



ICEMES



INTERNATIONAL CONFERENCE ON **ENERGY, MATERIALS & ENVIRONMENTAL SCIENCE**

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**SCIENTIFIC
PROGRAM
of
ICEMES²⁰²⁵**

Scientific Program of ICEMES-2025

WELCOME MESSAGE

Dear Colleagues and Friends,

On behalf of the organizing committee, we are delighted to welcome you to the International Conference on Energy, Materials and Environmental Science (ICEMES2025) which will be held under the theme " *Advancing Sustainable Development through Innovative Materials and Bridging Energy and Environment* "

For more than three years, ICEMES has provided a vital international forum for exchanging the latest research and innovations in materials, energy, and environmental science.

ICEMES2025 is scheduled to be held as an in-person event from April 9th to 11th, 2025, at BUMS in Casablanca, Morocco, which stands as a center of excellence in research and innovation. This stimulating and comfortable setting is designed to foster groundbreaking discussions among participants.

ICEMES2025 maintains its scientific rigor, serving as a global platform to share cutting-edge advancements in materials science, water, energy, and environmental science. The conference fosters the exchange of innovative research ideas, highlights emerging trends, and cultivates international collaboration opportunities.

At this event, distinguished plenary speakers will share the best of their scientific research expertise across the three thematic axes of our international conference.

We look forward to welcoming you to the beautiful BUMS campus in Casablanca for ICEMES 2025! May the conference bring you inspiring discussions, valuable collaborations, and great success. We also hope you enjoy your stay in vibrant Casablanca and discover the warmth and charm of this Moroccan city.

Organizing committee Chair

INTERNATIONAL CONFERENCE ON ENERGY MATERIALS & ENVIRONMENTAL SCIENCE (ICEMES-2025)

ICEMES 2025 PROGRAM

WEDNESDAY, APRIL 9, 2025

08:00 – 09:00	Welcome, Reception, and Registration of attendees
09:00 – 09:45	<i>WELCOMING ADDRESS: Honorary committee members</i> Representative of the Minister of Higher Education, Scientific Research and Innovation M. Houssine AZEDDOUG President of Hassan II University of Casablanca M. Abdelaziz SOUKRI Dean of the Faculty of Sciences Ain Chock of Casablanca M. Rachid ESSAMOUD Director of the Higher School of Technology of Casablanca M. Mohammed SMANI R&D Maroc M. Mohamed SADIK ENSAB, UHP of Settat, Morocco Organizing committee welcoming address Lhaj El Hachemi OMARI and M. Mohammed CHAFI
09:45 - 10:30	<i>Plenary Conference C1.1</i> <i>Amphitheater</i> Prof. Ismail SAADOUNE, UM6P, Morocco Exploring Lithium-ion Batteries: From Basics to Next-Generation Cathode Materials <i>Moderators:</i> M. SAJIEDDINE, G. VISCUSI, A. TIZLIOUINE
10:30 – 11:00	Welcome ceremony - Coffee Break

Oral sessions 1 (Parallel sessions)

11:00 – 13:15	Theme 1: Advanced Materials and Applications
	Room 1 Y. LGHAZI, L. ABBASSI, A. JABAR, M. BENCHIKHI

