We expect this Commission to fulfil its mandate impartially and objectively by bringing to Our attention a realistic report on the current situation in our country, as painful and harsh as it may be. It shall further be sufficiently forthright and inventive so as to pave the way for tailored solutions.

Rather than opting for a break from the premises of the past, it shall rather set a new milestone in our development process.

It is above all paramount to be audacious, to take initiatives and to abide by a high degree of accountability, for the implementation of the judicious and relevant recommendations that shall be adopted, as hard and painful as they may be... ».

Excerpt from the speech delivered by His Majesty the King Mohammed VI on Throne Day, 31st July 2019

GALLERY



TOPICS

THEME 1	ENERGY TRANSITION • Economics and Policy of Energy Transition • Energy Conversion Solutions • Energy Management and Integration • Energy Demand and Efficiency • Materials for Environmental uses and Energy Saving and Storage
THEME 2	WATER RESOURCES, AND MANAGEMENT • Water Governance, and Management • Water Resources Preservation • Wastewater Treatments • Water Desalination • Water Sector Technology Advances
THEME 3	INNOVATIVE HYDROGEN SOLUTIONS • Green Hydrogen for Clean Energy • Greenhouse Gas Emissions Reduction • Novel materials & Sustainability • Green Hydrogen Production Techniques • Green Hydrogen Current and Future Economics
THEME 4	NATURAL MATERIALS AND VALORIZATION • Phosphates and derivatives, as biomaterials • Biomaterials for tissue engineering • Sustainable biocomposites for advanced applications • Nanomaterials utilization in energy storage applications • Fibre Reinforced polymers • Advanced Membrane Separation Materials for the Next Generation • Theoretical Calculations and Molecular Modeling of Nanomaterials
THEME 5	INNOVATIVE TECHNOLOGICAL APPLICATIONS OF NATURAL PRODUCTS • Climate Resilience Across Food Systems • Climate Smart Agriculture for Sustainable Improved Production • Digital Technology for Environment Protection • Innovative Phosphate Fertilizer Technologies • Recent Advances in Bioprinting for Medical Applications • valorization of medicinal and aromatic plants • Biomaterials for specific medical applications

GUIDELINES

PRESENTATION GUIDELINES

- ✓ All presentations are in English.
- ✓ Each presentation is eight (15) minutes long with three (5) minutes for Q/As. Arrive 10 minutes before the session start time to upload your power point presentation. Please, start and end your presentation on time and keep the time schedule.
- ✓ For poster presentations, the posters should be displayed one hour before the beginning of the poster session and any explanation required should be provided to session chairs and visitors.

ICMBEST- 2024

1st International Conference on Materials, Biomaterials, Environmental Sciences, & Technology

Under the Theme:

< Fostering synergy between science and industry: Steering the future towards integrated solutions for renewable energy, water and food security, in line with the new development model >

Conference Center, University of Sidi Mohamed Ben Abdellah, Fez, Morocco

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1st International Conference on Materials, Biomaterials, Environmental Sciences and Technology ICMBEST - 2024



Scientific Program

Wednesday, May 29, 2024

08:30 - 09:30	Welcome and registration of participants
	Moderator: Prof. Mohammed LACHKAR
	Introductory Presentation & Start of the Scientific Program of ICMBEST-24 General-Chairs ICMBEST-24
	• Prof. Mohammed LACHKAR, Morocco • Prof. Belkheir HAMMOUTI, Morocco • Prof. Hamid AMSIL, Morocco • Prof. Khalil AZZAOU, Morocco • Prof. Said EL KAZZOULI, Morocco • Prof. Rachid OUARSAL, Morocco • Prof. Said Omar Said Hassane, Consul General of Comoros
09:30 - 10:30	Official Opening Ceremony
	• Mr. Abdellatif MIRAOU (Minister of Higher Education, Scientific Research and Innovation). • Mr. Said ZNIBER (Wali of the Fez-Meknes Region). • Mr. Abdelouahed EL ANSARI (President of the Fez-Meknes Region).

	• Mr. Said Omar SAID HASSANE (Consul General of the Comoros Islands in the Kingdom of Morocco). • Mr. Mustapha IJJAALI (President of Sidi Mohamed Ben Abdellah University, Fez). • Mr. Mostapha BOUSMINA (President of Euromed University, Fez). • Mr. Hamid MARAH (Director of the National Center for Energy, Nuclear Sciences and Technology). • Mr. Abdelmalek ALBOUTIEN (Chamber of Handicraft of the Fez-Meknes Region). • Mr. Yassine TAZI (General Director of the Fez-Meknes Regional Investment Center). • Mr. Mohammed BELKASMI (Dean of the Faculty of Sciences Dhar El Mahraz, Fez). • Mr. Tarik SQALLI HOUSSAINI (Dean of the Faculty of Medicine, Pharmacy and Dentistry, Fez). • Mr. Taoufiq ACHIBAT (Dean of the Faculty of Sciences of Technology, Fez). • Mr. Abderrahim LAHRACH (Director of the National School of Applied Sciences, Fez). • Mr. Mohammed KARIM (Director of the Higher School of Technology, Oujda). • Mr. Hassan BOUKA (Dean of the Polydisciplinary Faculty, Taza). • Mr. Ali AHAITOUF (Director, Ecole Normale Supérieure, Fez). • Madame Dalila BOUSTA (Director, National Agency of Medicinal and Aromatic Plants). • Mr. Mohamed AZZAMI HASSANI (Director, Centre Régional des Métiers de l'Education et de la Formation, Fès-Meknès). • Mr. Mohammed LACHKAR, Chairman of the conference. • Mr. Belkheir HAMMOUTI, Chairman of the conference.
10:30 - 11:00	Partnership Agreement
	✓ Signature of a partnership agreement for the exchange of technical, and scientific, between the University of Sidi Mohamed Ben Abdellah, Fez, Morocco and National Center for Energy, Nuclear Sciences and Technology. ✓ Signature of a partnership agreement for the exchange of technical, scientific, between University of Sidi Mohamed Ben Abdellah, Fez, Morocco, and Multi Laboratory LC2A.
11:00 - 11:30	Handicrafts & Art Exhibition of Morocco & Comoros Poster Session / Coffee Break

