

International Conference Energy in Africa, national, regional and local energy Mix (EAMix 2024)

14-15-16 MAY 2024, UM6P, Ben Guerir



PROGRAM EAMix 2024	
14 MAY 2024	
08:00 – 09:00	WELCOMING PARTICIPANTS & REGISTRATION AUDITORIUM
09:00 – 09:30	OFFICIAL OPENING OF THE EAMix 2024 M. Hicham EL HABTI, President of Mohammed VI Polytechnic University, Ben Guerir, Morocco M. Rachid BENHIDA, Program Lead of CBS Department, Mohammed VI Polytechnic University, Ben Guerir, Morocco M. Pierre AUGER, COPED president, French Academy of Sciences, France A representative from the Moroccan Agency for Sustainable Energy (MASEN)
PLENARY SESSION	
09:30 – 10:15 AUDITORIUM	Prof. Ismael Saadoune, UM6P, Ben Guerir, Morocco African Mineral Resources at the Heart of the Energy Transition: Focus on Lithium-ion Batteries Moderator: Prof. Said Laassiri, UM6P, Ben Guerir, Morocco
10:15 – 10:45	COFFEE BREAK & POSTERS SESSION 1
ORAL SESSION 1	
Theme 1 : Energy Transition and Production Room : Fatima Al Fihriya	
10:45 – 11:15	Prof. Charly Gatete, ECOWAS, Ghana Energy Policy and Regional Energy Mix in ECOWAS: Dynamics, Lessons and Perspectives Moderator: Prof. Robert Guillaumont, French Academy of Sciences, COPED, France

11:15 – 12:45	11:15 – 11:30	S. Ben Elahmadi, A. Tabit, A. Algouti, F. Hadach Evaluation of the Geothermal Potential of the Essaouira Basin in the Western High Atlas, Morocco
	11:30 – 11:45	S. Douhi, A. Eddiai, O. Cherkaoui, M. Mazroui Design and Characterization of a Planar Structure Wideband, Flexible RF Energy Collector for Wearable or Portable IoT Devices
	11:45 – 12:00	K. Chakar, N. Asdiou, A. Salhi, I. Salhi, M. El Mouden, A. Hajjaji TiO ₂ Nanofluid Synthesis and Stability Investigation for PVT applications
	12:00 – 12:15	S. Zakaria, A. El hichou In the absence of sulfurization: Zin molarity effect on nontoxic and low cost CZTS thin films deposited by spin coating technique
	12:15 – 12:30	A. Boubakri, A. Rajira, A. Almaggoussi, A. Abounadi Electrochemical and Physical Properties of Electrodeposited SnS Thin Films for Photovoltaic Application
	12:30 – 12:45	M. Madi, A. Rafiki, H. Zidouh, K. Souhar The Mode Instability Effect of Second Grade and Second Order Fluids Flow Along a Wavy Channel
Theme 2 : Energy Storage and Application Room : Al Khawarizmi		
10:45 – 11:15	Prof. Mouad Dahbi, UM6P, Ben Guerir, Morocco Advancements and Prospects in Sodium-ion Batteries for Large-Scale Energy Storage Moderator: Prof. Pierre AUGER, IRD, France	
11:15 – 12:45	11:15 – 11:30	S. Elamraoui, N. Asdiou, M. Rezki, K.M. Boris, K. Khaless, N. Abouricha, R. Benhida, M. Achak An experimental study of the solar distiller: Application to the drying of phosphate sludge
	11:30 – 11:45	L. V. E. Kamga Samen, J. Giogetti, R. Kaze, F. Docgne, P. Meukam, E. Kamseu, C. Leonelli A Low Thermal Conductivity Of Lightweight Laterite-Cement Composite With Cotton Waste Fibres
	11:45 – 12:00	L. Moutanassim, M. Aqil, A. Chari, J. Alami, M. Dahbi, S. El Hankari Disordered and Defective Semi-Crystalline Fe-MOF as a High-Power and High-Energy Anode Material for Lithium-Ion Batteries
	12:00 – 12:15	M. Achqraoui, H. Jebari, N. Bekkioui, H. Ez-Zahraouy Tensile Effect on Photocatalytic and Optoelectronic Properties of MoS ₂ for Hydrogen Production: DFT Study
	12:15 – 12:30	S. Sallam, M. Taqi, A. Eddiai Impact of the Feed Water Flow Rate on Direct Steam Generation for Industrial Application

