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# **GRCRES2024**

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## **CONFERENCE PROGRAM**

Global Research Conference on  
**RENEWABLE ENERGY  
AND SUSTAINABLE  
DEVELOPMENT**

September 23-25, 2024 | Munich, Germany

## Day 01: Monday, September 23, 2024

9:00-09:15	REGISTRATIONS	
09:15-09:35	Opening Lecture at Meeting Room Conference Chair: Ralph Kennel, Technical University of Munich, Germany Conference Co-Chair: Friedrich Grimm, RES-Institute, Germany	
09:35-10:20	Title: "How Can Predictive Control Support the Use of Renewable Energy Sources"  Ralph Kennel, Technical University of Munich, Germany	P
10:20-11:05	Title: "Quantum Mechanically Effective Device for Permanent Magnetic Plasma Confinement in a Fusion Reactor"  Friedrich Grimm, RES-Institute, Germany	P
11:05-11:20	COFFEE BREAK - FOYER	
11:20-12:05	Title: "Bicarbonate-based Microalgal Cultivation for Efficient Carbon Fixation and Biorefineries"  Lee Duu-Jong, City University of Hong Kong, Hong Kong	P
12:05-12:50	Title: "Key Technologies for the Innovative Solar Driven Heating and Cooling Systems"  Xudong Zhao, University of Hull, UK	P
12:50-13:00	GROUP PHOTO	
13:00-14:00	LUNCH BREAK - RESTAURANT	
14:00-14:35	Title: "Renewable Energy Park for District Heating"  Jes Donneborg, Aalborg CSP, Denmark	K
14:35-15:10	Title: "Affordability is the Focus of the Near Zero Energy Houses"  Mark Bomberg, Clarkson University, USA	K
Session 01	RENEWABLE AND RECYCLABLE ENERGY	
	WIND ENERGY, CLEAN ENERGY	
15:10-15:35	Title: "Explanatory Analysis and Machine Learning for City-Scale EV Charging Demand Prediction"  Arbel Yaniv, Tel Aviv University, Israel	I

15:35-16:00	Title: "Proton Fast Ignition as a Path to Commercial Fusion Energy" Wolfgang Theobald, Focused-Energy GmbH, Germany	I
16:00-16:15	COFFEE BREAK - FOYER	
16:15-16:40	Title: "Overcoming Barriers to the Application of Sustainable Aviation Fuels: a Production and Certification Perspective" Xinran Luo, Beihang University, China	I
16:40-17:05	Title: "Infrasound and Wind Turbines" Frank Kameier, Duesseldorf University of Applied Sciences, Germany	I
17:05-17:30	Title: "Navigating the Transition to Green Hydrogen: Sustainability Challenges and Opportunities" Lydia Maketo, Technical University of Munich, Germany	I
END OF DAY 1		

## Day 02: Tuesday, September 24, 2024

09:00-09:35	Title: "Energy Scenarios for Austrian Industry towards Climate Neutrality" Andreas Windsperger, Vienna University of Technology, Austria	K
09:35-10:10	Title: "Sustainable Energy by Waves Trap or Hydroelectric at Sea" Giulio Teodoro Maellaro, GECO S.R.L., Italy	K
10:10-10:45	Title: "Waste Plastics Conversion to Hydrogen by Pyrolysis and in Line Catalytic Steam Reforming" Gartzen Lopez, University of the Basque, Spain	K
10:45-11:00	COFFEE BREAK - FOYER	
Session 02	HETEROGENEOUS CATALYSIS	
	CATALYSIS FOR RENEWABLE SOURCES	
11:00-11:25	Title: "Highly Pure Hydrogen Production via Intensified Bio-oil Sorption-Enhanced Steam Reforming over Wastes-Driven-Stabilized CaO-NiO Bifunctional Materials" Eslam Elsaka, Université Laval, Canada	I