	Opening presentation
Moderator: Prof. Belkheir HAMMOUTI	
11:30 – 12:15	Plenary Conference (1) Prof. Shehdeh JODEH, Palestine <i>Synthesis of novel nano-hydroxyapatite doped with silver as super catalysts for carbon monoxide oxidation</i>
Moderator: Prof. Said EL KAZZOULI	
12:15 – 13:00	Plenary Conference (2) Prof. Gennaro GENTILE, Italy <i>Sustainable gas barrier flexible packaging realized nanostructured coatings</i>
13:00 – 14:00	Parallel Sessions
13:00 – 14:00	Room 1
	Session 1: Energy Transition
	Moderator: Prof. El-Kaber HACHEM
	ID_C115: Asmae Ben Abdelhadi , Rachid Ouarsal, Morgane Poupon, Michal Dusek, Juan Pedro Andrés González, Luis Lezama, Brahim El Bali, Mohammed Lachkar, Abderrazzak Douhal. A novel layered Cu-based perovskite metal-organic framework with 1,2-diaminoethane cations: synthesis, crystal structure, thermal and magnetic properties.
	ID_C122: Fatima Zahra Znaki , Jihane Znaki, Souad Elkhatabi. Alternative lead-free perovskite solar cells: overcoming the toxicity barrier.
	ID_C14: Omar Berradi , Mohamed Berradi, Salah Eddine El Youbi, Abdesselam Eddaoukhi, Abderrahimel Bachiri, Bousalham Srhir, Mohamed Chellouli, M'hamed Touil. Theoretical studies of the correlation between the intrinsic parameters of tetraalkylammoniumhexachlorostannate-based compounds and their chemical energy storage activities.
	ID_C121: Jihane Znaki , Fatima Zahra Znaki, Souad Elkhatabi. Engineering materials unlocking solar potential: Perovskite-based solar cells.
	ID_EN27: Fz. Abbadi , A. Ait Hou, S. Jemjami. Thermochemical calculations to monitor the fate of heavy metals during solid waste incineration.
	Room 2
	Session 2: Water Resources and Management
	Moderator: Prof. Kamal MORADI
13:00 – 14:00	ID_EN30: C. Jamal , A. Makaoui, M Chierici, F.Z. Bouthir, A. Agouzouk, M. Idrissi, O. Ettahiri, S. Yousfi, M.L. Bouamrani. Seasonal variability of marine biogeochemical proprieties in the Northwest African upwelling system.
	ID_EN39: Hamza Benrahma , Hlima Bessi, Bouchra Elhaimeur, Mina Bouhallaoui. Assessing coastal waters: a multibiomarker approach to evaluate water quality along the moroccan coast

	ID_EN40: <u>Hind Mensour</u>, Amina El Rhalbi, Touria El Ghailassi, Zineb Faiz, Hasna Hamdane. Investigating the impact of bentonite clay addition on the quality of cemented forms for radioactive liquid organic waste. ID_EN42 : <u>Saber Rouai</u>, Jamil Toyir. Alfa lignin-based activated carbons for methyl orange removal.
	Room 3
13:00 – 14:00	Session 3: Innovative Hydrogen Solutions
	Moderator: Prof. Mustapha BENIKEN
	ID_EN20: <u>Hamid Amsil</u>, Nakach Farouk, Abdessamad Didi, Hamid Bounouira, Ilias Aarab, Abdelwahab Badague, Ahmed Moussaif, Khalid Laraki, Lalla Btissam Drissi, Rachid Ahl Lamara. Assessment of microplastic pollution in the marine regions of Morocco; phase I: table sea salt ID_EN16: Y. <u>Yammad</u>, Hindou Baddih. L'impact socio-économique de la sécurité hydrique au Maroc : Essai de modélisation économétrique. ID_CI30: <u>Hajar Lamouadene</u>, Majid El Kassaoui, Mourad El Yadari, Abdallah El Kenz, Abdelilah Benyoussef. Exploring predictive design for sustainable hydrogen production: advancements and future directions. ID_EN37: <u>Moussaoui Fatima</u>, El Ouadrhiri Faïçal, El Bourachdi Soukaina, Lahkimi Amal. Optimization of hydrochar production from biogenic waste using the response surface method: application to organic pollutants.
	Room 4
13:00 – 14:00	Session 4: Natural Materials and Valorization
	Moderator: Prof. Rachid SABBAHI
	ID_CI17: <u>Safaa Hidaoui</u>, Safae Er-rouan, Soumya El Abed, Saad Ibn Souda Koraichi, Brahim El Bali, Mohammed Lachkar. Crystal structure, vibrational spectra, Hirshfeld surface analysis and biological Activities of a new transition metal phosphate compound $[Mn(H_2O)_2(H_2PO_4)_2] \cdot 2H_2O$. ID_CO17: <u>Youssef Lemallam</u>, Sarra Sibous, Fatima El Hajri, Abdelhay El Amri, Haddou Anahmadi1, Driss El Mekkaoui, Houria Elaouani1, Nour El Hoda Mustaphi, Zakaria Benzekri, Ahmed Lebkiri, Abdelaziz Souizi And Said Boukhris. Evaluation of a potential green heterogeneous biocatalyst for synthesis of 3,4-dihydropyrimidin-2(1H)-one derivatives. ID_CO18: <u>Driss El Mekkaoui</u>, Fatima El Hajri, Haddou Anahmadi, Youssef Lemallam, Houria Elaouani, Sarra Sibous, Nour El Hoda Mustaphi, Zakaria Benzekri, Amina Hassikou, Abdelaziz Souizi, Said Boukhris. Investigation of the catalytic potential of aluminium phosphate $AlPO_4$ in the synthesis of pyrano[2,3-c]pyrazole derivatives under sustainable conditions. ID_EN22: <u>Najwa Bellemjid</u>, Ali Assifaoui, Mohammed El Mzibri, Abdelghani Iddar. Development of a new system for fungicide slow-release delivery using biopolymers.
	Room 5
	Session 5: Innovative Technological Applications of Natural Products
	Moderator: Prof. Abdessamad DIDI
13:00 – 14:00	ID_CI20: <u>Fadoua Louglali</u>, Abdeslam Jaafari, Iman Meftah, Souad Lekchiri, Abdellatif Essoumhi, Ahmed Liba, Hafida Zahir, Mostafa El Louali, Hassan Latrache. Chemical analysis of stones formed in the human gallbladder. ID_CO8: <u>Mourad Aloui</u>, Menana Elhalaoui. Modelisation QSAR, docking moléculaire, dynamique moléculaire et prédiction ADMET de dérivés de pyrrolopyrimidine en tant que nouveaux inhibiteurs de la tyrosine kinase de Bruton (BTK).

