



PROGRAMME

2nd International Congress on Sustainable Energy and related Technologies

Palermo (Italy), August 31 – September 4, 2026

Organized by



Università
degli Studi
di Palermo



Palermo will host the 2nd International Congress on Sustainable Energy and Related Technologies (ICSET 2026) from August 31 to September 4, 2026. Rich in history, culture, and Mediterranean influences, the city offers an inspiring setting where innovation meets heritage. ICSET 2026 will bring together international energy leaders to share knowledge and solutions for the energy transition, addressing the balance between energy security and climate goals. The programme will include plenary and keynote sessions, invited talks, oral presentations, and exhibitions.

31 AUGUST — NH Palermo Hotel (Foro Italico Umberto I, 22/B)

Registration Desk: 18.00-20.00

18.00 – 20.00 | REGISTRATION & WELCOME COCKTAIL

at NH Palermo Hotel, Foro Italico Umberto I, 22/B

Upon check-in at the Registration Desk, you will receive your personal badge, conference kit, and tickets for the social events. Accompanying guests will receive their own badge and tickets. Admission to all social events is permitted only upon presentation of both the personal badge and the relevant ticket.

Day 1 | 1 SEPTEMBER — Teatro Stabile al Massimo (Piazza Verdi, 9)

Registration Desk: 8.00-13.00

9.00-9.15 | OPENING REMARKS

Chairs: Claudia D'Urso and Antonio Salvatore Vita, Hyland Enterprise, Italy

PLENARY SESSIONS

Chair: Antonino Salvatore Aricò, CNR, Italy

9.15-10.05 | (40'+10'):

Luigi Crema, Bruno Kessler Foundation, Italy

Hydrogen in Europe: Development Perspectives and the Role of Research

10.05-10.55 | (40'+10'):

Alexandr N. Simonov, Monash University, Australia

Redox-Mediated Electrosynthesis of Ammonia from Renewables

10.55-11.25 COFFEE BREAK

11.25-12.15 | (40'+10'):

José A. Odriozola, University of Seville, Spain

Tandem Catalysis: One-Pot SAF Synthesis from CO₂

12.15-13.05 | (40'+10'):

Juergen Garche, Ulm University, Germany

High Sustainability and Environmental Requirements for Batteries and Battery Safety

13.05-13.25 | Special Award Presentation

Chair: Antonio Salvatore Vita, Hyland Enterprise, Italy

13.25-13.35 | CLOSING REMARKS

Chairs: Claudia D'Urso and Antonio Salvatore Vita, Hyland Enterprise, Italy

Day 1 | 1 SEPTEMBER — NH Palermo Hotel (Foro Italico Umberto I, 22/B)

Registration Desk: 15.00-18.00

Room 1 - ENRICO	Room 3 - GUGLIELMO
IAGE ITALY ROUND TABLE Challenges and perspectives of green energy in the next decade Chair: Adolfo Iulianelli, ITM-CNR, Italy	ADVANCED BATTERY MATERIALS AND CELL DESIGN Chair: Artur Bekisch, Fraunhofer - Institut für Keramische Technologien und Systeme IKTS, Germany
15.30-17.30	15.30-15.50
15.30-17.30 ROUND TABLE (120 min) Invited speakers: <u>Luigi Crema</u> President of Hydrogen Europe Research & Director of FBK Institute <u>Vincenzo Palma</u> Full Professor at University of Salerno & Vice-President of IAGE-Italy <u>Ozgur C. Colpan</u> Full Professor at Dokuz Eylul University & President of IAGE-Türkiye <u>Leonarda Liotta</u> Research Director at the National Research Council of Italy <u>Jan Veres</u> Researcher at VSB-Technical University of Ostrava & next President of IAGE-Czech Republic <u>Gianluca Landi</u> Senior Researcher at the National Research Council & Member of IAGE-Italy Moderator: <u>Adolfo IULIANELLI</u> Senior Researcher at the National Research Council of Italy and President of IAGE-Italy	ORAL (15'+5') C027 <u>Giovanni Ceccio</u> , Nuclear Physics Institute of Czech Academy of Sciences, Czech Republic In Operando High-Resolution Li Depth Profiling in a Thin-Film All-Solid-State Battery Using TOF-ERDA and Neutron Depth Profiling 15.50-16.10 ORAL (15'+5') C057 <u>Concetta Busacca</u> , CNR-ITAE, Italy High Active-Mass Free-Standing Na₄MnCr(PO₄)₃/CNF Cathodes for Sodium-Ion Batteries 16.10-16.30 ORAL (15'+5') C140 <u>Gabriele Brugnetti</u> , RSE S.p.A., Italy Controlled Thermal Oxidation of Ti₃Al_(1-x)Tm_xC₂ (Tm = Sn, Si) MAX Phases for the Development of Nanostructured Li/Na-Ion Battery Anodes 16.30-16.50 ORAL (15'+5') C053 <u>Benedetta Brancato</u> , CNR-ITAE, Italy Planar Cell Design for Improved Performance of NaI–AlCl₃ Eutectic-Based Molten Sodium Batteries 16.50-17.10 ORAL (15'+5') C054 <u>Leone Frusteri</u> , CNR-ITAE, Italy Advancing Planar NASICON Batteries Through Ni–Fe Composites for Improved Performance Under Mild Thermal Conditions 17.10-17.30 ORAL (15'+5') C076 <u>Alberto Affranchi</u> , Università degli Studi di Palermo, Italy Environmental Analysis of a Nanowire Lead-Acid Battery Cell 17.30-17.50 ORAL (15'+5') C115 <u>Matthias Schulz</u> , Fraunhofer Institute for Ceramic Technologies and Systems (IKTS), Germany Water-Based Extruded LFP and NMO Electrodes for Sustainable SIB and NIB
18.00 – 20.00 SICILIAN SUMMER BREAK at NH Palermo Hotel, Foro Italico Umberto I, 22/B	