	12:30 –12:45	A. Faddouli, A. Bouazza, K. Khaless , M. Achak, R. Benhida Integrating Solar Thermal and Thermoelectric Technologies to Enhance Energy and Water Harvesting
12:45 – 14:30	LUNCH BREAK	
PLENARY SESSION		
14:30 – 15:15 AUDITORIUM	Prof. Sandrine Michel, Montpellier University, France Access to electricity in Sub-Saharan Africa: from an urban/rural frontier to a market frontier? A pricing analysis Moderator: Prof. Said Laassiri, UM6P, Ben Guerir, Morocco	
ORAL SESSION 2		
Theme 1 : Energy Transition and Production Room : Fatima Al Fihriya		
15:15 –15:45	Prof. Gilney Damm, Gustave Eiffel University, France Control of Power Systems – Challenges and Solutions for the Integration of Large Shares of Renewable Energy Sources and Electric Vehicles – Some Perspectives for Europe/Africa Exchanges Moderator: Prof. Innocent Kamwa, Laval University, Canada	
15:45 –16:15	15:45 –16:00	F. Gourchane, A. El Hourch Duckweeds : A promising bio-energy and vital sources
	16:00 –16:15	M. El Akkel, M. Achqraoui , H. Ez-zahraouy A First-Principles Study of The Indium Halide Perovskites $RbInX_3$ (X= F, Cl, Br, F) For Photovoltaic and Photocatalytic Applications
16:15 –16:45	COFFEE BREAK & POSTERS SESSION 2	
16:45–18:15	16:45 –17:00	H. Zalrhi, B. Dirrouch, M. Youssefi, M. Regragui, M. Abd-lefdil, L. Atourki Investigating Alkali Metal Doping Effects on CsPbBr ₃ Thin Films for All Inorganic Perovskite Solar Cells
	17:00 –17:15	A. Nefraoui, K. Kandoussi, R. Elotmani, A. Boutahar Empowering Electric Vehicle Charging Points with Solar Photovoltaic Energy in Residential Neighbourhoods
	17:15–17:30	A. MAR Study of a low-power thermoelectric solar conversion system for remote areas in Senegal
	17:30–17:45	H. Er-rafi, A. Galadi Unified DC Model for Both SiC Power MOSFET and GaN HEMT Including Moderate Inversion Regime and Quasi-Saturation Effect
	17:45–18:00	L. Sarsar

		The relationship between renewable energy production and economic growth in Africa: An econometric analysis by energy source
	18:00-18:15	A. Tighirt, F. El Guezar Modeling and Intelligent Power Control of Small-Scale Wind Energy Systems Using Takagi-Sugeno Fuzzy Models
Theme 2 : Energy Storage and Application Room : Al Khawarizmi		
15:15-15:45		Prof. Patrice Simon, French Academy of Sciences, COPED, France Signatures environnementales de la transition énergétique Moderator: Prof. Driss Stitou, Perpignan University, France
15:45 -16:15	15:45 -16:00	M. MAIGA, K. E. N'TSOUKPOE, A. GOMNA Experimental study of Lannea kerstingii and Lannea microcarpa seed oils as heat transfer fluid or thermal energy storage material for CSP applications
	16:00 -16:15	M. Karbak, M. Baazizi , F. Ghamouss Bridging the Gap between Manganese Oxide Precursors Synthesis and Lithium Manganese Oxide Cathodes for Lithium-Ion Batteries
16:15 -16:45	COFFEE BREAK & POSTERS SESSION 2	
16:45-18:15	16:45 -17:00	I. Belkoufa, A. Alaoui Belghiti, M. Mouyane, D. Houivet, S. Laasri, E.K Hlil, A. Hajjaji Enhanced Thermodynamic Properties of Fe-Substituted Mg ₂ Ni Hydrogen Storage Alloys
	17:00 -17:15	A. Etrini, M. MAYmoun, S. Oukahou, A. Elomrani, K. Sbiaai, A. Hasnaoui 2D Dirac ZrB ₂ C ₂ as a Potential Anode Material for Alkali Metal-Based Batteries
	17:15-17:30	A. EL Jaouhari, J. Bencaid, M. Matrouf, B. Manoun, F. Ghamouss Phosphate-Based Materials for Enhanced Green Hydrogen Production via Alkaline Water Electrolysis
	17:30-17:45	K. Omeoga, M. Dahbi, J. Jacquemin Integrating Mathematical Modeling with Machine Learning for Predicting Volumetric Properties of Ionic Liquids
	17:45-18:00	N. Gabin Alex, A. Bennis, N. Guy Edgar, C. D'Ouazzane Saâd Thermal characterization of cement-stabilized earth bricks and sawdust residues using the asymmetric hot plane method for the development of ecological and sustainable constructions
	18:00-18:15	H. Orfi, A. A. Mekkaoui , S. A. Labyad, S. El Houssame Colloidal Mono- and Bimetallic NPs Anchored Carboxymethyl Cellulose and Supported on Natural Phosphate: Application in Hydrogen Transfer Reactions
END OF THE FIRST DAY		

15 MAY 2024

PLENARY SESSION

09:00-09:45
AUDITORIUM

Prof. Abdelghafour Zaabout, UM6P, Ben Guerir, Morocco
Cost-effective pathways for decarbonized production of hydrogen from natural gas and biogenic waste
Moderator: Prof. Samir El Hankari, UM6P, Ben Guerir, Morocco

ORAL SESSION 1

Theme 1 : Energy Transition and Production
Room : Fatima Al Fihriya

09:45-10:15

Prof. Driss Stitou, Perpignan University, France
Solar thermochemical processes for autonomous cooling production
Moderator: Prof. Mohammed Lahcini, Cadi Ayyad University, Marrakech, Morocco