617260	A. STAOUI, A. IDRISSE, Z. EL FAKIR, Y. BADI, S. BOUZKAROUI Theoretical approach of hole transport materials based on thiophene containing double bonds as bridge for efficient perovskite solar cells	612978	O. El Wafi, A. HAFDI, M. KASBAJI, M. KASBAJI, M. M'BARKI, M. OUBENALI Sustainable Nanoporous Materials from Agricultural Waste for Heavy Metal and Dye Removal in Polluted Water
613803	S. AYADH, M. AMJOUR, D. MEZZANE, J. GHANBAJA, GOUNE Piezo-catalytic performance study of potassium-doped bismuth sodium	620548	M. ALMEIDA VALENTE, V. RAMANA Strain engineering in Aurivillius oxides for multi-state memory: A case study of 5-layered structured thin films
618742	S. TĀEBWAOGA, J. AIT BRAHIM, B. ACHIOU, R. KAZZA Development of high-performance low-carbon cement utilizing industrial	626169	N. BABASSA, M. ANOUAR, A. MSAADI, S. SAKINI, S. A. AMAHROUS, et al. Optimization of dye removal using organic waste: a sustainable approach to water treatment through adsorption and experimental design
618038	Y. MOUGHAZI, R. KELLAL, R. HATTAF, M. ZERTOUBI, D. BENMESSOUAD LEFT Evaluation of an Eco-Friendly Corrosion Inhibitor Derived from Waste for Mitigating Metal Degradation in Phosphoric Acid	610676	Y. MESSAK, K. BEN ZAROUALA, O. RHALAMI, R. LAHKALE, K. CHOUNI, W. EL KASSITI, A. MAATOUFI, M. SABBAR Electrical and optical properties of anionic clay intercalated with Bromide ion
611608	H. JAABARI, K. EL MAHRAOUI, A. LAACHIR, S. GUESMI, M. KETATNI, F. BENTISS Synthesis, structural characterization and Hirshfeld surface analysis of CuI, CoII and NiII complexes with the angular dipyrindyl ligand 2,5-bis(4-pyridyl)-1,3,4-oxadiazole in the presence of pseudohalides as co-ligands	598457	R. SGHAYAR, M. LAHYAOUI, O. MOUSSAOUI, M. EL HADRAMI, N. SEBBAR KHAIRA A novel phenyl ferrocene derivative: molecular and crystal structures, spectroscopic characterizations, Hirshfeld surface analyses and Density Functional Theory calculations as well as improved molecular docking data
Theme 2: Renewable Energy		Theme 3: Environment & Sustainable Development	
Room 2 Y. ABOULIATIM, A. NAIT ALLA, A. BOULEZHAR,		Room 3 Y. ARBA, A. ANOUAR, R. ELKACMI	
609859	M. BOUMDYAN, M. ERRAI, M. BELLIOUA, A. TIRBIYINE, A. NAIT ALLA, R. EL ABBADI Electrical conduction under magnetic field in the insulating regime of the 70Ge: Ga system at low temperature	611699	A. BOUZIANE, H. EL GHAZI, R. ENNADIR Numerical simulation and optimization of perovskite solar cell for high conversion efficiency
605047	S. CHEMCHOUB A Sustainable Approach Using Natural Phosphates Impregnated with Nickel Hydroxide Nanoparticles: A Cost-Effective Solution for Alcohol Oxidation.	609907	S. BELAOUDI, A. TIZLIOUINE Effect of Na ₂ O/SiO ₂ , SiO ₂ /Al ₂ O ₃ , Na ₂ O/Al ₂ O ₃ , curing temperature on the mechanical properties of clay based geopolymer
602284	W. JABRI, K. AZOULAY, S. JEMJAMI, K. MOUSTAID Enhancing Pharmaceutical Quality: Cost Strategy and Environmental Integration	637222	H. EI HARAKATI, M. MOUTATAOUIA, A.A. ARAJLI, N. CHAKRI, M. HLAIBI, N. KAMIL Synthesis and characterization of Ag ₂ Ti(PO ₄) ₄ for photocatalytic application
609197	M. BAADDI, R. CHAMI, O. BAALLA, S. EI QUAOUBI, A. SAADI, L.H. OMARI, M. CHAFI Influence of stress on hydrogen storage properties in double perovskite hydride K ₂ NaAlH ₆ by the first principles method	613098	A. HAIDA, S. MANSOURI, Y. TAMRAOUI, J. ALAMI Valorization of Phosphate Waste Rocks in Geopolymer Synthesis for Sustainable Construction Applications
612381	K. LAAROUISSI, S. JEMJAMI, A. HARKANI, T. BENABDELOUAHAB, A. EI AISSAOUI Carbon Footprint and Economic Viability Analysis of Water Pumping Systems in an arid region	613142	N. KAYOUH, L. OUFNI, R. RABI Comprehensive CFD Modeling of Radon Progeny Transport and Deposition in the Human Respiratory Tract
613304	S. AMEZZOUG, H. EL GHAZI Investigating the performance of the InGaN quantum dots solar cell	615723	S. EN-NAJI, S. CHHAIBA, S. MABROUM, R. HAKKOU, I. GARC-A LODEIRO Removal of methylene blue from wastewater using geopolymers based on phosphate by-products

13:30 – 14:30	Lunch Break
14:30 – 15:15	<i>Pleanry Conference C1.2</i> <i>Amphitheater</i> Prof. Fathollah VARNIK, ICAMS, Ruhr-University Bochum, Germany <i>Smart materials and structures: Diffusion of small-size aliphatic alcohols and the chemical actuation of shape memory polyurethane</i> <i>Moderators: Y. LGHAZI, L. ABBASSI, D. BENCHEKROUN</i>
15:15 – 16:00	<i>Pleanry Conference C1.3</i> <i>Amphitheater</i> Prof. Thaira ADEEB EL-HAFEZ, Amman, Jordan <i>Sustainable Water Conservation through Xeriscape Landscape Design</i> <i>Moderators: S. JEMJAMII, M. GHLIYEM, M. EL BOUCHTI</i>
16:00 – 16:30	Coffee Break - Posters Session 2

Oral Sessions 2 (parallel sessions)			
16:30 – 18:30	Theme 1: Advanced Materials and Applications		
	Room 1 A. EL BASSET, M. EL BOUCHTI, M. MOUTATAOUIA		Room 2 F. LMAI, J. LOUAFI, R. MOUBAH, M. GHLIYEM
	613085	M. EI KAMILI, S. TOUAIRI, M. MABROUKI Tracking maximum power in the energy consumption of public buildings using an artificial neural network	610157 J. RABO, T. TSUCHIYA, K. TERABE, R. CERVERA BUTCH Microstructural Properties of Scandia- and Yttria-stabilized Zirconia (ScYSZ) Electrolyte Thin Films Prepared using Pulsed Laser Deposition Technique
	617418	S. SKAKRI, M. EL RHAZI, A. EL ATTAR, S. BBENHAIBA, A. MOUAKKAR Ultrarapid Synthesis of Bimetallic Transition Metals Reinforced by Para-Phenylenediamine for Monitoring the Hydrogen Evolution Reaction in Alkaline Medium	620567 S. BAAYYAD, C. BAHLOUL, F. SEMLALI, H. EL KABIR, T. MAHFOUD, H. EL MOUSSAOUI, M. EL ACHBAY Magnetic NiFe ₂ O ₄ -PVDF composites: Combining flexibility, stability, and superior magnetic properties for functional applications.
	605273	M. AMZAOUAD, S. ZRIOUL, M. MABROUKI, J. LOUAFI Ab-initio Exploration of (Cr, Mo, Ti and V)-Doped PbSe: Structural, Electronic, and Magnetic Interactions.	602390 M. OUAFI, L. ATOURKI, D. BARIT, L. LAANAB, A. IHLAL Characterization of Structural and Optical Properties of MAPbX ₃ (X= I, Br, Cl) Powders for Perovskite-Based Optoelectronic Applications
	613306	H. ANTER, M. AKLALOUCHE, M. MANSORI, M. KHACHANE Fabrication of a new olivine cathode from spent lithium-ion batteries	609210 M. BAADDI, L.H. OMARI, M. CHAFI First-principles evaluation of MM'Cl ₃ -xH _x as an effective material for solid-state hydrogen storage
	604386	L. BOUMAHDHI, W. BORJA, S. MANSOURI, Y. TAMRAOUI, J. ALAMI Towards Green Construction: Slag and Phosphogypsum as a Key Components in eco-Cement manufacturing	609976 S. NOUAA, R. AZIAM, G. CARJA, M. CHIBAN, R. FROIDEVAUX LDH/Alginate composite beads for immobilization of Trametes versicolor laccase in dye decolorization applications
	616323	M. EL ALOUANI Improving the Performance of Alkaline Al-Air Batteries and Preventing Self-Corrosion with a Novel Hybrid Sugar-Based Supplement	610924 A. SKAOU, A. AGLAGANE, O. ER-RGUIBI, H. EL MOUDEN Crops dependency on pollinators to secure pollination success and fruit development: A case study of almond varieties from Morocco

