

Organized by



**UNITED**  
A non-profit organization

Scientific  
Group

**REN-2024**  
November 11-13, 2024 | Barcelona, Spain

## Tentative Program

2<sup>nd</sup> International Conference on

# Renewable Energy

November 11-13, 2024 | Barcelona, Spain



## ABOUT REN

Join us at the International Conference on Renewable Energy (REN) in Barcelona, Spain and get a vivid exposure to diversified talks sessions being held here. Be a part of our insightful audience and branch your network with our cordially invited guest speakers and delegates holding eminent positions in their respective institutions and firms.

The Second International Conference on Renewable Energy (REN 2024) serves as the ultimate podium that helps spread knowledge & information in the world. Our conference draws the interest of eminent researchers and scientists, who together tend to resonate fantastic views through their hub of knowledge and experience that very well leads to the development of the world.

## AGENDA

**REN 2024** covers vast topics that entice our audience and maintains a well-focused ambience throughout the convention. Academicians, Delegates, Businessmen, Company Representatives all gather here to exchange information and ideas both needed for their mutual benefits. Researchers showcase their set of thesis that can indeed make a difference and seek for more innovation which increases the potency of their work.

## ABOUT THE ORGANIZER

USG-United Scientific Group (A non-profit scientific organization) is an expert-driven initiative with a vision to: Identify and bridge gaps in knowledge by creating and implementing new scientific and technology-specific platforms, forums and products to discuss bottleneck issues and incorporate recent research advances. Publish and promulgate innovative research findings with an ethical and stringent review process to make a step to change in the fields of science and technology. Partner business and science for the translation of scientific discoveries and innovative ideas into implementable solutions and products which benefit mankind.

## SCIENTIFIC SESSIONS

- Solar Energy
- Wind Power Energy
- Hydro Power
- Geothermal Energy
- Hydrogen and Fuel Cells
- Biomass (Biofuel, Biogas and Biomass)
- Photovoltaic cells
- Material sciences
- perovskite and piezoelectric cell
- Nuclear Energy
- Wave Energy
- Desalination
- Sustainable and Clean Energy
- Power Energy Management
- Smart Grids and Simulations
- Global Challenges in Energy
- Energy storage and Conversion
- Fuel Cells and Applications
- Renewable Energy and Grid Integration
- Environment & pollution issues
- Nano energy
- Energy & AI
- Carbon Neutrality
- Carbon Capture Science & Technology

**Note:** Last minute changes due to functional, private or organizational needs can be necessary. The event organizer accepts no liability for additional costs caused by a change of program.

**Program is subjected to change**

## Plenary Presentation

(40 minutes)



**Michel Armand**, CIC energiGUNE, Spain  
**Polymer electrolyte batteries, past, present and future**

## Keynote Presentations

(30 minutes)



**Dr. Emilio Nieto Gallego**, CNH2- National Hydrogen Center, Spain  
**Hydrogen: present and future**



**Mohamed Khayet**, University Complutense of Madrid, Spain  
**Photo-thermally heated membranes for desalination by membrane distillation**



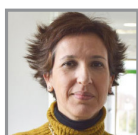
**M A Hannan**, Sunway University, Malaysia  
**Energy Storage Integrated Power Grid for a Net-Zero Future**



**Yoon-Bong Hahn**, Jeonbuk National University, Korea  
**Efficient and Stable Perovskite Solar Cells with Graphene-Based Functional Composites**



**Carlos del Canizo**, IES-UPM, Spain  
**Solar photovoltaics at the heart of a sustainable energy system: the challenges ahead**



**Monica Aguado Alonso**, CENER, Spain  
**TBA**



**Pedro Gómez**, ICN2- NEO-Energy Group Leader, Spain  
**Energy Storage, Enabling the Transition to a Sustainable Energy Model**

## Oral Presentations

(18+2 minutes)