10:15-10:45

10:15-10:30

A. Sarr, A. Ndiaye, V. Sambou, C. M. Fadel Kebe
Analysis and feasibility of 50 kWp self-consumption solar photovoltaic system for four Senegalese typical climatic zones using PVsyst software

10:30-10:45

J. Ait Soussane
The Nexus Between Renewable Energy Consumption and Foreign Direct Investment in the African Context

10:45 - 11:15

COFFEE BREAK & POSTERS SESSION 1

11:15 - 12:45

11:15 - 11:30

A. Ben Hassen Trabelsi, A. Mabrouk El Asmi
Municipal solid waste-to-energy potential: a pathway to a energetic and ecologic transition in Tunisia

11:30 - 11:45

Y. Ghazal, A. Bendaraa, S.Nfaoui, M.M. Charafi
Enhancing Thermal Performances of Tubular Heat Exchanger using Hybrid Fluids based on Cu-Al₂O₃

11:45 - 12:00

S. Nfaoui, A. Bendaraa, Y. Ghazal, M.M. Charafi
Simulation of the thermal performance of a coaxial-tube heat exchanger using nanofluids as coolants

12:00 - 12:15

T. Chargui, F. Lmai, K. Rahmani
Improved efficiency of CZTS-based solar cells

12:15 - 12:30

M. Archi, O. Bajjou, K. Rahmani, B. Elhadadi
Improvement of the visible light absorption, electronic, optical, and charges lifetime of ZnO via silicon and gallium dual doping: Theoretical insights.

12:30 - 12:45

A. NDIAYE, C. M. F. Kebe, M. Garcia, V. Sambou
Promoting a sustainable diffusion of solar PV electricity in Africa: results of the leopard project

Theme 2 : Energy Storage and Application
Room : Al Khawarizmi

09:45-10:15

Prof. Khaoula Khaless, UM6P, Ben Guerir, Morocco
Electric energy savings in reverse osmosis desalination: opportunities and constraints
Moderator: Prof. Abdelhaq EL JAI, Perpignan University, France

10:15-10:45

10:15-10:30

W. El Bahrami, H. Mabrak, I. Boumanchar, Y. Naimi
Solar photoelectrochemical processes utilizing dye sensitizers for hydrogen production



	10:30-10:45	A. A. Dango Aggregated Models of Renewable Production Systems For EMT Simulations
10:45 - 11:15	COFFEE BREAK & POSTERS SESSION 1	
11:15 - 12:45	11:15 - 11:30	H. Afaryat, M. Karbak, M. Kerroumi, A. El-Bchiri, M.Aqil, B. Manoun, Y. Tamraoui, F. Ghamouss Exploring the synthesis of Spinel Manganese Oxide Cathodes for Aqueous Zinc-ion Battery Applications
	11:30 - 11:45	M. Tair, S. Drissi, M.Chafi, L. H. Omari Hydrogen Storage Properties of Perovskite-type KMgH ₃ Under Strain Effect : A DFT Study
	11:45 - 12:00	A. Benaddi, A. Elomrani, A. Hasnaoui Lithium decorated 2D orthorhombic (o)-B ₂ X ₂ monolayers for hydrogen storage: first principles calculations
	12:00 - 12:15	S. Jouini, B. H. Trabelsi, A. Mauviel Plastic waste management in Tunisia : energy recovery prediction using artificial intelligence
	12:15 - 12:30	F. El Kouihen, M. Chakir, A. Faik Synthesis and Characterization of Advanced Cathode Materials for All-Solid-State Batteries
	12:30 -12:45	S. Taoussi, I. Chaiboub, A. Ouaha, K. Hoummada, A. Lahmar M. Naji H. Bi , B. Manoun, M. P. Fernandes Graca , A. El Bouari, L. Bih Development and Characterization of High-Performance Novel Glass-Ceramic for All-Solid-State Lithium Batteries
12:45 - 14:30	LUNCH BREAK	
PLENARY SESSION		
14:30 - 15:15 AUDITORIUM	Prof. Innocent Kamwa, Laval University, Canada Solar PV Based Autonomous Minigrids to Combat Energy Poverty and Propel Smart Cities and Villages Moderator: Prof. Samir El Hankari, UM6P, Ben Guerir, Morocco	
ORAL SESSION 2		
Theme 1 : Energy Transition and Production Room : Fatima Al Fihriya		
15:15 -15:45	Prof. Saïd Laassiri, UM6P, Ben Guerir, Morocco Towards the development of new renewable-energy-based-systems in Africa through Power to X concepts: Opportunities and challenges Moderator: Prof. Christian Amatore, French Academy of Sciences, COPED, France	
15:45 -16:15	15:45 -16:00	T. Aissi K.Kandoussi, R. Elotmani, Y. Abouelmahjoub, M. Louzazni Exploring Hybrid Energy Systems with low Carbon Emission: A Comparative Study of Atlantic Moroccan cities
	16:00 -16:15	S. Drissi, A. El Kissani, A. Abali, D. Ai El Haj, S. El Massi, T. Melaid, L. Nkhaili, K. El Assali, A. Outzourith Sol-gel deposition of Cu ₂ Fe _{0.75} Co _{0.25} SnS ₄ thin films for photovoltaic applications
16:15 -16:45	COFFEE BREAK & POSTERS SESSION 2	
16:45-18:15	16:45 -17:00	M. K. Atouailaa, A. Arif, M. Boulghallat, M. El idrissi DFT, DFTB and TD-DFT investigations of non-fullerene electron acceptors based on thiophene derivatives for organic Photovoltaics