626158	M. LAALA, A. OUEDRIHI, Y. LGHAZI, M. CHAFI Review of Studies on Pollutant Adsorption by Activated Carbon from Eucalyptus Bark: Characterization, Kinetics, Isotherms, and Advanced Modeling	611659	S. SAKINI, K. AZOULAY, A. BHAR, N. BAHASSA, I. BALLOU, M. ESSAHLI, A. MOUFTI, S. JEMJAMI Characterization of Activated Carbon from Textile Waste: A Sustainable Approach for Industrial Wastewater Treatment
626159	Sanaa EL MAGHRI Contribution du CETEMCO dans la R&D et l'innovation pour l'industrie du béton au Maroc	615818	A. EL GHANDOURI, O.H. EL HACHEMI, A. EL BASSET, S. SAYOURI, C. EL AKILI Synthesis, structural refinement and physical properties of Manganese doped barium titanate $Ba(Ti_{1-x}Mn_x)O_3$ ($x = 0, 4$ and 5%)
Theme 2: Renewable Energy		Theme 3: Environment & Sustainable Development	
Room 3 A. EDDIAL, H. EL GHAZI, Y. MEJDOUB		Room 4 S. KOUZBOUR, Z. ZAROUAL, A. EL HALIL,	
608370	JR. LEON MISHNAEVSKY Wind Turbine Blade Maintenance and Protection: Danish-Indian collaborative project maintainer	615619	A. BOUCHAALA, O. MERROUN, A. SAKIM, Y. ARKAM Enhancing desiccant wheel performance using particle swarm optimization
615581	H. EL HARRAK Assessment of environmental impacts of dams by numerical simulation: Strategies to minimize infiltration and stabilize downstream slopes	616558	N. EL HAMOUCHI, S. AIT BOUZID, M. SAJIEDDINE, H. ELKEBIR, M. MANSORI, A. ESSOUMHI Tuning Microstructure: How Sintering Conditions Influence Particle Size and Porosity in Manganite for Magnetic Cooling
612425	A. MIFTAH, L. AZARYOUH, Z. OUAHOUE, S. BASOUAD, Z. KASSAB, K. EL HARFI, A. ABOULKAS Hydrothermal Carbonization of Biomass: A Sustainable Approach for Enhanced Biofuel Production	612954	Z. OUAHOUE, A. MIFTAH, S. BASOUAD, L. AZARYOUH, M. EL ACHBAY, Z. KASSAB, EI K. HARFI, A. ABOULKAS From Sugarcane Bagasse to Advanced Adsorbent: Dual Modification for Sustainable Dye Removal
628636	S. TARHOUCI Specific materials for membrane-oriented processes relating to the extraction and the purification of tropic acid compound	611096	M. EL YASSI, S. LOUBNAN, A. RAMADANE Thermal behavior of a plaster including a microencapsulated phase-change material
618946	C. KANTAOU, M. FEDDAOUI, K. ZABOUR Numerical investigation of Single Slope Solar Still Desalination Integrated with PCM	616591	C. MOUKHLISSE Enhancing the Valorization of Moroccan Clay
611404	A. BENNIS, A. BOUSLIHIM, S. CHARIF DOUAZANE, G. AYAD Optimizing Sustainable Compressed Earth Blocks: Comparative Analysis of Granular Correction and CSA Cement Stabilization	610635	M. AARJANE, S. SLASSI, A. GHALEB, Y. BOUBEKRI, O. MOUSSAOUI, A. AMINE Microwave assisted synthesis and antibacterial activity of a novel heterocyclic compound derived from acridone.
615993	A. ZBAKH, J. EL KARKARI, Z. ANDALOSSI Experimental and numerical studies on photovoltaic cells and its models	611134	S. MEFTAH, K. MEFTAH, B. DARKAOUI, A. AMAHROUS, M. TAIB, H. OUKANI, L. BOUYAZZA Optimizing conditions for the removal of OM from water by a cork oak shell derivative.