**Ralph-Uwe Dietrich**, German Aerospace Center, Germany  
**Efficient European Biomass Utilization for Sustainable Aviation Fuels**

**BANETO Mazabalo**, Centre d'Excellence Régional pour la Maîtrise d'Electricité (CERME), Université de Lomé, Togo  
**Simultaneous effect of precursor source and concentration on structural, morphological and optical properties of ZnO nanostructured thin films for photovoltaic applications**

**Salim Daccache**, INSA Toulouse, France  
**Magnetically induced heterogeneous catalysis for energy storage applications: methanation of CO<sub>2</sub>**

**Maria Blecua de Pedro**, FUNDACION CIRCE, Spain  
**Chemical recycling of photovoltaic modules, wind blades, and EV batteries in Europe: current situation, regulations, and technologies**

**Yi Jing Chan**, University of Nottingham, Malaysia  
**Optimisation of Biogas Production from Anaerobic Digestion of Food Waste**

**Jakob Albert**, Hamburg University, Germany  
**3D-Printed Raney-Cu POCS as Promising New Catalysts for Methanol Synthesis**

**Elisa Moretti**, Ca' Foscari University of Venice, Italy  
**Nanomaterials by Design: Tailored Morphology for Environmental Challenges**

**Sara Rubio**, National Hydrogen Center (CNH2), Spain  
**FCH2RAIL Project: Development of a modular Hydrogen Refuelling Station prototype for Heavy Duty Vehicles**

**Cristina Alonso Egido**, National Hydrogen Center (CNH2), Spain  
**Advanced material and Reactor for ENERGY storage tHrough Ammonia (ARENHA Project)**

**Mark bomberg**, Clarkson University, Potsdam NY, USA, Poland  
**New affordable and universal building technology can slow climate change.**

**Anna Kornushchenko**, University of Münster, Germany  
**Formation of Cu micro- and nanostructures for potential application as 3D current collector in Li-ion and Li-metal batteries**

**Pilar de la Cruz**, UCLM, Spain  
**CHALLENGES OF MOLECULAR DESIGN OF MATERIALS FOR ORGANIC SOLAR CELLS**

**Vladimir Novotny**, Northeastern University Boston, MA  
**Changing wastewater and waste solids management energy uses and GHGs emitting techniques to integrated renewable hydrogen, energy, and resources production systems with negative GHG emissions**

**Xi Jiang**, Queen Mary University of London, United Kingdom  
**Insight into Pollutant Formation of Ammonia and Ammonia-Hydrogen Combustion Utilisation**

**Valentina Stojceska**, Brunel University London, United Kingdom  
**Sustainability assessment of a Novel Solar Energy Application in industrial processes**

**Yao BOKOVI**, Centre d'Excellence Régional pour la Maîtrise d'Electricité (CERME), Université de Lomé, Togo  
**Study of the transient stability of the electrical transmission network of the Electric Community of Benin (CEB) using PowerWorld software Sentence Case**

**Ana Patricia Talayero Navales**, FUNDACION CIRCE, Spain  
**Estimating Photovoltaic Inverter Production with Confidence Intervals**

**Musse Mohammud Ahmed**, Unimas, Malaysia  
**Novel Algorithm Application Development to the Extra-large scale optimal solar energy sites identification.**

**Laura Simonelli**, ALBA synchrotron, Spain  
**Operando multi-edge XAS to unlock the Co removal effect in Li- and Mn rich NMC cathodes**

**Adekunle Akim Salami**, Centre d'Excellence Régional pour la Maîtrise d'Electricité (CERME), Université de Lomé, Togo

**Solar irradiance prediction using the hybrid Support Vector Regression and Long Short-Term Memory LSTM-SVR approach**

**Yawovi NOUGBLEGA**, Centre d'Excellence Régional pour la Maîtrise d'Electricité (CERME), Université de Lomé, Togo

**Study of thermoelectric efficiency for combined and shunt solar chimneys via vented photovoltaic panels with multiple inlets**