	17:00 –17:15	Z. El hafidi, N. Outaleb, Y. Naimi Electrochemical Deposition of ZnO Thin Films on ITO Conductive Glass: Investigating the Impact of Cathodic Deposition Potential Variation
	17:15–17:30	J. Bassama, A. Chapuis, B. Piriou, A. Sall, H. Dupeux, L. van de Steene, O. Kontao, D. Diouf, M. Rivier, J. M. Méot, J. Blin Development of equipment for heat production powered by residual biomass for food processing SMEs in West Africa
	17:30–17:45	A. Idrissi, R. El Amraoui, H. El Mghari Efficiency of mixed versus displacement ventilation in a full-scale model of a room Using CFD simulation
	17:45–18:00	N. SYLVERE, A. Duarte Sierra, S. Sindayikengera, C. Gisèle JUNG, N. Manirakiza Procedure for manufacturing ecological briquettes by wet pyrolysis from residual biomass in Burundi
	18:00–18:15	B. Addou, A. Balouki, A. Ben Richou Transient Heat Conduction in Two Dimensions Using Lattice Boltzmann Simulations
Theme 2 : Energy Storage and Application Room : Al Khawarizmi		
15:15 –15:45	Prof. Olivier Donard, French Academy of Sciences, COPED, France Signatures environnementales de la transition énergétique Moderator: Prof. Gilney Damm, Gustave Eiffel University, France	
15:45 –16:15	15:45 –16:00	S. Misry, A. Echaoui Short and long-term fuel price asymmetries and long-term relationships in the Moroccan gasoline and diesel market using the NARDL model
	16:00 –16:15	B. Misski, I. Belkoufa, A. Alaoui Belghiti, M. Mouyane, J. Bernard, A. Hajjaji, D. Houivet And F. Belhora Synthesis and Characterization of Lead-Free KNN Ceramic Piezoelectric Materials for Energy Harvesting Applications
16:15 –16:45	COFFEE BREAK & POSTERS SESSION 2	
16:45–18:15	16:45 –17:00	M. Agouri, A. Benaddi, A. Elomrani, A. Abbassi, A. Hasnaoui, B. Manaut, S. Taj, M. Driouich A high-performance anode material for lithium-ion batteries: A DFT study
	17:00 –17:15	M. Akhsassi, O. Ait Si Ahmed, A. Zaaboul, A. Amarraque, R. Benbba, A. Wifaya, L. Gourdo, R. Bouharroud, F. Elame, L. Ouboubker, M. Raoufi, A. Bennouna, A. Outzourhit Comparison of Experimental Performances with Two Simulation Studies of An Agrivoltaic System in Arid Climate
	17:15–17:30	H. Nahi, E. Elhoucine, C. Abdelwahed, A. Jones, D. Mouad A sustainable recycling process of vanadium spent catalyst for high power vanadium-based battery application
	17:30–17:45	H. EL Fallah, M. Aquil, A. Ait Benhamou, A. Amarray, M. Elachaby, F. Ghamous, J. Alami, M. Dahbi, H. Sehaqui Enhancing Lithium-Ion Battery Safety with Phosphate-based Separators: A Novel Approach
	17:45–18:00	A. Ouaha, S. Taoussi, K. Hoummada, D. Mezzane, E. Haily, M. Naji, B. Manoun, L. Bih Optimizing Energy Storage Performance of BNT Ceramics with Alkaline-Phosphate Glass Additive
	18:00–18:15	N. Asdiou, S. Elamraoui, M. Rezki, E. Lamy, S. B. Alaoui, M. Achak Performance evaluation of olive mill wastewater treatment by a hybrid system: coupling infiltration-percolation and solar distillation technologies
END OF THE SECOND DAY		

16 MAY 2024

PLENARY SESSION

09:00-09:45
AUDITORIUM

Prof. Christian Amatore, French Academy of Sciences, COPED, France
Production and electrochemical storage of hydrogen atoms on single layer graphene sheets
Moderator: Prof. Rachid Daoud, UM6P, Ben Guerir, Morocco

ORAL SESSION 1

Theme 1 : Energy Transition and Production
Room : Fatima Al Fihriya

09:45-10:15

Mr. Ayoub Hirth, Institute for Research in Solar Energy and New Energies (IRESEN)
Advancing Renewable Energy and Green Hydrogen: IRESEN's R&D and Innovation Efforts in Morocco
Moderator: Prof. Hamza Tachallait, UM6P, Ben Guerir, Morocco