End of the 1st day

THURSDAY, APRIL 10, 2025

08:00 – 08:30	Welcome, Reception, and Registration of attendees
08:30 - 9:15	Pleanary Conference C2.1 Amphitheater Prof. Manuel ALMEIDA VALENTE, Universidade de Aveiro, Portugal <i>Strain engineering in Aurivillius oxides for multi-state memory: A case study of 5-layered structured thin films</i> Moderators: A. CHARI, L.H. OMARI, A. BOULEZHAR, A. JABAR
9:15 - 10:00	Pleanary Conference C2.2 Amphitheater Prof. El Kebir HLIL, NEEL Institute, the University of Grenoble Alpes, France <i>Ab-initio calculations for predicting and improving materials properties</i> Moderators: A. CHARI, L.H. OMARI, A. BOULEZHAR, A. JABAR
10:00 - 10:30	Coffee Break - Session Posters 3

Oral sessions 3 (Parallel sessions)	
<u>10 : 30 – 13 : 00</u> <u>Thematic Conferences</u>	
T.C1 Amphitheater Prof. Gianluca Viscusi, Università degli Studi di Salerno, Italy <i>Sustainable and efficient solutions for water remediation: design, functionalization and applications</i>	
T.C2 Amphitheater Prof. Haddou El Ghazi, Hassan II University of Casablanca, Morocco <i>Numerical approach against AI-Driven Prediction of Subband-State Optical Absorption of Nitride-Based Quantum Well for PV applications</i>	
T.C3 Amphitheater Prof. Abdelwahad Chari, Polytechnic University of Mohamed, Ben Guerir, Morocco <i>Sustainable Approach to Design Na₃V₂(PO₄)₂F₃@C Cathode for High Energy Density and Low-Cost Sodium-Ion Batteries</i>	
T.C4 Amphitheater Prof. Latifa ABBASSI, Néel Institute Grenoble Alpes France <i>NANOFAB : Plateforme de Nanofabrication Avancée au Service de la Recherche Fondamentale</i>	
T.C5 Amphitheater Prof. Pierre LACHKAR, Néel Institute Grenoble Alpes France <i>Advanced technologies for measurements of energy material properties</i>	
T.C6 Amphitheater Prof. Zia Ur REHMAN, Namal University, Mianwali, Pakistan <i>DFT-Driven Discovery of High-Performance Materials for Hydrogen Storage, Solar Cells, and Green Urea Synthesis</i> Moderators: L.H. OMARI, M. NAJIM, A. TIZLIOUINE, M. CHIBAN	
11:00	Theme 1: Advanced Materials and Applications

		Room 1 R. FAKHREDDINE, F. EL WARDI, A. TIZLIOUINE, H. EL GHAZI		Room 2 F. LMAI, J. LOUAFI, P. HERNANDEZ-GOMEZ, M. MANSOURI
	612940	H. BENIDDAR, F. EL ABASSI, Y. TAHA, M. BENZAAZOUA Durability Enhancement of Self-Compacting Mortar Using Phosphate Mining Co-product as Sand Replacement	585789	R. ZARI, A. LAGHZIZIL, K. ABDLOUAHDI, L. EL FAROUDI NaX-type zeolites converted from industrial waste for the removal of brilliant green dye from aqueous solution
	613463	S. ES-SAKALI, A. ANOUAR, N. BABASSA Synergistic Enhancement of Natural Phosphate Surface Area through Calcination and Surfactant Treatment for Broader Industrial and Agricultural Applications	611995	A. DAANOUN, K. MOUZDAHIR, M. KADDAMI, Z. BAKHER Liquid-liquid equilibrium data for systems containing of hexane, water, and (acetic or sulfuric acid) at T = 298.15 K
	609484	K. EL MARHRAOUI, H. JAABARI, A. LAACHIR, S. GUESMI, O. MENTRE, E. KETATNI, F. BENTISS Synthesis, structural characterization and Hirshfeld surface analysis of cadmium (II) complexes based on N-heterocyclic ligands and thiocyanate ion as co-ligand	613320	F. B. BENZENNOU, A. TIZLIOUINE, B. BAHJA, L. H. OMARI, S. DAHBI Impact of Shock Wave Micronization on the Characterization, Morphology, and Composition of Gray Electric Arc Furnace Slag
	612882	H. MAARIR, Y. EL KHAYAT DRIAA, H. CHARII, A. BOUSSETA, N. GRIMI, A. MOUBARIK Phosphorylation of lignin as a new approach to improving mechanical properties and formaldehyde emissions in plywood	610332	H. AGNAOU, A. ELHALIL, M. CHIBAN, L. ELMAHJOUB Study of the performance of layered double hydroxides in terms of dye adsorption in aqueous solution and their electrochemical behavior in basic medium
	618928	R. LAHKALE, E. SABBAR Proton conduction in nitrate intercalated Mg-Fe layered double hydroxide investigated by the electrical modeling	604389	R. SERSAR, H. EL GHAZI Numerical Modeling of InGaN/GaN Quantum Well-based Laser system: Geometrical size and chemical Indium Content Impacts
	598359	M. MOSAID, H. EL MGHARI, R. EL AMRAOUI Energy Efficiency in Industry: What are the Energy, Financial and Environmental Impacts?	630338	A. ELGHARBI Structural and optical properties of Eu2O3-ZnO composite prepared by solid state method
	629734	E. ABUKHOUSA Smarter Decisions, Smarter Cities: AI and Data Analytics for Sustainable Development and Environmental Management	614824	Y. BACHIRAT, A. TIZLIOUINE Formulation study and mechanical characterization of a cement-based foam concrete mixed with oriental clay
	Theme 2: Renewable Energy		Theme 3: Environment & Sustainable Development	
		Room 3 S. EL GHACHTOULI, A. NAIT ALLA, M. IDIRI		Room 4 A. EDDIAI, H. AHMED GHANIM, S. BELHAMIDI, M. CHIBAN
	611535	A. BOUHMOUCHE, I. RHRISSI, S. BAHHAR, R. MOUBAH A DFT investigation of the Electronic, Elastic, Thermodynamic, and Optical Properties of the CeH9 Superhydride: A Promising High-Tc Superconductor	618959	L. HAMRAOUI, A. ABOULAICH, A. ABIDI, M. EL KHOUAKHI, A. KHALIL, Y. TAHA, M. BENZAOUZOUA Optimizing Dewatering of Polymetallic Tailings Using Anionic Polyacrylamide: A Comparative Analysis Between Static and Pilot
	616364	M. TAIR, M. CHAFI, M. BAADDI, E.K. HLIL, L.H. OMARI Strain Engineering for Improved Hydrogen Storage in KMgH3: First-principles investigation	613479	F. BENHNI, S. BELOUAFI, A. ELBOUARI, Y. ABBoud Green Synthesis of Zinc oxide Nanoparticles using Phoenix Dactylifera L. Biomass: Optimization and Catalytic Performance in Benzimidazole Synthesis