**Annika Bjorn**, Linkoping University, Sweden

**Alternative operational approaches to enable more biomethane in biogas processes**

**ANTONIA SONIA ALVES CARDOSO DINIZ**, PUC MINAS, Brazil

**The Contribution of Photovoltaic Solar Energy for Brazil's Electricity Matrix**

## Poster Presentations

**Mohamed Khayet**, University Complutense of Madrid, Spain

**Solar membrane distillation process using self-heating membrane**

**Mohammed Mansour Almansour**, Exeter University, United Kingdom

**Life Cycle Assessment of Waste to Energy**

**NGO DUC VU**, Kunsan National University, Korea (South)

**Framework for seismic fragility analysis of suction bucket supported offshore wind turbine considering site-specific effect**

**Marija Macenic**, University of Zagreb, Croatia (Hrvatska)

**Technical approaches to the use of abandoned wells for geothermal energy utilization – project INTERREG CE TRANSGEO experiences**

**Dorothea Voss**, Hamburg University, Germany

**Pioneering Strategy for Simultaneous Humic Acid Valorization and Homogeneous Catalyst Recycling using Nanofiltration**

**EunYoung Kim**, Korea Institute of Civil Engineering & Building Technology, Korea (South)

**Strategies for Utilizing Building Energy through the Construction of Modular Vertiport**

**Tae-Jun Yeom**, Korea Institute of Civil Engineering & Building Technology, Korea (South)

**Research on the Design and Considerations of UAM Vertiports and Modular Energy Storage Systems**

**Jiwon Jang**, Korea University, South Korea

**Enhancing the piezoelectric coefficient of SrTiO<sub>3</sub> nanocubes and PVDF film deposited by supersonic spraying for energy-harvesting nanogenerators**

**Jungwoo Huh**, Korea University, South Korea

**Tunable pseudocapacitance of electrospun carbon/iron–vanadium oxide nanofibers for high-energy-density flexible supercapacitors**

**Woojin Lim**, Korea University, South Korea

**Flexible high-power piezoelectric nanogenerator fabrication: Augmenting electroactive  $\beta$ - and  $\gamma$ -phases of PVDF with supersonically sprayed Sr<sub>2</sub>SnO<sub>4</sub> nanorods**

**Kapil Kedar Tirpude**, IIT Bombay, India  
**Investigation of TiVxZr1-xCrNi Multi-component Alloys for Hydrogen Storage**

**Wissal MAKBOUL**, Faculty of Sciences, Mohammed V University in Rabat, Morocco  
**Optimization of Green Hydrogen Production through Renewable Energies: Innovative Methods and Materials**

**Amal Arharbi**, Faculty of Sciences, Mohammed V University in Rabat, Morocco  
**Fluorine, Nitrogen doping, and triaxial strain effects on the structural stability and hydrogen storage properties of lithium hydride LiH: DFT investigation**

### Titles to be announced

**Qingqing Li**, Towson University, Towson, MD  
**Yet to be released**

**Alessio Marchesin**, Terna Spa, Italy  
**Yet to be released**

**Dong-Hyawn Kim**, Kunsan National University, Korea(south)  
**Yet to be released**

**Young Jin Kim**, Kunsan National University, Korea(south)  
**Yet to be released**

**Andres Sela Barrial**, ArcelorMittal Global R&D, Spain  
**Yet to be released**

**Karel Borovec**, Energy Research Centre, Czech Republic  
**Yet to be released**

**Seyed Mahmood Marashi**, Fakoore Sanat Tehran Co., Iran  
**Yet to be released**

**Sadegh Shoghisarkhosh**, Fakoore Sanat Tehran Co., Iran  
**Yet to be released**

**Urszula Chandlarska**, Orlen S.A., Poland  
**Yet to be released**

**Przemyslaw Rosul**, Orlen S.A., Poland  
**Yet to be released**

### Presentations Yet to be confirmed

**Michele Tartaglia**, Polytechnic of Turin, Italy  
**Photovoltaic Power Plants development and improvement: design and installation rules based on fire risks**