10:15-10:45

10:15-10:30

M. Lamhani, Z. Chchiyai, B. Manoun, A. Hasnaoui
Enhanced Photocatalytic Water Splitting of SrTiO₃ Perovskite through Cobalt Doping: Experimental and Computational Modelling

10:30-10:45

Z. Ouaoa, K. Khallaki, K. Choukairy, H. El Kharaz
Transient numerical investigation of phase-change materials cooling using innovative fin shapes to improve Photovoltaic panel performance

10:45 - 11:15

COFFEE BREAK & POSTERS SESSION 1

11:15 - 12:30

11:15 - 11:30

M. EL Idrissi, B. Mai, L. Atourki
Optimizing Synthesis and Characterization of CuFeO₂ for Photoelectrochemical Water Splitting

11:30 - 11:45

Y. Nouri, B. Hartiti, A. Ziti, A. Batan, H. Labrim, P. Thévenin
Modeling of highly efficient CNGS based kesterite solar cell: A DFT study along with SCAPS-1D analysis

11:45 - 12:00

A. El Yahyaoui, B. Jaber, L. Laanab, E. Lotfi
Stability Improvement of hybrid Perovskite (MAPi) by Chloride incorporation

12:00 - 12:15

M. Ahliouati, R. El Otmani, K. Kandoussi
Comparative assessment of energy efficiency between double glazing and single glazing photovoltaic (PV) modules under identical environmental parameters

12:15 - 12:30

I. EL Ghazali, A. Bendaraa, M.M. Charafi
Investigating the impact of cylinder diameter on flow dynamics using the lattice Boltzmann method: Insights for renewable energy aerodynamics

Theme 1 : Energy Transition and Production
Room : Al Khawarizmi

09:45-10:15

A representative from JESA
Energy initiatives and ongoing projects



	Moderator: Prof. Olivier Donard, French Academy of Sciences, COPED, France	
10:15-10:45	10:15-10:30	N. Benaïssa, T. Garmim, Z. El Jouad, A. Louardi, M. Monkade Optimization of CuO Thin Film Synthesis via Spray Pyrolysis Using Taguchi Design for Solar Absorption Applications
	10:30-10:45	E. Darkaoui, A. Zaghrane, H. Ouhenou, A. Abbassi, M. Agouri, A. Waqdim, S. Taj, B. Manaut Two-dimensional MXenes for clean energy by DFT
10:45 - 11:15	COFFEE BREAK & POSTERS SESSION 1	
11:15 - 12:30	11:15 - 11:30	M. Y. Fatihi, S. Gueddida, M. Pastore, S. Lebègue, A. Hasnaoui dye Anchoring on CuAlO ₂ Surfaces for p-Type Dye-Sensitized Solar Cell Applications: An Ab Initio Study
	11:30 - 11:45	A. Waqdim, M Agouri, A Abassi, B Manaut, S Taj, M El Idrissi Study of structural, electronic, optic and thermoelectric properties of simple pérovskite oxides
	11:45 - 12:00	I. Jamaï, M. Ziati, N. Bekkioui, H. Ez-Zahraouy Exploring the structural, electronic, and optical properties of CaGa ₂ X ₄ (X = S, Se) chalcogenide spinels for potential solar cell applications: DFT study
	12:00 - 12:15	H. Ouachtouk, A. Harbi, S. Azerblou, Y. Naimi, E. Tace Structural, Vibrational, and Magnetic Characterization of Double Perovskites La ₂ NiMnO ₆ and La ₂ CoMnO ₆
	12:15 - 12:30	B. Hamadoua, D. Djomdi, R. Z. Falama, R. D. Darnan, F. Audonnet, P. Fontanille, C. Delattre, G. Pierre, P. Dubessay, P. Michaud, G. Christophe Optimization of Energy Bioconversion Yield from Sweet Sorghum (Sorghum bicolor (L.) Moench) Stalks
12:30 - 13:30 AUDITORIUM	CLOSING CEREMONY	
13:30 - 15:00	LUNCH BREAK	
END OF THE EAMix CONFERENCE		