610300	M. LAOUINI Electrochemical Performance of Amorphous and Crystalline FePO ₄ used as Cathode Materials in Aqueous Lithium-ion Electrolyte	604677	A. BASBASSI, A. EL BOUARI, O. TANANE Development of new processes for reinforcing geopolymer composites using sustainable and renewable natural fibers: A comparative study
625027	I. ABDELRHAFOR, H. EL KABIR, L.H. OMARI Study of electronic properties and sodium ion diffusion in Na ₄ Ni ₅ (PO ₄) ₂ (P ₂ O ₇) ₂	612580	A. BOUSLIHIM, A. BENNIS, H. BOUABID, M. CHERRAJ Impact of Granular Correction with Beach Coarse Grains on the Compressive Strength of Compressed Earth Blocks
609201	M. BAADDI, A. SAADI, L.H. OMARI, M. CHAFI Study of the effect of substitution on the solid hydrogen storage properties of the compound NaBeH ₃	611574	K. MOUZDAHIR, A. DAANOUN, Z. BAKHER, S. JAMJAMI, A. ZOUHRI Optimizing Phosphoric Acid Production: The Role of Experimental Research, Modeling, and Simulation
617905	S. BASAOUD, A. MIFTAH, Z. OUAHOUEH, M. EL ACHABY, Z. KASSAB, K. EL HARFI, A. ABOULKAS Sustainable Bio-Oil Production from Olive Mill Wastewater via Optimized Hydrothermal Liquefaction: A Box-Behnken Design Approach for Process Enhancement	627288	K. ELASLANI, A. LOUDIKI, B. CHAAIBI, F. LGHRIB, S. IAHRICH, A. FARAHI, A. EL MHAMMEDI Study of the interaction between silver and ofloxacin at various concentrations and its complexation via green synthesis.
616326	K. TAROUAL Green Hydrogen Production from Marine Renewable Energy: A Sustainable Pathway for Energy Transition	622993	A. ABDELMAJID, I. BELKOUFA, S. SEBBAHI Optimization of the Thermodynamic Properties of Na ₃ AlH ₆ : Towards Improved Hydrogen Storage

13:00 – 14:30	Lunch Break
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14:30 - 15:15	Pleenary Conference C2.3 Amphitheater Prof. Muhammet Emin ÇAM , Istanbul Kent University, Turkey <i>Nanotechnology and biomaterials synthesis for Enhanced Therapeutic Efficacy</i> Moderators: S. MAJID, A. CHARI, D. BENCHEKROUN
15:15 - 16:00	Pleenary Conference C2.4 Amphitheater Prof. Saloua JEMJAMI , Hassan First University, Settat, Morocco <i>Carbon: Balance sheet, tools and emission factors</i> Moderators: S. KOUZBOUR, M. MANSOURI, O. TANANE
16 : 00 – 16:30	Coffee Break - Posters Session 4

Oral sessions 4 (Parallel sessions)		
16:30 – 18:30	Theme 1: Advanced Materials and Applications	
	Room 1 M. DAKIR, P. LACHKAR, Y. ABOULIATIM	Room 2 A. CHARI, M. TAHIRI, S. MAJID, M. MANSOURI

