



CIERTE

INTERNATIONAL CONFERENCE ON RENEWABLE ENERGIES AND WATER TECHNOLOGIES

**JANUARY 25-27, 2024
BUMS, CASABLANCA, MOROCCO**



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TOPICS

- RENEWABLE ENERGIES AND ENERGY EFFICIENCY
- WATER AND WATER STRESS MANAGEMENT
- GREEN TRANSITION AND SUSTAINABLE DEVELOPMENT



CIERTE 2024 PROGRAM

CHAIRS

- PROF. M. TAHIRI, SOEV LABORATORY, FSAC CASABLANCA
- PROF. L.H. OMARI, LPMAT LABORATORY, FSAC CASABLANCA
- PROF. M. CHAFI, LIPE LABORATORY, ESTC CASABLANCA
- PROF. S. JEMJAMI, CAE LABORATORY, FST SETTAT



- ACCEPTED ARTICLES WILL BE PUBLISHED IN SCOPUS INDEXED JOURNALS AND BOOK



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Conférence Internationale sur les Energies Renouvelables et les Technologies de l'Eau (CIERTE2024)

International Conference on Renewable Energy and Water Technologies

CIERTE 2024 PROGRAM

THURSDAY JANUARY 25, 2024

08 :00 – 09 :00	Welcome and registration of participants
09 :00 – 09 :30	<p style="text-align: center;">Official opening ceremony – Room 1</p> <p>Honorary Committee</p> <ul style="list-style-type: none"> • Prof. Houssine AZEDDOUG, President of Hassan II University of Casablanca, Morocco. • Prof. Abdelaziz SOUKRI, Dean of Faculty of Sciences Ain Chock, Casablanca, Morocco • Prof. Rachid ESSAMOUD, Director of the Higher School of Technology, Casablanca, Morocco • Mohamed Smani (R&D), Hind Baddagh (APC), Hassan Saakhi (CCI-RKSM) • Organizing Committee Speech
09 :30 – 10 :00	<p style="text-align: center;">Plenary Conference 1– Room 1</p> <p>Prof. BERNABE MARI Photovoltaic Energy and Green Hydrogen production. The key for a zero-emission future</p> <p style="text-align: right;"><i>Moderators: A. Arbaoui, A. Bouich, M. Chafii</i></p>
10 :00 – 10 :30	<p style="text-align: center;">Plenary Conference 2 – Room 1</p> <p>Prof. FATHOLLAH VARNIK Shape memory polymers and their potential for energy storage</p> <p style="text-align: right;"><i>Moderators: B. Manoun, L.H. Omari, A. Tizliouine</i></p>
10 :30 – 10 :45	Discussion
10 :45 – 11 :15	Coffee break - Posters session 1
11 :15 – 11 :45	<p style="text-align: center;">Plenary Conference 3 – Room 1</p> <p>Prof. Mohammed TAHIRI L'Opportunité de réutilisation des eaux épurées dans les stations d'épuration de la zone périurbaine de Casablanca en vue de mieux gérer la ressource hydrique en périodes de pénurie d'eau</p> <p style="text-align: right;"><i>Moderators: A. Elhalil, M. Ettaki T. Chafik,</i></p>
11 :45 – 12 :45	<p style="text-align: center;">Panel – Room 1</p> <p style="text-align: center;">Quelle synergie entre le milieu universitaire, industriel et associatif pour la promotion d'un développement sobre en carbone et une croissance verte</p> <ul style="list-style-type: none"> • Ms Hind Baddag, Geocycle Director, LafargeHolcim Groupe • Mr. BERNABE MARI; Ms Amal Bouich • Mr. MOHYADINE TLEMÇANI • Mr. Mohamed Smani, Director, R&D Maroc Association • Mr. Hassan Saakhi, President of the Chamber of Commerce and Industry-Rabat Kenitra Sale-Maroc • Mr. Mohamed Tahiri, Governance Pole, International Academy on Scientific Francophonie • Ms. Asmaa ARBAOUIU <p style="text-align: right;"><i>Moderators: M. Smani, S. Jemjami, T. Mouhib</i></p>
Oral Sessions 1 (parallel sessions)	
12 :45 – 13 :45	<p style="text-align: center;">Topic 1. Renewable energies and energy efficiency – Room 1</p> <p style="text-align: right;"><i>Moderators: A. Arbaoui, A. Bouich, A. Tizliouine</i></p> <p>1. Abonner l'utilisation du gaz butane au Maroc : Etude énergétique, économique et écologique. <i>Echarradi Othmane, Benlafkih Abdessamad, Fahoume Mounir, Hadjoudja Abdelkader</i></p> <p>2. Comparative study of four types of clay used in the ceramics industry: Effect of firing temperature on the physical and thermal properties of clay bricks. <i>Abouloifa Walid, Ettaki Mohammed, Hayani Mounir Sanaa</i></p> <p>3. Contribution to the Influence of sunspots on solar irradiance variability during the solar cycle 24 <i>El Malki Mohammed, Hajjaj Charaf, Nebdi Hamid</i></p>