	ID_CO20: <u>Basma Chiboub</u>, Abdesselam Maatougui, Kaoutar Aboukhalid, Ikram Saber, Mourad Baghour. Phytochemical analyses and controlled germination of <i>Capparis spinosa</i> L from Morocco. ID_CO21: <u>Reda El Boukhari</u>, Ahmed Fatimi. Recent advances in repellents based on the Lamiaceae family's plants.
14:00 - 15:00	Lunch
Moderator: Prof. Anouar ALAMI	
15:00 – 15:45	Plenary Conference (3) Prof. Said EL KAZZOULI, Morocco <i>Ethacrynic acid as a scaffold for anticancer and anti-SARS-CoV2 drug design</i>
Moderator: Prof. Solhe F. ALSHAHATEET	
15:45 – 16:30	Plenary Conference (4) Prof. Maria Cristina COCCA, Italy <i>Development of analytical and mitigation approaches to identify and mitigate microplastics</i>
Moderator: Prof. Ghali AL HOUARI	
16:30 – 17:15	Plenary Conference (5) Prof. Solhe F. ALSHAHATEET, Jordan <i>Zinc oxide nanoparticles: bio-synthesis, characterization, and tetracycline adsorption behaviour</i>
17:15 – 17:45	Handicrafts & Art Exhibition of Morocco & Comoros Poster Session / Coffee Break
	Room 1
17:45 – 19:00	Session 1: Energy Transition Moderator : Prof. Hanane TOUNSADI ID_EN15 : <u>Abdessamad Didi</u>, Hamid Bounouira, Abir Adnane, El Khamsi Chahd Soumaia, Hamid Amsil, Badague Abdelwahab, Ilias Aarab, El Mahjoub Chakir, Khalid Laraki. Determination of activity of uranium-238 descendants and assessment of radiological risk in soil samples using gamma spectrometry. ID_CI42: <u>Manar Ennaouri</u>, El-Kaber Hachem. Computational investigation of gold nanoparticle-loaded blood flow under magnetic field in aorta for biomedical application. ID_CI5: <u>F. El Aychaoui</u>, Y. Ababou, A. El Basset. Effect of lithium doping on the structural and dielectric properties of BaTi_{1-x}Li_xO_{3-δ} ceramics elaborated by the sol-gel method. ID_CI38: <u>Zineb Ariba</u>, Mohammed Zerrouk, Safaa Hidaoui, Smaiel Herradi, Rachid Ouarsal, Mohammed Lachkar. Synthesis, X-ray crystal structure, catalytic activity and Hirshfeld surface analysis of the new hybrid phosphite (C₂H₁₀N₂)[Co_{1.5}(H₂PO₃)(HPO₃)₂.H₂O].

	ID_C140: <u>Nouhaila El Amin</u>, K. Fejfarova, M. Dusek, B. El Bali, M. Lachkar. Optimization of a synthesis method for cyclam-based coordination complex and its characterizations studies. ID_C135: <u>Yousra Taoudi</u>, Hicham Oudghiri Hassani, and Mohammed Lachkar. Synthesis, characterization, and application of molybdenum oxide nanomaterials.
	Room 2
	Session 2: Water Resources, and Management
	Moderator: Prof. Souad RAKASS
	ID_CO10: <u>H. Zgueni</u>, M. El Mesky, S. Elhamidi, Y. Youssefi, A. Oubair, M. Znini, E. Mabrouk and D. Chebabe. Prediction by DFT, synthesis of the new compound 3,3-bis(4-benzyloxyphenyl)benzofuranone and evaluation of its anticorrosive properties for a mild steel in an aggressive acidic medium HCl 1M. ID_CO15: <u>Omar Ou-Ani</u>, Youssef Youssefi, Lahcen Oucheikh, Abdeslam Ansari, Mohamed Znini, Driss Chebabe, Mabrouk Elhoussine, Ahmad Oubair. Experimental and quantum chemical studies of <i>Teucrium luteum subsp. Flavovirens</i> Essential Oil's ability to prevent mild steel from corrosion in 1.00 M HCl. ID_CO16: <u>Abdeljalil Hamdi</u>, M'hamed Ahari, Abdelmalik El Aatiaoui. Contribution to the development of the synthesis base Schiff based imidazo[1,2-a]pyridine. Electrochemical and functional theory (DFT) application. ID_CO19: <u>Nazih Asoufar</u>, Hicham Zgueni, Mohammed El Mesky, Mohamed Tanghourte, Nazih Ouassou, Mohamed Jabha, Said Achamlale, Nabil Amri, Ahmed Oubair, Mohamed Znini, Driss Chebabe, Elhoussine Mabrouk. N-methyl-2-pyrrolidone derivative as novel and potent corrosion inhibition agents for iron in acidic media: Synthesis, DFT simulation, natural bond orbital methods. ID_C19: <u>Mouna Azogagh</u>, Rachid Hsissou, Abdelfattah Hmada, Nadia Dkhireche, Salleh Eddine Hegazi, Mohamed Rafik, Experimental and computational insights into destruction protection of mild steel by new difunctional epoxy polymer.
17:45 – 19:00	Room 3
	Session 3: Innovative Hydrogen Solutions
	Moderator: Prof. Hicham OUDGHIRI HASSANI
	ID_EN26: <u>Ouzrour Zineb</u>, Moumen El Mehdi, Tausif Altamash, El Hankari Samir, Jacquimen Johan. Efficient synthesis of UiO-66 from ZrOCl₂.8H₂O: enhancing CO₂ adsorption performance. ID_EN32: <u>Mouhssine Benhadj</u>, Imad Alouiz, Mohamed Yassine Amarouch, Mohamed Sennoune, Driss Mazouzi. Lignocellulosic materials composition: impact on adsorption of organic pollutants. ID_EN43: <u>Belkodia Kaltoum</u>, Edaala Mohammed-Amine, El Mersly Lekbira, El Mouchtari El Mountassir, Hafid Achtak, Aloui Tahiri Abdelaziz, Rafqah Salah. Treatment of cheese wastewater by combined coagulation-flocculation and heterogenous photocatalysis using a new synthesized TiO₂ anatase: Treatment efficiency and phytotoxicity evaluation. ID_EN47: <u>Abdelfettah Benchrif</u>, Mounia Tahri, Bouchra Oujidi, Hamid Bounouira, Fatiha Zahry. Spatio-temporal variations and source apportionment of ambient PM10 and PM2.5 composition in four Moroccan cities. ID_EN45: <u>A. Karbal</u>, D. Bougmoum, M. Faraji, R. Mghaiouini, Mly.Y. Elhafidi, A. El Bouari. Physical seawater desalination using a combination of MHD-EHD process coupled with centrifugation and crystallisation mechanisms as a sustainable approach to ZL.