PROGRAM EAMix 2024

14 MAY 2024

POSTER SESSION

Theme 1 : Energy Transition and Production	Theme 2 : Energy Storage and Application
<p>A. Soussi, A. Ait hssi, M. Taoufiq, A. Elfanaoui, A. Ihlal Mo-Doped TiO₂ Thin Films: Enabling Renewable Energy Applications through Structural, Electronic, and Optical Advancements</p>	<p>W.Ferdinand Fassinou On the road to energy transition: WASCAL's green hydrogen training courses</p>
<p>I. Laazizi, J. Boujema, L. Larbi DFT study of Structural, Electronic and Optical properties of inorganic perovskites RbSnX₃(X=Cl, Br and I) for solar cells</p>	<p>R. Sidi Moumane, S. Ait Bahadou, H. Ez-Zahraouy Ab initio study of the physical properties of MoS₂ material as an anode for batteries</p>
<p>E. Dahbani, N. Hachem, M. Salama, E.M. Jalal, M. El Bouziani Thermodynamic properties of a mixed spin-3/2 and spin-5/2 square-octagon lattice</p>	<p>S. EL Broudi, N. Zehhar, N. Abdenouri, F. Benkhalti, H. Bouamama Exploring the Potential of Convective Indirect Solar Drying for Aromatic Plants in Morocco</p>
<p>Raïâ Moulay Youssef, R. Masrour, A. Rezzouk Novel semiconductor x₂mnb (x =Ti, Zr, HF) heusler alloys with the Hg₂CuTi-type structure promising materials for optoelectronic and thermoelectric applications</p>	<p>J. Ziraoui, H. Mastouri, H. Radoine, H. Chehouani, M. Dahbi, Y. Tamraoui, B. Benhamou, A. Outzourhit, G. Squadrito, A. Nicita, M. C. Gameiro Da Silva Low-Cost Panels from Natural Fibers for Improved Buildings Thermal Performance: Inferential Review</p>
<p>M. El Azar, A. Jellal Enhancement of the graphene quantum dot's energy spectrum with an inhomogeneous gap and magnetic flux</p>	<p>A. Ramadane Simulation of the potential of multi-layer membrane nano-filtration in the desalination process</p>
<p>Z. El hafidi, N. Outaleb, Y. Naimi From Electrochemical Deposition to Application in Solar Cells: ZnO Thin Films on ITO Conductive Glass</p>	<p>W. Makboul, M. Hajji, O. Mounkachi Modeling and simulation of a green hydrogen production system</p>
<p>I. Guermat, M. Matrouf, F.Z. Semlali, H. Sehaqui, F. Ghamouss The development of nanocellulose based membrane for fuel cells application</p>	<p>O. Moustakim, M. Aqil, K. Amine, M.Dahbi Enhanced electrochemical performance of LiNi_{0.8}Mn_{0.1}Co_{0.1}O₂ cathode by Poly(TEMPO-VImTFSi) coating</p>
<p>M. Sow, M.M Ibrahim, M. Achak, S. Laassiri, A. Zaabout Techno-economic assessment of algae-based waste Hydrochar production via HTC technologies</p>	<p>A. Addou, J.F. Dacquin, S. Royer, S. Laassiri Inorganic Electricle Composite Materials for Green Ammonia Synthesis at Mild conditions</p>
<p>S. Tijani, E. Bouddia, A. Faik Valorization of Energy Surpluses in an Industrial Site: Modeling, Simulation, Optimization and Performance Analysis</p>	<p>A. Boutahar, Y. Seffar, A. Sghiouri Idrissi, J. Alami, M. Chaker Necibi, M.Dahbi Description automatically generated NASICON-Structured Na₃Fe₂(PO₄)₃ as a Faradaic Cathode in Hybrid Capacitive Deionization</p>



S. EL Ouakili, A. Elhichou, N. Rochdi Deposition Of ZnO: TiO ₂ Nanocomposite Thin Films Using Sol-Gel Spin Coating	M. Abdelouahhab, S. Manar, R. Benhida Impact of Phosphate Rock Impurities on the Reaction Heat Balance during Phosphoric Acid Manufacturing
R. EL Otmani, A. El Manouni, A. El Kanouny, A. Al Maggoussi Low cost kesterite materials as hole-transporting layers for MAPbI ₃ perovskite solar cells: numerical simulation and comparison	H. Anter, M. Mansori, M. Khachane, M. Aklalouch Li-ion battery recycling
M. Sakhradi, A. Ramos, A. Rouboa, E. Monteiro Biomass Gasification: A Sustainable Pathway for Biogas Production and Waste Management	S. Elmazouzi, H. Mabrak, F. Allali, A. Zourif, A. Salim, I. Zerdani, N. Touach, A. Benzaouak, Y. Naimi Simultaneous Electricity Generation and Wastewater Treatment using Microbial Fuel Cells: A Comparative Study with Compost Leachate and Industrial Wastewater
B. Boukili, M.K. Atouailaa, A. Arif, A. Aboulouard, M. Boulghalat, A.Tounsi, M. El idrissi Electronic structure, optical properties and electron dynamics in TiO ₂ interfaces sensitized by organic dyes: TD-DFT study	A. Ihechmyen, M. Mansori, M. Khachane, M. Aklalouch Study of the electrolyte/electrode interfaces to avoid safety issues of rechargeable batteries
A. Ou-khouya, I. Ait Brahim, H. Mes-adi, H. Ez-Zahraouy, A. Houba, M. Tahiri Impact of doping by chalcogen elements on the electronic, structural, and optical properties of SrTiO ₃ compounds: Ab initio calculations	H. Wakrim, A. Chari, E. Elmaataouy, S. Majid, J. Alami, S. Gmouh, M. Dahbi Exploring Sodium-Ion Half-Cells: Advancements with Ionic Liquid Hybrid Electrolytes
Said Elmassi, L. Amiri, M. Bousseta, S. Drissi, A. Abali, A. Narjis, L. Nkhali, A. El kissani, A. Outzourhit Effect of NiO:Co thin film as buffer in the back contact of the CdTe solar cell	I. Chaiboub, S. Taoussi, B. Manoun, H. Bih, A. Lahmar, M. Naji, K. Hoummada, A. El Bouari, L. Bih Enhancing Ionic Conductivity in Sodium Phosphate-based Glass-Ceramics through Glass Crystallization
END OF THE FIRST DAY	
15 MAY 2024	
POSTER SESSION	
Theme 1 : Energy Transition and Production	Theme 2 : Energy Storage and Application
J. Bencaid, E. Maadane, A. EL Jaouhari, J. Jacquemin, F. Ghamouss Electrocatalytic Bicarbonate Conversion to Fuels using Phosphate-Based electrocatalyst	I. Chaiboub, S. Taoussi, B. Manoun, H. Bih, A. Lahmar, M. Naji, K. Hoummada, A. El Bouari, L. Bih Enhancing Ionic Conductivity in Sodium Phosphate-based Glass-Ceramics through Glass Crystallization