	<p>4. Effect of temperature variation on thermal properties of compressed soil-based bricks <i>Bakari Randa, Samaouali Abderrahim, Ouazizi Karima, Kanibou Fatima, Arbaoui Asmae</i></p>
	<p style="text-align: center;">Topic 2. Water and water stress management – Room 2 <i>Moderators: M. Chafi, N. Kamil, A. Moufti</i></p>
12 :45 – 13 :45	<p>5. Caractérisation des lixiviats de la décharge contrôlée de la ville de Fès Touzani Abdelaziz, Dimane Fouad, Tahiri Mohamed, El Hammoudani Yahya</p>
	<p>6. Characterization and valorization of Recycled Textile Waste: Application for treatment of wastewater from the textile industry Sakini Salma, Meftah Khadija, Jemjami Saloua, Moufti Ahmed, Khadija Ouladhaj Ali, Mabrouki Jamal</p>
	<p>7. L'élimination des colorants des rejets liquides par adsorption sur des fibres d'origine végétale Moussaoui Lhachmi, Bamaarouf Meriem, Saadi Latifa, Jalal Rachid, Waqif Mohamed, Saafadi Laila</p>
	<p>8. Advanced Harmonization of UV-Visible Spectroscopy with Cutting-Edge Chemometric Techniques for Simultaneous Assessment of Key Water Quality Indicators Meryem Nini, Mohamed Nohair</p>
	<p style="text-align: center;">Topic 3. Green transition and sustainable development – Room 3 <i>Moderators: S. Jemjami, M. Ettaki, A. Elhalil</i></p>
12 :45 – 13 :45	<p>9. Desalination of anchovy residues and their mixture with soybean meal for the production of poultry feed: Optimization of waste associations through response surface methodology (RSM) Boumendil Ilham, El Haimer Youness, Sisouane Mhammed, Safi Amal</p>
	<p>10. Ecological building materials based on mixtures of demolition waste, recovered pumice stone and marble sludge's Waste: Elaboration and Characterization Kouassi Abla Grace Leaticia</p>
	<p>11. La valorisation du biogaz : une solution innovante pour une énergie renouvelable polyvalente et durable Bhar Abderrahime, Jemjami Saloua</p>
	<p>12. Indicateurs clés pour optimiser la performance du système management environnemental : cas d'une société de travaux public (Maroc) Bakkass Soukaina</p>
13 :45 – 14 :30	Lunch break
14 :30 – 15 :00	<p style="text-align: center;">Plenary Conference 4 – Room 1</p> <p>Prof. Amine BENNOUNA Impact combiné du ralentissement de la croissance économique et de l'autoproduction sur la modération de la croissance de la demande d'électricité au Maroc <i>Moderators: B. Manoun, M. Tahiri, M. Chafi</i></p>
15 :00 – 15 :30	<p style="text-align: center;">Plenary Conference 5 – Room 1</p> <p>Prof. ILHAMI COLAK Digital Transformation and Energy Technologies <i>Moderators: Y. Naimi, L.H. Omari, N. Kamil</i></p>
15 :30 – 16 :00	<p style="text-align: center;">Plenary Conference 6 – Room 1</p> <p>Prof. MOHYADINE TLEMÇANI Smart Embedded Systems for Photovoltaic Applications: Research, Innovations and Business Models <i>Moderators: A. Arbaoui, Bernabé MARI, A. Bouich</i></p>
16 :00 – 16 :30	Discussion
16 :30 – 17 :00	Coffee break - Posters session 2
Oral Sessions 2 (parallel sessions)	
	<p style="text-align: center;">Topic 1. Renewable energies and energy efficiency – Room 1 <i>Moderators: T. Mouhib, M. Tlemçani, J. Louafi</i></p>
17 :00 – 18 :30	<p>13. Effect of the amount and size of argan nut shells particles on the thermal properties of a composite clay materials: Experimental characterization Ouazizi Karima, Samaouali Abderrahim, Bakari Randa, Kanibou Fatima, Arbaoui Asmae</p>
	<p>14. Elaboration and characterization of SnSe elaborated by electrodeposition Waderhman Keltoum, Lghazi Youssef, El Haimer Chaimaa, Bahar Jihane, Aynaou Aziz, Youbi Boubaker, Bimaghra Itto</p>
	<p>15. Evaluation of Photovoltaic Systems Performance using Satellites and Drones Digital imaging Laaroussi Karima, Harkani Assia, Jemjami Saloua, Benabdelouahab Tarik, El Aissaoui Abdellah</p>