Room 4	
Session 4: Natural Materials and Valorization	
Moderator: Prof. Idriss EL BAKALI	
ID_EN44: <u>Rana Choukri</u>, Mohamed Faize, Manuel Rodríguez-Concepción, Ali Skalli, Mourad Baghour, Effect of planting density on growth and abiotic stress tolerance of two tomato varieties. ID_EN41: <u>Soukaina El Bourachdi</u>, Fatima Moussaoui, Faïçal El Ouadrhiri, Abderrazzak Adachi, Mohamed Jghaoui, Amal Lahkimi. Ecological study combined with RSM process optimization for the removal of organic pollutant (Congo Red) from aqueous solution using chitosan beads adsorption. ID_CO1: <u>A. Bouabbadi</u>, M. Rbaa, H. El Harmouchi, M. Harcharras. Electrochemical and thermodynamic studies of certain compounds derived from 8-hydroxyquinon as inhibitors of acid corrosion in mild steel. ID_CO12: <u>Hajar Benrzeil</u>, Bouchra. Tazi, Yannick Guari, Farhate Guenoun. Efficient direct asymmetric aldol reactions in water using C2-symmetric chiral diamide as organocatalysts. ID_CO13: <u>Iliasse Aarab</u>, Hamid Bounouira Abedessamad Didi, Hamid Amsil, Abdelwahab Badague, Youssefmaazouzi & El Mahjoub Chakir, Multi-Element Analysis of Moroccan Cannabis seeds using K0-INAA and ICP-MS: Risk Assessment of Toxic Elements.	
Room 5	
Session 5: Innovative Technological Applications of Natural Products	
Moderator: Prof. Asmae BOUAYAD	
ID_CO24: <u>A. Lahmer</u>, M. Oukhouia, A. Houiat, S. El Mernissi, A. Belmahjoub, A. Remmal. The 1,8-cineole contribution in boosting the effectiveness of Co-amoxiclav antibiotic. ID_CO29: <u>Rachid Sabbahi</u>. The efficacy of pheromone traps in controlling the tomato leafminer <i>Tuta absoluta</i>. ID_EN6: <u>Mourad Bendada</u>, Abderrahmane Hadini, Ouahid El Asri, Abderrahmane Nazih, Youness Taarabt, Karim Andich, Khalid El Bekkaye, Khalid Chaabane. Transition to sustainable cropping systems: impact on diversity of macroinvertebrate communities in association with edaphic properties of soil from province of Berkane, North Est region of Morocco. ID_EN17: <u>Edaala Mohammed-Amine</u>, Belkodia Kaltoum, El-Gheryby Youssef, El Mouchtari El Mountassir, Alaoui Tahiri Abdelaziz, Wong-Wah-Chung Pascal, Rafqah Salah. Development and characterization of novel composite phosphate based for efficient photocatalytic degradation a high concentration of pharmaceutical pollutants in water. ID_EN51: <u>Tarik Moubchir</u>, Sanae Rezouki, Aimad Allali, Nouredine Eloutassi, Ilham Zahir. Environmental issues by heavy metal pollution from Abandoned Mine Land in Morocco and their solutions.	
Thursday, May 30, 2024	
Moderator: Prof. Shehdeh JODEH	
09:00 – 09:45	Plenary Conference (6) Prof. Said GMOUH, Morocco Mastering Material Functionalization: Techniques, Applications, and Future Perspectives

Moderator: Prof. AMSIL Hamid	
09:45 – 10:30	Plenary Conference (7) Dr. Ing. Khalid LARAKI, Morocco <i>Le rôle du CNESTEN dans la promotion des techniques nucléaires pour un développement durable</i>
Moderator: Prof. Stéphane MOUNIER	
10:30- 11:15	Plenary Conference (8) Prof. Hassan HANNACHE, Morocco <i>Development of high-performance phosphate glass fibers and their applications in agrotexiles and composite materials</i>
11:15 - 12:30	Handicrafts & Art Exhibition of Morocco & Comoros Poster Session / Coffee Break
12:30 - 13:30	Parallel Sessions
	Room 1
	Session 1: Energy Transition
	Moderator: Prof. Mohammed TACHIHANTE
	ID_CI39: Hajar Fatihi , Rachid Ammari, Abdeltif El-Habib, Hajar Ghannam, Mustapha Diani, Abdesamad Aouni, Structural, morphological and optical characterization of Ni doped CeO₂ thin films grown by spray pyrolysis method. ID_EN12: H. Bounouira , L'analyse par activation neutronique au Centre d'Etude Nucléaire de la Maamoura : Un outil au service de l'environnement et de la géochimie. ID_CI18: Imad Alouiz , Mohamed Aqil, Mouad Dahbi, Mohamed Yassine Amarouch, Driss Mazouzi, Synthesis and characterization of activated charcoal derived from olive pomace as anodes for Li-ion batteries. ID_CI41: Fatima El Amin , Mohamed Zerrouk, Zineb Ariba, Rachid Ouarsal, Michal Dusek, Brahim El Bali, Mohammed Lachkar. Synthesis, structural characterization and thermodynamic behaviour of a new magnesium phosphite [Mg(H₂O)₆][Na₂(H₂O)₄](HPO₃)₂.
	Room 2
12:30 - 13:30	Session 2: Water Resources and Management
	Moderator: Prof. Rachid OUARSAL
	ID_CI7: S. Herradi , M. Zerrouk, A. Bouayad, R. Ouarsal, M. Khaldi, B. El Bali B, M. Lachkar. Removal of methylene blue with a highly effective hydroxyapatite-silica nanocomposite. ID_EN60: Hafssa Atlas , Smail Imame, Mohamed Sadoq, Khaoula Loukili, Mohamed Karim El Bakkali, Mohammed Legsaier, Ilham Kirm, Fatima Boukhli. Biochar derived from seaweed: a sustainable solution for methylene blue dye adsorption.