597222	A. AIT AKKA, A. GOUNNI, M. EL ALAMI Simulation of Type III Hydrogen Storage Tank: Optimizing Efficiency and Safety under Varying Flow Rates and Ambient Conditions	633508	A. AMAHROUS, M. TAIB, N. BABASSA, L. LOUKANI, L. BOUYAZZA Optimized Ultrasonic-Assisted Extraction of Canary Seed: Physicochemical, Rheological, and Functional Properties
611592	Z. AIT FARES, N. KAMIL, R. OUCHN, M. ARRAD Fabrication of Poly(vinyl chloride) (PVC) Membranes for Desalination via Membrane Distillation	583919	F. LAKTAOUI AMINE, M. EL ALAMI, S. ELLAMI Impact of Heat Sink Height on Mixed Convection Flows: A Cascaded Lattice Boltzmann Method
605586	T. CHARGUI, F. LMAI Defect engineering and recombination reduction in CZTSSe solar cells	613249	Y. ERROUYOUSSI Magnetic Properties and Spin Wave Theory of Multiferroic GaFeO ₃ Powders.
614694	S. TARIQ, O. EL HAJ HACHEMI, V. TUYIKEZE, M. CHAFI, A. EL BASSET A Comprehensive Study on the Impact of Strain on the Structural, Electronic, and Optical Properties of Novel Double Perovskites Cs ₂ InSbX ₆ (X = F, Cl)	624647	M. BELHADI, M. CHAFI, S. TIGHADOUINI Mechanistic Insights and Performance of Pyrazole-Based Corrosion Inhibitors for Carbon Steel in Acidic Media: Experimental and Computational Approaches
616609	S. EL KHAIDER, N. SAJAI, R. FAKHREDDINE, S. KRIMI Synthesis, structural and physico-chemical characterizations of Na ₂ O-CaO-NiO-P ₂ O ₅ glassy system	618842	M. MANSSOURI, A. IDRISSE, A. EDDIADI, M. RGHUTI, O.L. HACHEMI Active control of vibrations induced by acoustic waves: an approach based on the use of piezoelectric ceramics.
616610	M. TAIR, M. CHAFI, E.K. HLIL, L. H. OMARI Strain-Induced Modifications in XMgH ₃ (X= Li, Be) perovskite type hydrides: Implications for hydrogen storage Performance	614957	A. ZITI, B. HARTITI, Y. NOURI, S. SMAIRI, L. HICHAM, H. JOËL T. NKUSSI, A. BATAN, M. TAHRI, T. PHILIPPE Optimization of Conditions for Improving CZTS Thin Films by Sol Gel Method with Enhanced Optical Properties
Theme 3: Environment & Sustainable Development			
Room 3 A. GOUNNI, O. TANANE, A. ANOUAR, M. CHIBAN		Room 4 M. NAJI, R. TOUTI, A. EL HALIL, M. CHAFI	
617640	H. RAFFAK Intelligent Prediction Model for Part Compliance in Plastic	618892	K. SAIDI Improving the Hydrogen Evolution Reaction Activity of Non-Noble Metal-Based Materials
609779	M. KOUCHAM, A. KHALIL, S. SOULAIMANI, L. ZOUHRI, L. MOUHAGIR, M. EL ADNANI Geochemical Stability and Environmental Assessment of Copper mine Tailings	631419	Z. CHAKIR Recharge artificielle de la nappe de Berrechid avec les eaux usées traitées de Mediouna : Réglementation, et qualité des eaux
604639	Y. BOUKIOUD, K. RHAZI SENHAJI, Y. MEJDOUB Comparison of Economic and Environmental Impacts of Ponce bloc and Hemp Wool Insulation in Building Walls Across Moroccan Atlantic and Continental Climates	617616	E. GULER, B. YEKLER HUMEYRA, S. TEKINALP GULSAH, G. PARVIZ, M. DOGAN, C. EKENTOK, M. CAM Emin Development of Sublingual Nanofibrous Mats for Enhanced Nutrient Delivery: A Novel Approach Using Chitosan-Based Nanoparticles
612004	F. ABBADI, A. AIT HOU, N. BABASSA, S. JEMJAMI Advancing Climate Solutions through Thermochemical Calculations: Insights into CO ₂ Capture Using Calcium-Based Compounds	604744	F. EL AYCHAOU, Y. ABABOU, M. NAJI, A. EL BASSET Influence of Lithium Substitution on the Structural and Dielectric Properties of BaTi _{1-x} Li _x O _{3-δ} Ceramics Prepared Using the Sol-Gel Process.

628634	A. EL FOULANI, S. TARHOUCI, I. HAMMOUDAN, R. SADDIK, S. TIGHADOUINI A novel hydrazide-modified silica gel as a promising material for adsorption of methyl orange from aqueous solutions: Experiments and theoretical insights	616449	Y. EL-GHERYBY, K. HMINNA, M. EDAALA, M. EL MOUCHTARI, A. ALAOUI TAHIRI, B. MAGALIE, S. ROSSIGNOL, P. WONG-WAH-CHUNG, S. RAFQAH Optimization of Hydroxyapatite-TiO ₂ Composite Synthesis for Pharmaceutical Photodegradation Using Experimental Design and Artificial Intelligence
615823	K. MOUIH, M. MANSORI, R. HAKKOU Compressed earth bricks from yellow marls: A cement and lime stabilization study	616343	F. Z. TABANE, R. FAKHREDDINE, A. CHAKIR, A. HARRATI, N. SAJAI, A. ZAROUAL, A. CHHAM, S. KRIMI Structural and optical properties of the orthophosphates Ba ₂ MNb(PO ₄) ₄ M=Fe and In
On-line session 1			
Y. LGHAZI, M. DAKIR, S. DERKAOUI			
631719	L. ET-TAZY, R. FEDELI, A. LAMIRI, S. DESIDERI, S. LOPPI Essential Oils as Seed Priming Agents: Impact on Germination and Biochemical Parameters of Chickpea Seeds for Sustainable Agriculture	618832	M. A. MANSOURI, A. IDRISSE, A. EDDIAI, M. RGUTI Active Optimal Vibration Control in Lightweight Structures: A Modal Approach Using Piezoelectric Actuators
End of the 2nd day			

FRIDAY, APRIL 11, 2025	
08:00 – 09:00	Welcome, Reception, and Registration of attendees
09:00 - 9:45	Plenary Conference C3.1 Amphitheater Prof. Rachid YAZAMI , KVI Pte Ltd in Singapore What do we learn from non-linear voltammetry in battery management? Moderators: A. ANOUAR, Y. ABOULIATIM, R. TOUTI, M. MOUTATAOUIA,
09:45 - 10:30	Plenary Conference C3.2 Amphitheater Prof. Heba Ahmed Aboukhousa , Mohamed Bin Zayed University for Humanities, UAE Enhancing Sustainability Education In Arabic Through Gen-Ai In UAE Higher Education Moderators: S. KOUZBOUR, R. ELKACMI, M. DAKIR
10:30 – 11:15	Plenary Conference C3.3 Amphitheater Prof. Pablo HERNANDEZ-GOMEZ , Universidad de Valladolid, Spain Functional Oxide Materials: Synthesis, Characterization, and Applications Moderators: S. MAJID, T. MOUHIB, F.Z. EL WARDI, S. DERKAOUI
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M. NAJI, M. IDRI, A. GOUNNI, M. CHAFI,	

