

Green Hydrogen Generation and its Application as a Fuel

1st HyGenWorkshop

Program Schedule

Conference time is based on the UTC+2 time zone of Italy

8th April, 2024

Day 1

Inaugural Session: 10:00 AM-10:35AM

Introductory Lecture: Prof. Patrizia Bocchetta, Head of CFA Lab, Department of Engineering for Innovation, University of Salento (Italy)

Institutional Welcome: Prof. Antonio Ficarella, Director Department of Engineering for Innovation, University of Salento (Italy)

Keynote speaker 1: Prof. Pasquale Daniele Cavaliere, University of Salento (Italy)

Title of Talk: Hydrogen employment in Iron making

Timings: 10:35AM-11:10AM

Keynote speaker 2: Prof. Adolfo Iulianelli, CNR-ITM, Rende, CS (Italy)

Title of Talk: Hydrogen and membrane engineering in the field of Green Energy and Sustainable Processes

Timings: 11:10AM-11:45AM

Invited 1: Prof. Oleksii Pirotti, Institute for Sustainable Energy, University of Malta (Malta)

Title of Talk: Prospects for offshore hydrogen production with FLASC Energy Storage System integration in the Mediterranean

Timings: 11:45AM-12:10PM

Invited 2: Prof. Zhang Bai, College of New Energy, University of Petroleum (China)

Title of Talk: Solar-biomass gasification for green hydrogen production and the cross-regional hydrogen application

Timings: 12:10PM-12:35PM

Invited 3: Prof. Carlos Alberto Martinez-Huitle, Institute of Chemistry, Federal University of Rio Grande do Norte, Federal University of Rio Grande do Norte, Campus Universitario (Brazil)

Title of Talk: Replacing oxygen evolution reaction in water splitting process by electrochemical energy-efficient production of high-added value chemicals with co-generation of green hydrogen

Timings: 12:35PM-01.00 PM

Oral 1: Ms. Arooj Asif, Department of Engineering for Innovation, University of Salento, Lecce (Italy)

Title of Talk: Photocatalytic H₂ Production Through Water Splitting Processes Promoted by Dye-Sensitized Semiconductors

Timings: 01.00 PM -01:20PM

Oral 2: Ms. Alessandra Pellegrino, Department of Engineering, Università degli Studi di Palermo, Palermo (Italy)

Title of Talk: Experimental and economic investigation on Anion-Exchange Membrane Electrolyser using different cell components

Timings: 01:20PM-01:40PM

9th April, 2024

Day 2

Keynote speaker 3: Prof. Carmelo Lo Vecchio, CNR-ITAE, Messina (Italy)

Title of Talk: Innovative tandem photo-electrochemical cells for green hydrogen production

Timings: 10:00AM-10:35AM

Keynote speaker 4: Prof. Alessandro Tamburini, University of Palermo (Italy)

Title of Talk: Electro-membrane processes for green hydrogen production

Timings: 10:35AM-11:10AM

Invited 4: Prof. Matteo Morciano, Energy Department, Politecnico di Torino, Torino (Italy) Title of Talk: Solar passive water desalination for hydrogen production

Timings: 11:10AM-11:35AM

Invited 5: Prof. Johannes Binder, Faculty of Physics, University of Warsaw (Poland)

Title of Talk: Hydrogen Generation by Radiolysis of Water at the Interface between Hexagonal Boron Nitride and Sapphire

Timings: 11:35AM-12:00AM

Invited 6: Prof. Alexis Spalletta, Unité Transformations & Agro-resources - Univ. Artois, UniLasalle, ULR7519, F-62408 Béthune, France

Title of Talk: An artificial leaf mimicking photosynthesis to produce H₂

Timings: 12:00AM-12:25PM

Invited 7: Prof. Teresa Donateo, Department of Engineering for Innovation, University of Salento, Lecce (Italy)

Title of Talk: On the use of PEM fuel cells in aerospace propulsion: from small UAVs to ultralight aviation

Timings: 12:25PM-12:50PM

Oral 3: Mr. Giovanni Campisi, Department of Ingegneria, Università degli Studi di Palermo, Palermo (Italy)

Title of Talk: Proton Exchange Membrane Water Electrolysers (PEMWEs): a 3D Computation Fluid Dynamics Analysis

Timings: 12:50PM-1:10PM

Oral 4: Mr. Zehua Dou, Chair of Measurement and Sensor System Technique, University of Technology, Dresden, Saxony (Germany)

Title of Talk: Monitoring Water Content in Membrane Electrode Assembly of Proton Exchange Membrane Fuel Cells using Ultrasound

Timings: 01:10PM-01:30PM

10th April, 2024

Day 3

Keynote speaker 5: Prof. Yogesh Kumar, University of Delhi (India)

Title of Talk: Carbon-based materials for hydrogen generation

Timings: 10:00AM-10:35AM

Invited 8: Prof. Athanasios Tiliakos, ICSI Energy Department, National R&D Institute for Cryogenic and Isotopic Technologies (ICSI), RamnicuValcea (Romania)

Title of Talk: Additive manufacturing of bipolar plates for PEM fuel cells using high-load metal-polymer composite filaments

Timings: 10:35AM-11:00AM

Invited 9: Prof. Saim Emin, Materials Research Laboratory, University of Nova Gorica, Ljubljana (Slovenia)

Title of Talk: Colloidally Synthesized Inorganic Nanomaterials for Electrocatalytic Hydrogen Generation

Timings: 11:00AM-11:25AM

Invited 10: Prof. Adele Brunetti, National Research Council, CNR, Institute on Membrane Technology, Rende (Italy)

Title of Talk: Sustainable valorization of water CO₂ into e-fuel through catalytic and photocatalytic membrane processes

Timings: 11:25AM-11:50AM

Invited 11: Dr. Laxmi Narayan Tripathi, Department of Physics, Vellore Institute of Technology, Vellore (India)

Title of Talk: Green-hydrogen production using quantum materials

Timings: 11:50AM-12:15PM

Invited 12: Prof. Maduraiveeran Gunasekaran, SRM Institute of Science and Technology, Tamil Nadu (India)

Title of Talk: Enhancement of HER performance of CQDs in real-time electrolysis

Timings: 12:15PM-12:40PM

Oral 5: Mr. Qiming Qian, Department of Industrial and Systems Engineering, The Hong Kong Polytechnic University, Hong Kong (China)

Title of Talk: Techno-economic analysis and carbon footprint analysis of co-gasification of mixed plastic waste and biomass for hydrogen production

Timings: 12:40PM-01:00PM

Oral 6: Mr. Samid Khan, Department of Mechanical Engineering, University of Petroleum and Energy Studies, Dehradun (India)

Title of Talk: Hydrogen storage in composite pressure vessels

Timings: 01:00PM-01:20PM

Valedictory Session: 1:20PM-1:30PM