	ID_EN35: Mohammed Zerrouk, Rachid Ouarsal, Mohammed Lachkar. Synthesis, crystal structure, and characterization of a novel phosphite [Na₂Zn(HPO₃)₂.3H₂O] for removal of methylene blue dye. ID_EN9: Abdesselam Eddaoukhi, Mohamed Berradi, Omar Berradi, Youssef El Rhayam, Abdessamad Eddaoukhi, Ahmed El Yacoubi, Hakima Nasali, Abderrahim El Bachiri. Statistical study of the effect of olive mill wastewater on the accumulation of heavy metals in eggplant organs using the PCA method. ID_EN10: Mohamed Allaoui, Otemane Allaoui, Said Ibn Ahmed. Statistical approach for the valorization of sea shells in the adsorption of metals: case of Nickel.
	Room 3
12:30 - 13:30	Session 3: Innovative Hydrogen Solutions
	Moderator: Prof. Mohcine SFAIRA ID_EN49: Akaya Hicham, Lamnini Soukaina, Sehaoui Houssine, El Achaby Mounir, Jacquimen Johan. Novel phosphorylated and amine impregnated cellulose paper films for CO₂ capture from air. ID_EN52: Hammoudan Imad, Chafi Mohamed, Tighadouini Said. Theoretical study for the pyrazole-hydrazone as a robust adsorbent that eliminates Pb(II). ID_EN4: H. Bouhaba, Z. Irzi. Assessing flood vulnerability in Oujda: Mapping urban flood risk and mitigation strategies. ID_EN13: M. E. Ahmed, H. Bounouira, M. A. Abbo, H. Amsil, S. Sanaa, A. Didi, I. Aarab, A. Badague. Concentrations of major and trace elements in soil from mining area: implications for environmental impact assessment. ID_EN53: Mustapha Zghaid, Amine Arfaoui, Mounia Tahri, Mohamed Derdaki, Malika Elouardi, Ismail Ameran, Ali Quyo and Abdelfettah Benchrif. Assessment of seasonal, monthly and daily variations in ambient air quality in the city of Kénitra (Morocco).
	Room 4
12:30 - 13:30	Session 4: Natural Materials and Valorization
	Moderator: Prof. Mohammed BENZAKOUR ID_CI50: Imane Adouar, Smaiel Herradi, Souad Rakib, Brahim El Bali, Mohammed Lachkar. Development and Analysis of new nanocomposite-based Hydroxyapatite for Agricultural Use. ID_CI3: Asmae Bouayad, Mohammed Zerrouk, Safaa Hidaoui, Rachid Ouarsal, and Mohammed Lachkar. Synthesis, X-ray crystal structure, catalytic activity and Hirshfeld surface analysis of the new hybrid phosphite (C₂H₁₀N₂)[Zn_{1.5}(H₂PO₃)(HPO₃)₂.H₂O]. ID_CI8: Y. Khadiri, C. Volkringer, A. Anouar, S. Royer, A. El Kadib, J. Dhainaut, T. Loiseau. Transition metal-based MOF embedded with graphene oxide in biopolymer matrix: a novel strategy for scaling up industrial applications of microporous materials. ID_CI36: Karima Safi, Asmae Ben Abdelhadi, Mohamed Zerrouk, Rachid Ouarsal, Michal Dusek, Brahim El Bali, Mohammed Lachkar. New hybrid organic-inorganic phosphite (N₂H₅)₂Co(H₂PO₃)₄.2H₂O: Synthesis, structural characterization, physico-chemical application and catalytic activity. ID_CO26: Yousra Bouramdane, Mustafa Haddad, Saadia Aît Lyazidi, H. Oudghiri Hassani, Abdellatif Boukir. Degradation of wood surfaces under natural weathering conditions: impact on lignin and cellulose biopolymers structures.

	Room 5
12:30 - 13:30	Session 5: Innovative Technological Applications
	Moderator: Prof. Adil BENJELLOUN TOUIMI ID_CO48: <u>Hajar El Ouarti</u>, Oussama Chedadi, Abdelilah Toughzaoui, Abderrafie Drajou, Abdeslam Dakhama, Kamal El Ourdani, Kamal Moradi, Abdelkrim Ouammou. Exploration of carbamate derivatives: 3D-QSAR modeling approach for potential inhibition of acetylcholinesterase in Alzheimer's disease. ID_CO49: <u>Abderrafie Drajou</u>, Kamal Moradi, Abdelkrim Ouammou, Oussama Chedadi, Abdelilah Toughzaoui, Hajar El Ouarti, Kamal Laouardani, Abdeslam Dakhama. Tetrazanbigen derivatives as partial agonists of peroxisome proliferator-activated receptor gamma (PPARγ): <i>in silico</i> investigations through 3D-QSAR, molecular docking, ADMET prediction. ID_CO7: <u>L. Naanaai</u>, A. El Aissouq, M. Bouachrine, H. Zaitan and F. Khalil. <i>In silico</i> discovery of indole-pyridine carbonitriles derivatives as potential anti-diabetes agents. ID_CO52: <u>Abdeslam Dakhama</u>, Oussama Chedadi, Abdelilah Toughzaoui, Hajar El Ouarti, Abderrafie Derajou, Kamal Laourdani Abdelkrim Ouammou Kamal Moradi. 3D-QSAR studies of an ERK5 kinase domain inhibitors. ID_CO45: Mohamed El Mesky, Hicham Zgueni, <u>Nabil Amri</u>, Mohamed Jabha, Mohamed Tanghourte, Nazih Ouassou, Nazih Asoufar, M'barek Azdouz, Rachid Ouarsal, Mohammed Lachkar, El Houssine Mabrouk. Synthesis, characterization, anti-corrosion behavior and theoretical study of the new organic compound: 8-(4-methylbenzenesulfonate) quinolone.
13:30 - 14:30	Lunch
	Moderator: Prof. Mohammed LACHKAR
14:30 – 15:15	Plenary Conference (9) Prof. Abdelkrim EL KADIB, Morocco <i>A travel through functional bio-hybrid materials: from chemical design to applications</i>
	Moderator: Prof. Abdelkarim OUAMMOU
15:15 – 16:00	Plenary Conference (10) Prof. Stéphane MOUNIER, France <i>La spectroscopie de fluorescence en environnement : technique et application</i>
16:45 – 17:15	Poster Session / Coffee Break
17:15 – 18:45	Parallel Sessions
	Room 1
17:15 – 18:45	Session 1: Energy Transition
	Moderator: Prof. Hamid BOUNOUIRA
	ID_EN18: <u>T. El Ghali</u> , Raibi F, Qurtobi M, Benmansour M, Laraki K, Marah H, Isotopic and geochemical assessment of thermal waters by hydro-isotopic geochemistry in the Middle Atlas region of the Sebou basin, Morocco.