	<p>16. Investigating the thermal behavior of microencapsulated phase change materials in recycled cotton textiles EL Majid Abdelkoddous, Younsi Zohir, Nicolas Youssef, Belouaggadia Naoual, El Bouari Abdeslam</p> <p>17. MPPT algorithm and control of the QZSI inverter used for PV power systems in standalone mode Jaoide Essaid, Outazkrit Mbark, El Aamri Faicel, Radouane Abdelhadi, Mouhsen Azeddine</p>	
17 :00 – 18 :30	<p style="text-align: center;">Topic 2. Water and water stress management – Room 2</p> <p style="text-align: right;"><i>Moderators: M. Chafi, N. Kamil, A. Tizliouine</i></p> <p>18. Management and Valorization of Rainwater by Alternative Techniques, Case of zone 1 of the University residence of Settat El Bouzidi Abdelhadi</p> <p>19. Optimization of drinking water treatment: A synergy of quality, economy and sustainability Khicha Souad, Mabrouki Jamal, El Hajjaji Souad</p> <p>20. Physico-chemical, bacteriological and virulo properties of treated wastewater at Had Soualem and Aeroport Mohamed V WWTPs and compliance with WHO and National standards for various reuses Zarri Meryem, Aite Ben Ichou Samah, Hiyane Hasnaa, Amraoui Fouad, Tahiri Mohamed</p> <p>21. Smart water telemeter based on infrared sensing Chakir Youness, Aaroud Abdessadek</p> <p>22. Elimination of BR46 dye by adsorption on Safi clay in purified raw state, characterization and valorization Asmaa Bennani Karim, Rais Zakia, Taleb Moustapha, Zarry Meryem, Mohamed Tahiri, Mounir Badia</p>	
	<p style="text-align: center;">Topic 3. Green transition and sustainable development – Room 3</p> <p style="text-align: right;"><i>Moderators: M. Ettaki, S. Jemjami, A. Moufti</i></p> <p>23. Natural wool as a fire-resistant material; technical safety textile Allam Ilham, Essaket Meryem, El Maliki Anas, Tahiri Mohamed, Cherkaoui Omar</p> <p>24. Recovery and recycling of concrete and its contribution rate to decarbonation of building sector Morsli Mourad, Tahiri Mohamed, Addou Rajae, Samdi Azzeddine</p> <p>25. Rosa canina aqueous extract: chemical characterization and green synthesis of silver and copper nanoparticles Outaki Meriem, Zefzoufi Manal, Sammama Amal, Sammama Hassna, Saadia Boulfane, Bouamama Hafida</p> <p>26. Use of Metakaolin and Fired Brick Waste in Geopolymer Production for Sustainable Construction Zineb Moujoud 1, Said Sair, Hanane Ait Ousaleh, Abdessalam El Bouari, Tanane Omar,</p> <p>27. Mechanical and Thermal Analysis of Compact Blocks Fabricated from Clay Stabilized with Wood Ashes or Crushed Waste from Traditional Pottery Bajji Said, Naimi Youssef, Saba Ahmed</p>	
	End of the first day	
	FRIDAY JANUARY 26, 2024	
	09 :00 – 09 :30	<p style="text-align: center;">Plenary Conference 7 – Room 1</p> <p>Prof. Ahmed ENNAOUI The Grand Challenge: Energy transition and Food-Energy-Water (FEW) Nexus <i>Moderators: Y. Naimi, L.H. Omari, T. Mouhib</i></p>
	09 :30 – 10 :00	<p style="text-align: center;">Plenary Conference 8 – Room 1</p> <p>Prof. Abdellah EL AISSAOUI Green Energy Transition for Sustainable Agriculture and Resilience to climat change <i>Moderators: S. Jemjami, M. Tahiri, M. Ettaki</i></p>
10 :00 – 10 :30	<p style="text-align: center;">Plenary Conference 9 – Room 1</p> <p>Dr. Amal BOUICH Optical and structural investigation of methylammonium lead perovskite mixed halide (I, Br, and Cl) on spin-coated zinc oxide <i>Moderators: M. Tlemçani, A. Tizliouine, M. Chafii</i></p>	
10 :30 – 10 :50	Discussion	
10 :50 – 11 :20	Coffee break – Posters session 3	