11 :15 – 12 : 00	613120	H. HAMIACH, S. FERTAHI, S. TAYIBI, M. RAIHANE, A. BARAKAT, A. ATLAS Innovative ecofriendly polymers hydrogels as superabsorbents and slowrelease phosphorus fertilizers for sustainable agriculture	615752	D. AKHLIDEJ, A. EL BASSET, F. ABDI, T. LAMCHARFI, S. ECHATOU, L.H. OMARI A Comprehensive Study on the Role of Iron in Modulating the Properties of BaTiO ₃ Ceramics for Enhanced Electronic Applications
	618842	A. EL BOUZIDI, A. ANOUAR Reuse of rainwater and grey water in buildings	616021	A. EL BAHI, M. NACHTANE, L.H. OMARI Thermomechanical Performance of 3D-Printed Liners for Hydrogen Storage Tanks
	611632	M. OUTAZKRIT Comparative Analysis of Capacitor Voltage Balancing Techniques in Modular Multilevel Converters	612832	I. REZZOUGUI Synthesis, characterization, and antimicrobial properties of hydroxyapatite/montmorillonite composite enriched with strontium
	608854	M. A. MANSOURI, A. QADI EL IDRISI, A. EDDIAI, M. RGUITI, L.H. OMARI Active control of vibrations induced by acoustic waves: an approach based on the use of piezoelectric ceramics.	616387	Z. EL KHALAFI, A. EL BASSET, T. LAMCHARFI, F. ABDI, S. ECHATAOUI, M. AHABOUD, O. H. EL HACHEMI Influence of Cu Doping on the Structural and Dielectric Properties of Ba _{1-x} Cu _x TiO ₃ Ceramics Synthesized via the Sol-Gel Technique
	633525	I. ZAKARIA, M. KHATTABI, M. GALAI Evaluation of Pyrazolone Derivatives as Corrosion Inhibitors for Mild Steel in Acidic Environments	633178	S. MALLEK-A., N. BAHLOUL Biotechnological valorization of Cucumis melo L. fruit seeds for industrial applications: functional and thermodynamic properties

Poster Session : **F. LMAI, M. CHIBAN, S. BELHAMIDI, Z. ZAROUAL**

Theme 1: Advanced Materials and Applications

608461	M. EL MAHDI, F. BENTISS, M. BOUANIS, M. TOURABI, F. BENHIBA, A. ZARROUK, C. JAMA Citrullus colocynthis fruit extract as effective eco-friendly corrosion inhibitor in a hydrochloric acid pickling medium for carbon steel: Corrosion evaluation, surface characterizations and computational approach
615720	K. DAKHSI, B. HARTITI, G. CONSTANT, H. YERADOUNOU, BATAN, A. ZIADI, P. THEVENIN Structural, morphology and optical properties investigation of Cobalt doped ZnO thin films deposited by Spray Pyrolysis for optoelectronic applications
611610	A. DHILOU Numerical study of heat exchanges between a wall containing a phase change material and the ambient air.
602777	H. TOUNASSI, M. BELHADI, M. CHAFI, S. TIGHADOUINI Contribution to the protection of mild steel in an acidic environment: physicochemical study of the corrosion-inhibiting properties of new functionalized pyrazole ligands
607817	C. NAIM, A. TIZLIOUINE Physicochemical and Structural Analysis of Micronized Clays from Moroccan Regions to Improve the Mechanical Performance of Activated Binders
618897	M. EL MCHAOURI, N. BARKA, A. ELHALIL Development of photocatalytic semiconductors and nanocomposites for the environmental remediation of emerging contaminants
624630	Y. BOUDAD, M. SALMI, Z. DAHIB, Z. ZAROUAL, A. EL MAKSSOUDI, S. EL GHACHTOULI Schiff Base-Derived NiO/rGO Nanocomposites: A High-Performance Electrode Material for Supercapacitors