	ID_EN36: <u>Soumaia El Khamsi Chahd</u>, Abdessamad Didi, Hamid Bounouira, Abir Adnane, Hamid Amsil, Badague Abdelwahab, Ilias Aarab, El Mahjoub Chakir. Soil Gamma Spectrometry: Study of thorium-232 and cesium-137 distribution in an agricultural region. ID_EN50: <u>Lahcen El Amri</u>, Abdelouahed Chetaine, Hamid Amsil, Brahim El Mokhtari, Hamid Bounouira, Abdessamad Didi, Abdelfettah Benchrif, Khalid Laraki. New open-source software for gamma spectra analysis. ID_EN48: <u>Radouan Saadi</u>, Mohamed Qurtobi, Miriam Bellarbi, Fatima Raibi, Ismail Hilal, Moulay Driss Hasnaoui. A multi-isotopes approach nitrate ($\delta^{15}\text{N}_{\text{NO}_3}$, $\delta^{18}\text{O}_{\text{NO}_3}$) and sulfate ($\delta^{34}\text{S}_{\text{SO}_4}$, $\delta^{18}\text{O}_{\text{SO}_4}$): efficient method for tracking sources of current and legacy groundwater pollution. ID_CI23: <u>Y. Meknassi</u>, H. Ait Benaissa, M. Houmimi, A. Ziat, N. Moujibi, H. Zaghar. 4D printing with anisotropic process parameters. ID_CI34: <u>A. Fakkahi</u>, H. Azmi, M. Jaouane. A. Ed-Dahmouny, A. Sali, R. Arraoui, K. El-Bakkari. Nonlinear optical response of multilayered spherical quantum dots via finite element modeling.
	Room 2
17:15 – 18:45	Session 2: Water Resources and Management
	Moderator: Prof. Fatima BOUKHLIFI
	ID_EN55: <u>A. Errich</u>, S. El Hajjaji, B. M. Fekhaoui, Hammout, K. Azzaoui, R. Sabbahi. Deteriorating water quality in Sakia El Hamra River: assessing the ecological impact of uncoordinated wastewater infrastructure. ID_CO11: <u>H. Elmsellem</u>, A. Aouniti, B. Hafez, K. Azzaoui, Y. Elouadi, B. Hammouti. A comprehensive approach to inhibiting mild steel against 1.0 M HCl corrosive media for Theobromine (P1) and Caffeine (P2): From experimental studies to computational simulations. ID_CO59: <u>L. Chahir</u>, N. Timoudan, A. Barrahi, F. Benhiba, M. El Faydy, N. Abad, H. Zarrok, D. Benmessaoud Left, M. Zertoubi, M. Allali, Y. Ramli, A. Zarrouk. Exploring a Novel Organic Compound as a Corrosion Inhibitor for Carbon Steel in Hydrochloric Acid: An Experimental and Theoretical Investigation. ID_CO63: <u>Fatima Zahra Hafid</u>, Abdeslam El Amri, Jaber Hassna, Driss Hmouni, <i>Eruca vesicariae</i> essential oil as ecofriendly corrosion inhibitor for mild steel in 1.0 M HCl environment. ID_EN58: <u>Mohamed Sadoq</u>, Smail Imane, Hafssa Atlas, Mohamed Karim El Bakkali1, Khaoula Loukili, Mohammed Legsaier, Mbarka Ouchabi, Kirm Ilham, Fatima Boukhelifi. Elimination of dye from synthetic wastewater by adsorption on naturel polysaccharide: Kinetic, isotherm, thermodynamic studies and mechanism analysis. ID_EN59: <u>Smail Imane</u>, Hafssa Atlas, Mohamed Sadoq, Mohammed Legsaier, Khaoula Loukili, Mohamed Karim El Bakkali, Ilham Kirm, Fatima Boukhelifi. Valorization of biomass waste for the elimination of organic pollutants in wastewater.
	Room 3
17:15 – 18:45	Session 3: Innovative Hydrogen Solutions
	Moderator: Prof. Mohamed EL YAZIDI
	ID_EN14: <u>Soufya El Basraoui</u>, Hamid Bounouira, Nadia Ziad, Mohammed Sadikki, Hamid Amsil, Abdessamad Didi, Ilias Aarab and Abdelwahab Badague. Analyse géochimique des roches granitiques de la région de Ment. ID_EN19: <u>S. Said</u>, H. Bounouira, H. Amsil, A. Didi, I. Aarab, A. Badague, A. Moussaif And B. Benazzouz. Analyse élémentaire des éléments essentiels et toxiques dans des légumes Marocains biologiques et conventionnels à l'aide de la méthode de standardisation k0 d'analyse par activation neutronique. ID_EN54: <u>Derdaki Mohamed</u>, Bakkali Mohamed, Ait Ouaziz Nabil. Mustapha Zghaid. Elouardi Malika. Arfaoui Amine. Ali Qyou. Médiation multiple en série de la concentration