<p>A. Ait Baha, M. R. Benmansour, S. Boulif, A. Oulkhir, A. Etahiri, R. Benhida Sustainable synthesis of white phosphorus through electrosynthesis</p>	<p>N. Jabli, A. Mellalou, Y. Tamraoui, F. Ghamouss Zeolites Based-Porous Materials for Hydrogen Storage: A Pathway to Advanced Energy Storage</p>
<p>H. Bouzine, H. Ez-Zahraouy DFT Study of Structural, Optoelectronic, and Thermoelectric Properties of Lead-Free Inorganic Double Perovskites Rb_2InAsX_6 ($X = Cl, Br$) for Solar Cell Applications</p>	<p>I. Alouiz, M. Aqil, M. Dahbi, M. Y. Amarouch, D. Mazouzi Low-cost and High-Performance Hard Carbon derived from olive pomace as Anode Materials for Sodium-Ion Batteries</p>
<p>F. Amallal, Y. Belkassmi, M. Bouzelmad, A. Kotri Numerical Investigation Of Photovoltaic System Integrated With Thermoelectric Generator And Phase Change Material Under Varied Operating Conditions</p>	<p>E. Lahrar, H. Essaoudi Electrocaloric And Energy Storage Properties Of $Ba_{0.85}Ca_{0.15}Zr_{0.1}Ti_{0.9}O_3$ Synthesized By Sol-gel Method</p>
<p>S. Smairi, A. Batan, B. Hartiti, Y. Doubi, M. Azrou, M. Azdouz, P. Thevenin The effect of experimental process on CdS thin layers properties nanostructured by Chemical Bath Deposition for optoelectronic application</p>	<p>S. Nour Eddine, Z. Kassab, A. Chari, H. Daoudi, J. Alami, M. Dahbi, M. El Achabi Modified & P-functionalized Stipa Tenacissima plant derived hard carbon as anode materials for sodium ion batteries</p>
<p>C. Moukhfi, Y. Ghandi, S. Zerraf, M.E. Belghit, A. Malaoui, S. Belaouad The synthesis and thorough analysis of the double perovskite compound</p>	<p>A. Ezaier, R. Masrou, K. Bouslykhane Structural, Electronic, and Magnetic Properties of the Full Heusler Alloy Ti_2FeSn Investigated Through Methods GGA, MBJ-GGA, and GGA+U</p>
<p>L. Elmaazouzi, Imane Lmachraa, B. Lizoul, A. Driouch, Z. Lakbaibi Hydroxyapatite recovered from Waste Bone Biomass: A Green and Sustainable Catalyst for Biodiesel Production—A Model Demonstrating the Benefits of Circular Economy Strategies</p>	<p>I. EL Ghandouri, A. Chakir, M. Sakkay, S. Saadeddine, M. Meziane, A. El Maakoul Harmonizing global energy: a review of thermal management systems for lithium-ion batteries</p>
<p>K. Boughanbour, M. Sahal, E. Oublal Improved efficiency of perovskite solar cells through a numerical study utilizing TiO_2/ZnO</p>	<p>Y. Jamouri, F. EL Kouihen, B. Manoun, A. Faik Advanced Cathode Materials for Next-Generation Batteries</p>
<p>F. Id Ouissaaden, S. Dlimi, H. Kamel, S. El Khaldi, F. Elmourabit, A. Khoukh Partial Shading Impact Analysis on PV Array Efficiency</p>	<p>L. Boutajanouit, A. Amarray, J. Jacquemin, J. Alami, M. Dahbi Towards Sustainable Battery Recycling: Enhancing Metal Recovery from spent Lithium-Ion Batteries</p>
<p>A. Ryahi Study the Inter-Building Effects on Building Energy Balance and Solar Energy Use: An Application to the Climate of Morocco</p>	<p>W. Bouallègue, A. B. Hassen Trabelsi Exploring Circular Economy Trends in Municipal Solid Waste Organic Fraction Recovery Through Composting And Biochar Production</p>
<p>L. Amzil, T. Raffak, T. Mouhib Exploring the Potential of Hybrid Composites in Advancing Wind Turbine Blade Technology: A Comprehensive Review and Future Outlook</p>	<p>A. Arharbi, S. Bahou, H. Ez-Zahraouy Study of the Physical Properties of Lithium Hydride for Hydrogen Storage: Ab Initio Calculations</p>
<p>I. Es-saoudi, H. Ez-zahraouy Photocatalysis for Water Treatment and Hydrogen Production</p>	<p>I. Bouaakil, M. Lahouij, M. Aqil, M. Dahbi, J. Alami, M. Makha Surface stabilization of Ni-rich cathodes via Non-reactive DC sputtering of carbides-based coatings for high-performance lithium-ion batteries</p>