11:25-11:50	Title: "Ru/CeO <sub>2</sub> -Al <sub>2</sub> O <sub>3</sub> Based Materials as Efficient Catalysts for Ammonia Synthesis: A Kinetic Analysis"	
	Javier Arroyo-Caire, Universidad Loyola Andalucia, Spain	
11:50-12:15	Title: "Enhanced Phenol Degradation via Sonication-Activated PMS and CoCr <sub>2</sub> O <sub>4</sub> Nanoparticles: Efficiency and Degradation Mechanism"	
	Delvin Aman, Egyptian Petroleum Research Institute, Egypt	
Session 03	ENVIRONMENTAL IMPACT AND SUSTAINABILITY, SUSTAINABLE DEVELOPMENT	
	ENERGY CONVERSION AND STORAGE	
	POWER AND ENERGY ENGINEERING	
12:15-12:40	Title: "Triboelectric Nanogenerator for Sustainable and Renewable Energy: Tribo-Material, Surface Structure and Applications"	
	Chung Chen Kuei, National Cheng Kung University, Taiwan	
12:40-13:05	Title: "Disrupting the Status Quo: Reconfigurable Batteries"	
	Manuel Kuder, BAVERTIS GmbH, Germany	
13:05-14:00	LUNCH BREAK - RESTAURANT	
14:00-14:25	Title: "From Waste to Wonder: How Biochar can Change our Environment, Human Health, and Animal Welfare"	
	Juliana Schultz, Federal University of Parana, Brazil	
14:25-14:50	Title: "Title: A Regional Lens for Renewable Energy Scenarios using CEVESA Model: The Case of Portugal"	
	Tiago Miguel, University of Aveiro, Portugal	
P001	Title: "The Effect of Varying the Air Flow Velocity in a Solar Air Heater on Dryer Performance Under No Load Conditions"	
	Bhanudas B.Takale, BITS Pilani- K.K Birla Goa Campus, India	
P002	Title: "Polymer-Confined Pyrolysis Promotes the Formation of Ultrafine Single-Phase High-Entropy Alloys: A Promising Electrocatalyst for Oxidation of Nitrogen"	
	Hele Guo, KU Leuven, Belgium	
END OF DAY 2		

**Day 03: Wednesday, September 25, 2024**  
**London Time Zone (GMT+1)**

VIRTUAL PRESENTATIONS		
09:00-09:25	Title: <b>"Prediction Model of Photocatalytic Hydrogen Production Based on Machine Learning and the Interactive Interface Design"</b>	I
	Yan Yang, University of Shanghai for Science and Technology, China	
09:25-09:50	Title: <b>"Hydrogen Production Characteristic and Heavy Metal Migration Mechanism of Super-accumulated Plants Gasification in Supercritical Water"</b>	I
	Liu Shanke, Shanghai Jiao Tong University, China	
09:50-10:15	Title: <b>"The Use of Smart Apps to Promote Energy-Saving: Householders' Response and Behavioural Change in Hong Kong (A Case Study of New Territories East District)"</b>	I
	Lam Hin Shun Thomas, Hong Kong Baptist University, Hong Kong	
10:15-10:40	Title: <b>"Life Cycle Environmental and Economic Benefit Analysis of Sustainable Aviation Fuel Based on Cellulosic Biomass"</b>	I
	XiaoJun Yang, Civil Aviation University of China, China	
10:40-11:05	Title: <b>To be Updated</b>	I
	So Stuart, University of Exeter, UK	
11:05-11:30	Title: <b>"Preserving Cultural Diversity in Rural Africa Using Renewable Energy"</b>	I
	Emil Roduner, University of Stuttgart, Germany	
11:30-11:55	Title: <b>"Mixing Induced Advanced Oxidation Process: CFD Simulations and Experimental Measurement"</b>	I
	Arijit Ganguli, Ahmedabad University, India	
11:55-12:40	Title: <b>"What, Why and How Hydrogen Production using Functional Nanomaterials"</b>	P
	Tokeer Ahmad, Jamia Millia Islamia University, India	



12:40-13:05	Title: "Application of Artificial Intelligence for the Development of New Materials in Green Hydrogen Production"	I
	Enio Pontes de Deus, Federal University of Ceará, Brazil	
13:05-13:50	Title: "Greenhouse Gases as Sustainable Feedstocks"	P
	Chao-Jun Li, McGill University, Canada	
13:50-14:35	Title: "Calixarene Based Nanocomposite Membranes for Clean Energy and Clean Water Applications"	P
	(Neal) Tai-Shung Chung, National University of Singapore, Singapore	
14:35-15:20	Title: "The Novel Hyperfusions without the Coulomb Barrier and Their Industrial Realization"	P
	Ruggero Maria Santilli, Hadronic Technologies Corporation, USA	
15:20-15:45	Title: To be Updated	I
	Maria C Iliuta, Université Laval, Canada	
15:45-16:30	Title: To be Updated	P
	Chao-Jun Li, McGill University, Canada	
<b>END OF THE CONFERENCE</b>		

2<sup>nd</sup> Global Research Conference on

# RENEWABLE AND SUSTAINABLE ENERGIES

December 04-06, 2025  
Milan, Italy

UPCOMING IN  
**2025**



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**REGISTRATIONS  
OPEN!**