	d'hémoglobine et du diabète gestationnel sur la relation entre l'IMC avant la grossesse et la macrosomie chez les femmes enceintes à Kénitra, Maroc. ID_CO62: <u>S. Bourht</u>, M. Janati, A. Kammouni, M. Diouri, F. Oudrhiri Hassani, A. Laachachi. Determination of cellulose content in date seeds by chemical methods. ID_EN57: <u>Khaoula Loukili</u>, Mohammed Legsaier, Mohamed Karim El Bakkali, Smail Imame, Hafssa Atlas, Mohamed Sadoq, Ilham Kirm, Fatima Boukhli. Acorn waste as a novel adsorbent for cationic dye removal from aquatic ecosystem.
	Room 4
17:15 – 18:45	Session 4: Biomaterials and Applications
	Moderator: Prof. El Houssine MABROUK
	ID_CI11: <u>Khadija Bougrine</u>, Mohamed Salahdine Elyoubi, Mohamed Abid, M'hamed Taibi. Synthesis and investigation of the effect of B₂O₃ on the properties of Li₂O-ZnO-B₂O₃-P₂O₅ Glass system. ID_CI37: <u>Chaimae Ait Salem</u>, Kamal Moradi, Azzaoui Khalil, Hamid Ait Said, Mejdoubi Elmiloud. Synthesis and Physicochemical Characterization of Calcium Phosphate-Polymer Composites with Enhanced Removal Capacity toward Lead (II). ID_CI47: <u>M. Aaddouz</u>, K. Azzaoui, R. Sabbahi, B. Hammouti, M. Siaj, E. Mejdoubi, Cheminformatics-based design and synthesis of hydroxyapatite/collagen nanocomposites for biomedical applications. ID_CI49: <u>Oluwatosin David Abodunrin</u>, Khalil El Mabrouk, Meriame Bricha. Harnessing Borate for Enhanced Acellular Bioactivity in Tissue Engineering: Insights from Borosilicate Glass. ID_CI1: <u>K. Azzaoui</u>, R. Sabbahi, B. Hammouti, K. Moradi, A. Titi, A. Berisha, E. Mejdoubi, Synthesis of hydroxyapatite in presence of polyethylene glycol 6000 composite by novel dissolution/precipitation method: optimization of the adsorption process using a factorial design: DFT and molecular dynamic. ID_CI46: <u>Mohammed El Khalfaouy</u>, Mohammed Belghazdis, El-Kaber Hachem. Conception and characterization of innovative Ghassoul/natural fiber biocomposites: Effect of fiber content on structural properties.
	Room 5
17:15 – 18:45	Session 5: Organic Chemistry and Applications
	Moderator: Prof. Mustapha AIT EL HAD
	ID_CO43: <u>Rachid Bouzammit</u>, Youssra Kanzouai, Mohammed Chalkha, Asmae Nakkabi, Mohamed El Yazidi, Ghali Al Houari. Synthèse d'une nouvelle génération d'isoxazoles hybrides et étude de leur activité antibactérienne. ID_CO2: <u>Serrar H</u>, Marmouzi I, El Jemli M, Asmaa Qlihaa, Boukhris S., My El Abbes F., Hassikou, A., Souizi, A. Synthesis of New 1,3,4-thiadiazine heterocyclic derivatives and evaluation of their antidiabetic potential. ID_CO33: <u>Abderrahim Titi</u>, Azzaoui Khalil, Rachid Touzani, Anna Moliterni. Ultrasonic Clusterization Process to Prepare [(NNCO)₆Co₄Cl₂] as a Novel Double-Open-Co₄O₆ Cubane Cluster: SXRD Interactions, DFT, physicochemical, thermal behaviors, and biomimicking of catecholase activity. ID_CO28: <u>F. Nouayti</u>, Y. Rhazi, A. Metouekel, E. Essassi, M. El Yazidi, M. Ansar, F. Lazrak. Novel triazole-based arylacetamide derivatives as antibacterial agents: synthesis and biological assessment. ID_CO22: <u>Aziz Arzine</u>, Yassine Rhazi, Najoua Barghady, Mohammed Chalkha, Asmae. Nakkabi, Mohamed Bakhouch, Mohamed El Yazidi. Synthèse, caractérisation structurale et évaluation biologique de nouveaux isoxazoles-ester fonctionnalisés. ID_CO25: <u>Youssra Kanzouai</u>, Rachid Bouzammit, Mohamed Akhazzane, Ghali Al Houari, Mohamed El Yazidi. Nouvelle Série d'hybrides chromone-isoxazole liée par un amide "Linker" : processus d'élaboration, synthèse, caractérisation et études biologiques.

	ID_CO34. Yassine Rhazi , Aziz Arzine, Mohammed El Mesky, Fatima Nouayti, Najoua Barghady, Mohammed Chalkha, Asmae Nakkabi, Mohamed Bakhouch, Elhoussine Mabrouk, Mohamed El Yazidi. Synthèse et évaluation biologique des noyaux hétérocycliques à cinq chaînons et l'évaluation de leur activité antimicrobienne.
Friday, May 31, 2024	
Moderator: Prof. Shehdeh JODEH	
09:00 – 09:45	Plenary Conference (11) Prof. Mohammed LACHKAR, Morocco <i>Inorganic-organic hybrid materials: case of phosphates materials</i>
Moderator: Prof. Hicham OUDGHIRI HASSANI	
09:45 – 10:30	Plenary Conference (12) Prof. Taibi BENHADDA, Morocco <i>Un défi éternel : Comment lutter contre le Covid 19 au plus bas prix ?</i>
Moderator: Prof. El Houssine MABROUK	
10:30 – 11:15	Plenary Conference (13) Prof. Said Omar SAID HASSANE, Iles Comores <i>Effet antioxydant de quelques plantes aromatiques et médicinales des Comores</i>
11:15-11:45	Poster Session / Coffee Break
Moderator: Prof. Souad RAKASS	
11:45 – 12:30	Plenary Conference (14) Prof. Manuel ALGARRA, Spain Carbon Dots Nanoparticles as a New Gate for Sensing
Moderator: Prof. Khalil AZAOU	
12:30 – 13:00	Plenary Conference (15) Prof. Mostapha EL JAI & Prof. Iatimad AKHRIF, Morocco Clay-based printing for 3DCP and artisanal pottery integration
Moderator: Prof. Rachid OUARSAL	
12:30 – 13:00	Plenary Conference (16) Prof. Mohammed KHALDI, Morocco <i>The Secrets of Tanning in the City of Fez</i>

13:00-14:30	Friday Prayer
14: 30-15:30	Lunch
	Parallel Sessions
	Room 1
15:30 – 16:30	Session 1: Energy Transition
	Moderator : Prof. Nabil AMRI
	ID_CO14: <u>Mohamed Amine Benzaouia</u>, Ghanem Hamdoun, Nadia Katir, Abdelkrim El Kadib. Phosphorylated lignin as sustainable flame-retardant nanofillers for micrometer-thick polyvinylalcohol films. ID_CI25: <u>Yachi Mouhcine</u>, Physical realization of quantum Fourier transform using three spins with protecting quantum correlations by circulant Hamiltonians. ID_CI19: <u>Mohamed Houmimi</u>, Hamid Zaghar, Nabil Moujibi, Hamza Ait Benaissa, Yassin Meknassi. Study of stress distribution in the various interfaces present in the 3D printing microelectronic systems: applies to boxes produced by additive manufacturing. ID_CO53: <u>Fatima Ezzahra Dnaya</u>, Driss Soubane, Yassin Laaziz. Silicon for harvesting light: structural, optical and electronic properties of Si nanostructures. ID_CI48: <u>Khadija Abdouni</u>, Mostafa Benboukous, Asmaa Drighil, Mohamed Bour, Hicham Bahri. Maximum power point tracking technique based on ANN and PI for photovoltaic system.
	Room 2
15:30 – 16:30	Session 2: Innovative Technological Applications of Natural Products
	Moderator: Prof. Smaiel HERRARDI
	ID_CO21: <u>Reda El Boukhari</u>, Ahmed Fatimi. Recent advances in repellents based on the Lamiaceae family's plants. ID_CO44: <u>Maryem Aichouch</u>, Mohammed Khaldi, Mohamed Bouktaib. Eco-extraction of polyphenols and study of antioxidant activity of carob seed peel. ID_CO37: <u>Imad Ed-Dahmani</u>, Hanane Touijer, Yassine El Atki, Mustapha Taleb, Abdelfattah Abdellaoui. Assessment of <i>Ferula communis</i> L. polyphenolic content, antioxidant and antimicrobial activities, and toxicity study. ID_CO23: <u>Habiba Houti</u>, Abdellatif Boukir. Biyclic monoterpene contribution on sesquiterpene lactones formation and their antimicrobial properties. ID_CO32: <u>Meryeme Azagouagh</u>, Amina Amine, Bouchra Tazi. Study of the chemical composition and evaluation of the antioxidant activity of the essential oils of two aromatic and medicinal plants: <i>Salvia officinalis</i> L and <i>Origanum majorana</i>.
	Room 3
15:30 – 16:30	Session 3: Innovative Hydrogen Solutions
	Moderator: Prof. Abderrahim TITI