M. H. Saley, J. El-hassouny, A. El Mouhafid, A. Jellal Energy Band Tunneling in ABC Trilayer Graphene Superlattice	Z. El Bouhali, K. Khaless, R. Benhida Synthesis of Mineral Membranes for Marine and Brackish Water Desalination
H. Benali, B. Hartiti, F. Lmai, A. Batan, S. Fadili, P. Thevenin Enhancing the Efficiency of Perovskite Solar Cells using Magnesium doped ZnO as an Electron Transport Layer	O. Liaaychi, P. Blanchard, C. Lancelot, C. Lamonier, J. P. Dacquain, S. Royer, S. Laassiri Development of a novel, highly active, and selective 2D/3D heterostructure for CO ₂ Hydrogenation into syngas: a step towards H ₂ economy
L. Dahane, M. Ziati, H. Ez-Zahraouy Study of the physical properties of the perovskite-oxide for photovoltaic application: Ab initio calculations	S. Naaim, B. Ouhammou, B. Daouchi, M. Aggour Achieving Sustainable and Cost-Effective Wastewater Treatment: Leveraging Renewables for Energy Independence, Decentralization and Environmental Benefit
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POSTER SESSION	
Theme 1 : Energy Transition and Production	Theme 2 : Energy Storage and Application
A. Ait hssi, A. Soussi, A. Elfanaoui, A. Ihlal, K. Bouabid Optimizing cuprous oxide films on zinc oxide nanorods via two-step electrodeposition for solar cell applications	N. Mansori, A. Chari, J. Alami, M. Dahbi Enhancing Sodium-Ion Battery Performance: A Study on Cobalt Free Cathode Materials and Optimized Synthesis Process
Z. Jellil, H. Ez-Zahraouy Pressure-Induced Band Gap Engineering and Enhanced Optoelectronic Properties of non-toxic Ca-based Perovskite CsCaCl ₃ : Insights from density functional theory	T.S. Kabore, A. Amarray, J. Alami, M. Dahbi Techno-Economic Evaluation of Olivine-Structured LiFePO ₄ Cathode Production using Continuous Stirred Tank Reactor (CSTR) for Cost-Effective Lithium-Ion Batteries
I. Lmachraa, L. Elmaazouzi, K. El Idrissi, A. Zeroual, M. El Idrissi, Z. Lakbaibi Computational study of photovoltaic performances of dye-sensitized solar cells (DSSCs) containing phosphonic acid as an anchor group: achievements and remarks	F.E. Khatta, Z. Mansouri, O. Mounkachi New phases of phosphorene as anode material for post-lithium-ion Batteries
N. Sfiani, E. Arouda Analysis of the thermal performance of a parabolic trough solar collector in the climate of Tetouan, Morocco	O. Thayfi, K. Khaless, R. Benhida Preparation of ion exchange membranes for electrodialysis in desalination
S. Boulif, M.R. Benmansour, A. Ait Baha, A. Oulakhir, A. Etahiri, R. Benhida	N. EL HALYA

Extraction and Recovery of Heavy Metals from Waste by Ion Flotation Technology I. Nori, K. Khallaki, S. Touil	Insights into the Role of Li ₃ AlF ₆ Coating in Mitigating Voltage and Capacity Decay of Li-Rich Li _{1.2} Ni _{0.13} Mn _{0.54} Co _{0.13} O ₂ Cathode
Advancing Sustainable Bioenergy: Integrated Biorefinery and Circular Economy Strategies for Bioethanol Production from Opuntia Ficus-indica Z. Aqachmar	Z. Chchiyai, A. Faik Halide-based solid electrolytes to achieve advanced All-Solid-State Li-ion Batteries
Perovskite solar cells for fostering resilience toward clean electrification of Africa: Energetic, Economic and environmental analysis S. Tijani, E. Bouddia, A. Faik	A. Azouni, A. Ben Hassen Trabelsi, A. Mabrouk El Asmi Action plan for a circular economy based on organic waste: current situation, potential for recovery and future prospects
Valorization of Energy Surpluses in an Industrial Site: Modeling, Simulation, Optimization and Performance Analysis	I. Bouziani, C. Elkadiri, A. Faik Theoretical Study on Nitrides for Ammonia Synthesis
	M. Kerroumi, M. Karbak, H. Afryate, A. El-Bchiri, B. Manoun, Y. Tamraoui, F. Ghamouss Transforming Low-Grade Manganese Ore into Mn ₃ O ₄ Cathode for Rechargeable Aqueous Zinc-Ion Batteries
END OF THE EAMix CONFERENCE	