**Mahfoudh Raissi**, KELENN Technology, France  
**Digital Printed of Efficient Semi-transparent Dye-Sensitized Solar Cells(ST-DSSCs)**

**Tanushree Majhi**, CSIR-NPL, India  
**Multifunctional Lewis base additive for defect passivation in perovskite solar cell**

**Vladislav Poulek**, Czech University of Life Sciences, Czech Republic  
**PV panels laminated by soft polysiloxane gel – New simple eco friendly recycling method**

**Bader Alshuraiaan**, Kuwait University, Kuwait  
**Natural Convection Heat transfer and Fluid Flow inside an L-Shaped Cavity with one Flexible Wall**

**Khalil Khanafer**, University of Michigan, Ann Arbor, MI  
**Enhancing Electric Vehicle Battery Pack Cooling: Thermal Modeling of Porous Medium Integrated with PCM**

**Antonio Brasil Junior**, Universidade de Brasalia, Brazil  
**Energy Transition for Brazilian Amazon Small Villages**

**Maciej Zajkowski**, Bialystok University of Technology, Poland  
**Assessment of light pollution emitted from greenhouses**

**Beatriz Castillo-Tellez**, Universidad de Guadalajara, Mexico  
**Freezing water desalination of water using solar thermal power and energy recovery**

**Nandan Kumar**, Shiv Nadar Institute of Eminence, Delhi (NCR), India  
**Analyzing Water Depth of Conical Solar Still using N- identical Photovoltaic Thermal Compound Parabolic Concentrator Collectors**

**Chaudhry Ghulam Farid**, University of Barcelona, Spain  
**Enhancing Cycling Stability of Lithium-Ion Battery Anodes through MoO<sub>3</sub> Nanoparticle Functionalization on Silicon Nanowire Arrays**

**Shubhadeep Majumdar**, University of Barcelona, Spain  
**Enhancing Hydrogen Evolution: Carbon Nanotubes as a Scaffold for Mo<sub>2</sub>C Deposition via Magnetron Sputtering and Chemical Vapor Deposition**

**Anita Trenczek Zajac**, AGH University of Krakow, Poland  
**Photoactive heterostructure for solar energy conversion**

**Oday Daghagheleh**, University of Leoben, Austria  
**Instant Hydrogen production utilizing plasma technology**

**Kiana Niazmand**, University of Erlangen-Nuremberg, Germany  
**The economics of global green ammonia trade –“Shipping Australian wind and sunshine to Germany”**

**Myriam Amezcua**, Mexican Institute of Petroleum, Mexico  
**The role of biomass valorization in Mexico's energy transition**

**Ana Kekelj, HOPS**, Croatia (Hrvatska)  
**Advanced data quality monitoring for energy system management**

**Francisco Haces Fernandez**, Texas A&M University Kingsville, TX  
**Solar energy assessment to supply Electric School Buses in the United States**

**Mahnoosh Shajiee**, Sharif University of Technology, Iran  
**Design of a Robust Dynamic Sliding Mode Observer for a Class of Nonlinear Systems Applied in Wind Turbines**

**Anindita Das**, Indian Institute of Technology Guwahati, India

**Catalytic Hydrothermal Liquefaction-hydrodeoxygenation of lignin in presence of sub or supercritical solvent**

**Orlando Salcedo-Puerto**, LUT University, Finland

**Life cycle assessment of alternative pulp mill sludge treatment methods in Finland**

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**Presentation Slots available!**  
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We Wish to See You at

# REN-2024

## Barcelona, Spain

**Venue**

Hotel Occidental Atenea Mar,  
Paseo García Faria 37-47, 08019 Barcelona, Spain

Organized by



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