Oral Sessions 3 (parallel sessions)

Topic 1. Renewable energies and energy efficiency – Room 1

Moderators: A. El Aissaoui, A. Arbaoui, J. Louafi

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| 11 :20 – 12 :40 | <p>28. Numerical study of mixed convection flows around small-scale heat sinks: application to the cooling of electronic components.
Laktaoui Amine Fatima Zahra, El Alami Mustapha, Jadal Mariam, Semma Elalami</p> <p>29. Optical Analysis Of Geometry Effect On A Solar Cooker box Performance
Dihmani Nadia, Fatima Zmim, El Khatir Rahmouni, Samir Amraqui</p> <p>30. SCAPS-1D simulation of 2-Terminal Monolithic Perovskite/CISe Tandem solar cell
Moujoud Salaheddine, Hartiti Bouchaib, Touhtouh Samira, Belhora Fouad, Hajjaji Abdelowahed</p> <p>31. Spectroscopic and Dielectric Analysis of Heterocyclic Polymer containing n-Vinylcarbazole units: Predicting Promising Properties for Organic Solar Cells
Ninis Ouafae</p> <p>32. A PRACTICAL MODELING APPROACH FOR PHOTOVOLTAIC SOLAR CELLS WITH ONLY FOUR PARAMETERS
Sara Abdellaoui , Hassan Mharz</p> <p>33. Hydrogen storage properties of perovskite-type KMgH₃ under strain effect from first-principles calculations
Tair Melaid, Chafi Mohammed, Chami Lhaj El Hachemi Omari</p> |
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Topic 2. Water and water stress management – Room 2

Moderators: M. Chafi, M. Tahiri, T. Chafik

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| 11 :20 – 12 :40 | <p>34. Sustainability in integrated water resources management: systematic literature review
Rbaibi Oumaima</p> <p>35. Valorisation of rainwater by growing chickpeas: Experimentation in plantae
Berrada Sanae, Illoussamen Boutaina, Mazrha Abdelhadi, Atemni Ibrahim, El Barnossi Azzedin, Chetouani Ahmed, Merzouki Mohammed, Taleb Mustapha, Tounsadi Hanane, Rais Zakia</p> <p>36. Characterization physico-chemical and evaluation the performance of a wastewater treatment plant type natural lagooning with anaerobic digestion of the city of Skhirat Morocco
Lahlouhi Naima, Lotfi El Mostapha, Mohammed El Mahi, Achkir Abdelmajid</p> |
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Topic 3. Water Green transition and sustainable development – Room 3

Moderators: S. Jemjami, L.H. Omari, M. Ettaki

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| 11 :20 – 12 :40 | <p>37. Thermal-oxidative Ageing and lifetime prediction of the High-Density Polyethylene Pipes
Srii Ihssan, Naoual Belouaggadia, Mustapha Jammoukh, Latifa Elfarissi, Abdellah Zamma</p> <p>38. Thermo-physical characterization of a cementitious composite material for sustainable construction
Soulami Houda</p> <p>39. Carvacrol, camphor, and linalool / Al (111) interaction modelled using DFT, Monte Carlo, and Molecular Dynamics methods
Laihemdi Fathia, Barhoumi Ali, Chafi Mohammed, Omari Lhaj El Hachemi, Tizliouine Abdeslam</p> <p>40. First-principles computational study of double perovskite structure as material for solid-state sodium batteries
El Quaoubi Soukaina, Chafi Mohammed, Omari Lhaj El Hachemi, Tizliouine Abdeslam</p> <p>41. Enhancing Thermal Properties of Construction and Demolition Debris via Marble Powder By-Product Addition and Sintering
Hajar Sdira , Asmae Arbaoui , Tlemcani Mouhaydine , Mohammed Ali Arbaoui</p> |
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14 :30 – 15 :30