	ID_C151: <u>Meryem Idboumlik</u>, Safae Erraouan, Michal Dusek, Vaclav Eigner, Brahim El Bali, Mohammed Lachkar. Wet chemistry synthesis, characterization and catalytic and biological activities of $(H_2en)_3\{V_{10}O_{28}\}.6H_2O$. An improved refinement. ID_EN4: <u>H. Bouhaba</u>, Z. Irzi. Assessing flood vulnerability in Oujda: Mapping urban flood risk and mitigation strategies. ID_C145: <u>Abdlouhab Hamman</u>, El-Kaber Hachem. Enhancing solar panel yield: a comprehensive review of artificial intelligence applications. ID_CO14: <u>Mohamed Amine Benzaouia</u>, Ghanem Hamdoun, Nadia Katir, Abdelkrim El Kadib. Phosphorylated lignin as sustainable flame-retardant nanofillers for micrometer-thick polyvinylalcohol films. ID_EN11: <u>Mohamed El Farkhani</u>, Mohamed Elmiz, Mohammed Koudad, Said Dadou, Yassine Elmiz, Nouredine Benchat. Elimination du cuivre d'une solution aqueuse par adsorption sur bentonite modifiée par biopolymère. ID_EN63: <u>M. Beniken</u>, O. Jounaidi. On the use of the Langmuir adsorption isotherm in corrosion inhibition. ID_C127: <u>Moha Afrokh</u>, Mohamed Tabyaoui, Saida Tahrouch, Abdelkader Zarrouk. Valorisation de l'extrait de <i>Cystoseira gibraltaria</i> en tant qu'inhibiteur de corrosion écologiquement durable de l'acier au carbone en milieu HCl 1M.
	Room 4
15:30 – 16:30	Session 4: Natural Materials and Valorization
	Moderator: Prof. Issam JILAL
	ID_CO36: <u>Abdelmoughite Ouakil</u>, Nadya Lachkar, Imane Lakkab, Soumaya El Ismaili, Amal Maurady, Abdelmonaim Homrani Bakali, Brahim El Bali, And Mohammed Lachkar. Flavone glycoside isolated from aerial parts of <i>Stachys mouretii</i>. ID_CO54: <u>Lahcen Oucheikh</u>, Youssef Youssefi, Omar Ou-Ani, Mohammed El Mesky, Ahmad Oubair, Mohamed Znini, El Houssine Mabrouk. Anticorrosive activity of hydroethanolic extracts of <i>Anvillea garcinii subsp. radiata</i> obtained by maceration and ultrasound methods. ID_EN24: <u>Imad El Bojaddayni</u>, Youssef El Ouardi, Issam Jilal, Abdelkrim Ouammou. Synthesis of zeolitic materials from natural bentonite clay: applications in wastewater purification. ID_CO42: <u>Chahrazad Belkhiri</u>, Chaimae Himri, Salah-Eddine Azizi, Mohammed Dalli, Hicham Elmsellem, Ilyesse Rahhou, Chaouki Belbachir, Mostafa Markaoui, Bouchra Legssyer. Phytochemical characterization of an invasive plant <i>Nicotiana glauca</i> in the city of Oujda, Morocco. ID_C144: <u>Mohammed Legsaier</u>, Khaoula Loukili, Mohamed Karim El Bakkali, Smail Imame, Hafssa Atlas, Mohamed Sadoq, Ilham Kirm, Fatima Boukhlifi. Effect of partial substitution of clinker by pz on cement.
	Room 5
15:30 – 16:30	Session 5: Innovative Technological Applications of Natural Products
	Moderator: Prof. Houda SERRAR
	ID_C113: <u>Zine El Abidine Bzazou El Ouazzani</u>, Kristina Ivanova, Antonio Puertas-Segura, Tzanko Tzanov, Barrijal Saaid. Novel approach for preparing PEG-dimethicone based niosomes encapsulating colistin for enhanced antibacterial and antibiofilm activities against <i>E. coli</i>. ID_C112: <u>Safae Er Raouan</u>, Soumya El Abed, Badr Errabiti, Saad Ibnsouda Koraichi, Mohammed Lachkar. Analyzing the antimicrobial and antiadhesive properties of secondary metabolites on <i>Pseudomonas aeruginosa</i> adhesion to nylon 3D printing material: molecular docking analysis. ID_EN56: <u>El Ouardi Malika</u>, Derdaki Mohamed, Zghaid Mustapha, Arfaoui Amine, Quyou Ali. Effet biochimique des bactéries gastro-intestinales chez les enfants autistes : Rapport de cas. ID_CO61: <u>Houda Zentar</u>, Mustapha Ait El Had, Fernando Jesús Reyes Zurita, Rachid Chahboun. Anticancer and anti-inflammatory activities of cassane diterpenes: (5α)-vuacapane-8(14),

	9(11)-diene, pterolobirin G, pterolobirin H and derivatives. ID CO65: Mouna El Khabchi, Shi-Wei Liu, Hua-Jun Shawn Fan, Mohammed Mcharfi, Mohammed Benzakour, Jong-Won Song, and Ho-Jin Lee. Assessment of dispersion-corrected DFT functionals to predict conformational behaviors of aza-asparagine-containing tripeptides. ID_CO9: Rachid Haloui, Khaoula Mkhayar, Abdelmoula El Abbouchi , Samir Chtita , Amal Haoudi And Souad Elkhatabi, Design of new benzimidazole-indazole derivatives as potential FLT3 inhibitors for the treatment of acute myeloid leukemia using a computer-aided drug design approach.
16:30 - 17:00	Poster Session / Coffee Break
17:00 - 17:30	Workshop
	Leather industry in Morocco
	The pottery industry in Morocco
	Reception / Participant certificate
17:30-18:30	Closing Ceremony

CONTACTS		
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