630328	N. SAJAI, R. FAKHREDDINE, D. RAIR, N. ER-RAHMANY, M. GALAI, R. TOUIR, A. CHAHINE, S. KRIMI Elaboration, structure, properties and corrosion inhibition tests of phosphate glasses
614693	R. FAKHREDDINE, F. TABANE, S. EL KHAIDER, A HARRATI, N SAJAI, A ZAROUAL, L.H. OMARI, A. OUASRI, S. KRIMI Spectroscopic and optical studies of phosphates with Yavapaiite type structure
623608	E. M. SALMI, S. EL GHACHTOULI Enhanced efficiency and durability of nickel sulfide catalyst integrated with graphene oxide: exploring hierarchically porous structures for methanol oxidation reaction
598461	R. SGHAYAR, M. LAHYAOUI, O. MOUSSAOUI, M. EL HADRAMI, N. KHEIRA SEBBAR In vitro antimicrobial activity of novel series of D-ribofuranosyl tetrazoles: Design, [3 + 2] cycloaddition and N-alkylation reaction synthesis, evaluations, molecular docking and computational studies
628635	A.A. EL FOULANI, S. TARHOUCI, M. CHAFI, S. RAFIK, H. LGAZ, S. TIGHADOUINI Synthesis of pyrazole amide-functionalized silica for efficient methyl orange adsorption: A combined experimental and theoretical study
613377	S. SAMINE, M. KAROUCHI, M. ZEMZAMI, N. HMINA, M. LAGACHE, S. BELHOUIDEG AI-Driven and First-Principles Approach for Predicting the Mechanical Properties of Perovskite Materials in 3D Printing
628639	S. DAHBI, L. H. OMARI, M. CHAFI, M. BOUCHTI, M. BOUIRI, O. CHERKAOUI Enhancement of GO and ZnO properties and their integration into the PVDF-HFP polymer
Theme 2: Renewable Energy	
605615	M. AMZOUAD, S. ZRIOUL, M. MABROUKI, J. LOUAFI DFT Computational Modeling Studies of Electronic and Magnetic Features in ZnTe for Spintronic and Opto-Electronic Applications
615907	A. NAJIM, B. HARTITI, A. BATAN, M. ERTUGRUL, T. PHILIPPE Enhancing Photovoltaic Performance: Investigating ZnS as a Buffer Layer in Thin-Film Solar Cell Architectures Using SCAPS-1D Numerical Simulations
616391	H. AIT KAZIT, M. DARGAL, A. OUBARRA, K. ZNIBER Thermal and Shear Effects on Engine Oil Viscosity: A Study on 15W40 Lubricants
610463	M. BOUIRI, L.H. OMARI, S. DAHBI, N. CHAKHCHAOU, O. CHERKAOUI PLA/PZT Nanocomposite Thin Films: Preparation and Characterization
628647	S. TARHOUCI An innovative carboxylic acid-functionalized silica gel for effective extraction and removal of methyl blue from aqueous solutions: Experiments and theoretical investigations
616606	M. TAIR, M. CHAFI, E.K. HLIL, L.H. OMARI Investigation of structural, electronic and thermodynamic properties of XMgH ₃ (X= Li, Be) perovskite type hydrides and their hydrogen storage applications
583586	T. CHARGUI, F. LMAI, K. RAHMANI Impact of defects on the performance of kesterite solar cells: Modelling with SCAPS-1D
616845	Y. MOUHDA, S. DERKAOUI, L.H. OMARI, M. CHAFI Noble and non-noble materials review for PEM electrolyzers for water electrolysis.

615711	S. TANTANI, M. BEZZA, S. SGHIOURI DFIG Wind Turbine Control with Multi-Level Converters.
585726	M. BOUTALEB, K. TABIT, M. MANSORI, L SAADI, M WAQIF Development of a low-cost clay ceramic membrane for wastewater filtration
Theme 3: Environment & Sustainable Development	
610620	A. BOUHDADI, M. ENNADIF, A. JEDAA, Y. ABOUFADIL Sensing by Self-assembled Monolayers Field Effect Transistors
613547	O. FOUASSI, S. ELGHACHTOULI, M. CHAFI Treatment of surfaces by electro-oxidation: comparative study between Classic OAS and OAC anodizing and MAO plasma anodizing on aluminum alloys
618897	M. EL MCHOUARI, N. BARKA, A. ELHALIL Development of photocatalytic semiconductors and nanocomposites for the environmental remediation of emerging contaminants
621095	S. TANTANI, M. BEZZA, S. SGHIOURI Comparative Analysis of Static and Multi-Level Converters for the Control of DFIG-Based Wind Turbines
622937	A. EL HADDAOUI, A. NADI, M. CHAFI, O. CHERKAOUI, M. TAHIRI High-Performance Nanofibrous Membranes for Water Desalination via Direct Contact Membrane Distillation (DCMD)
617756	D.BENMESSOUAD LEFT, R. HATTAF, Z. SAFI, N. WAZZAN, M. ZERTOUBI Experimental Assessment and Theoretical Analysis of Plant Extracts as Corrosion Inhibitors for Steel Reinforcement in Simulated Concrete Environments.
617752	R. HATTAF, EL OUADARRI, Z. SAFI, N. WAZZAN M. ZERTOUBI, D. BENMESSOUAD LEFT Experimental Evaluation and Theoretical Modeling of Plant Extract's Inhibitory Action on Corrosion in Acidic Media.
611337	M. ABOULFADILE Sonochemical oxidation of an azo dye in liquid medium by low frequency ultrasonic waves
610329	H. AGNAOU, M. CHIBAN, N. BARKA, A. ELHALIL Progress in Layered Double Hydroxides: Structure, Synthesis and Applications
610638	M. AARJANE, S. SLASSI, A. GHALEB, Y. BOUBEKRI Synthesis and biological evaluation of novel isoxazole derivatives from acridone
609892	S. NOUAA, R. AZIAMI, R. BENHITI, C. GABRIEL, M. ZERBET, M. CHIBAN Optimization of phosphate ion removal using LDH/Alginate composite beads: a comparative study of RSM and ANN modeling Approaches
598055	O. MOUSSAOUI, R. SGHAYAR, M. ARJANE, E.M. EL HADRAMI, S. CHAKROUNE A Study of the Synthesis and Characterization of New Tetrazole Derivatives for Use as Corrosion Inhibitors on mild steel in Hydrochloric Acid solution
618853	S. EL MEZIANI, N. BARKA, A. ELHALIL Valorization of biomass into activated carbon composites for environmental applications: Recent trends and future challenges
620981	S. MALLAH, H. EI HADDAJ, N. BARKA, A. ELHALIL Photocatalysis technology and semiconductor advancements for water pollution treatment
620989	MALLAH L. FANNANE, A. GOUNNI, L.H. OMARI Développement, caractérisation expérimentale et modélisation de matériaux composites innovants pour l'isolation thermique des bâtiments en climat marocain

Closing Ceremony

12:00 -12 : 30

(Amphitheater)

Moderators:

L.H. OMARI, M. CHAFI, S. JEMJAMI

**Best Oral Presentation & Best Poster Award
Delivery of certificates to participants**

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