Lunch break

15 :30 – 16 :00

Plenary Conference 10 – Room 1

Dr.Khadija Haboubi

Gestion et valorisation des déchets solides-empreinte carbone

Moderators: L. Laasri, M. Tahiri, S. Jemjami

Oral Sessions 4 (parallel sessions)

Topic 1. Renewable energies and energy efficiency – Room 1

16 :00 – 17 :45	42. Structural, Electronic and Optical properties of novel double perovskites Rb ₂ Sn(Br _{1-u} I _u) ₆ (u = 0.25, 0.33, 0.42 and 0.5) for Photovoltaic Applications: A DFT study <i>El Rharib Abdelkhalek, Amine Abdelaziz, Zazoui Mimoun, Mir Yamina</i>
	43. Towards aerogel blanket for thermal insulation in buildings – Review <i>Ait Khouya Oumaima, Latifa Elfarissi, Naoual Belouaggadia, Mustapha Jammoukh, Abdellah Zamma</i>
	44. Enhancing InGaN/GaN quantum-well solar cells in Ga Polarity with Piezo-Phototronic Effects: Revealing the Influence of External Stress <i>Bousdra Hamza, Ben Afkir Noureddine, Meziane Jaafar, Zazoui Mimoun</i>
	45. Frequency doubling emission through intersubband transitions in GaAs/AlGaAs quantum wells <i>Salhi Wafaa, Rajira Amal, Samyh Abdelhak, Akabli Hassan, Abounadi Abdelhadi, Almaggoussi Abdelmajid</i>
	46. Synthesis and Characterization of Sprayed Cu ₂ MnSnS ₄ Thin Films for Photovoltaic Applications <i>El Otmani Rkia, El Manouni Ahmed, Almaggoussi Abdelmajid, Hamady Sidi Ould Saad</i>
	47. Effect of Rotational Speed on Properties of Sol-Gel Spin Coated Cu ₂ Fe _{0.5} Co _{0.5} SnS ₄ Thin Films for Solar Cell <i>Safia Drissi, Abdelkader El Kissani, Abdelaziz Abali, Dris Ait El Haj , Said El Massi, Melaid Tair, Lahcen Nkhaili , Kassem El Assali, Abdelkader Outzourhit</i>

Topic 2. Water and water stress management – Room 2

15 :30 – 17 :30	48. Recycling of effluents from a haemodialysis service: Comments from a public service located in the north center of Morocco <i>Sanae Berrada, Azzedin El Barnossi , Ghita Benjelloun Touimi , Laila Bennani , Mustapha Taleb, Zakia Rais, Tarik Sqalli Houssaini</i>
	49. Adsorption of methylene blue from textile industrial wastewater using fonctionalized textile fiber waste <i>Meriem Saadouni</i>
	50. Advanced Harmonization of UV-Visible Spectroscopy with Cutting-Edge Chemometric Techniques for Simultaneous Assessment of Key Water Quality Indicators <i>Meryem Nini, Mohamed Nohair</i>

Poster session

	<ul style="list-style-type: none"> • Ecological building materials based on mixtures of demolition waste, recovered pumice stone and marble sludge's Waste: Elaboration and Characterization; <i>Abla Grace Leticia Kouassi</i> • Elaboration and characterization of SnSe elaborated by electrodeposition; <i>Keltoum Waderhman, Youssef Lghazi, Chaimaa El Haimer, Jihane Bahar, Aziz Aynaou, Boubaker Youbi, Itto Bimaghra</i> • Future changes in surface runoff due to climate variability in the Bouregreg basin by integrating regional climate model output data in the GR2M hydrological model; <i>Kamilia Mahdaoui, Mohamed Tahiri</i> • Thermal properties of compressed earth bricks produced with Pennisetum alopecuroides fibers; <i>Hicham Elmoudnia</i> • Thermodynamic Activity of Ammonium Superphosphate in Aqueous Solutions at 333.15 K; <i>Loubna Ghallali</i> • Thermodynamic properties data of ternary system KBr-KH₂PO₄-H₂O at 298.15 K; <i>Soukaina Elhantati</i> • Elaboration and Characterization of Nanocomposite Films; <i>El Mahdi Bouiri, El Mahdi Bouiri, Lhaj El Hachemi Omari , Nabil Chakhchaoui, Omar Cherkaoui</i>
From 18 : 00	<ul style="list-style-type: none"> • Open Discussion • Certificate, Best price • Prospects • Cocktail

Sponsors List