Day 2 | 2 SEPTEMBER — NH Palermo Hotel (Foro Italico Umberto I, 22/B)

Registration Desk: 8.30-12.30 / 14.30-16.30

Room 1 - ENRICO	Room 2 - FEDERICO	Room 3 - GUGLIELMO
HYDROGEN PRODUCTION BY WATER ELECTROLYSIS Chair: Carmelo Lo Vecchio, CNR-ITAE, Italy	Ricerca di Sistema PTR 2025-2027 ENERGY STORAGE TECHNOLOGIES: KEY ENABLERS OF SUSTAINABILITY AND ENERGY SECURITY <i>Session 1. European Initiatives and the International Landscape: Aligning Policy, Industry, and Research for Greater Competitiveness</i> Chair: Alessandra Di Blasi, CNR-ITAE, Italy	GRIPHUS PROJECT Green Innovative Photocatalytic systems for CO ₂ Utilization to produce e-fuels Chair: Adele Brunetti, ITM-CNR, Italy
9.00-9.35 KEYNOTE (25'+10') C122 <u>Cristina Cordas</u> , NOVA University of Lisbon, Portugal Bio-Inspired Electrochemical Systems for Sustainable Hydrogen Across the Value Chain	9.00-9.35 KEYNOTE (25'+10') <u>Ivan Matejak</u> , EERA European Context on Battery Initiatives	9.00-9.15 INTRODUCTION (15') <u>Adele Brunetti</u> , Istituto per la Tecnologia delle Membrane "Enrico Drioli", CNR-ITM, Italy GRIPHUS Project: Green Innovative Photocatalytic Systems for CO ₂ Utilization to Produce e-Fuels
9.35-9.55 ORAL (15'+5') C075 <u>Vincenzo Baglio</u> , CNR-ITAE, Italy NiFe ₂ O ₄ as an Efficient and Stable Anode for AEM Water Electrolysers	9.35-9.55 ORAL (15'+5') C197 <u>Margherita Moreno</u> , ENEA European Vision and Strategic Research and Innovation Agenda for the Battery Sector: State of Play and Future Actions of the SET Plan Implementation Working Group	9.15-9.45 INVITED (30') C107 <u>Evangelos P. Favvas</u> , Institute of Nanoscience and Nanotechnology, NCSR "Demokritos", Greece Fabrication of Structured Composite Photocatalytic Membranes: From Hollow Fiber Engineering to Reactor Implementation in Water Treatment
9.55-10.15 ORAL (15'+5') C001 <u>Hubert Girault</u> , École Polytechnique Fédérale de Lausanne, Switzerland Shunt, Parasitic and Reverse Currents in Bipolar Electrode Stacks	9.55-10.15 ORAL (15'+5') <u>Omar Perego</u> , RSE Challenges and Opportunities for the National Battery Value Chain	9.45-10.05 ORAL (20') C071 <u>M. Maček Kržmanc</u> , Advanced Materials Department, Jožef Stefan Institute, Slovenia Engineering 2D SrTiO ₃ Nanostructures for Enhanced Photocatalytic H ₂ Evolution through Aurivillius-Phase Bi ₄ Ti ₃ O ₁₂ Transformation
10.15-10.35 ORAL (15'+5') C010 <u>Martina De Bonis</u> , Università della Calabria, Italy Effect of Conveniently Functionalized Nanomaterials on Anion Exchange Membranes for Water Electrolysis	10.15-10.35 ORAL (15'+5') <u>Speaker to be confirmed</u> INDUSTRIAL PERSPECTIVE FOR THE FUTURE OF STATIONARY ENERGY STORAGE	10.05-10.25 ORAL (20') <u>Elisa Avruscio</u> , Istituto per la Tecnologia delle Membrane "Enrico Drioli", CNR-ITM, Italy Advanced Photocatalytic Membranes for CO ₂ Valorization
10.35-10.55 ORAL (15'+5') C032 <u>Caterina Gaudioso</u> , CNR-IFN, Italy Improved Electrolytic Cell Performance Using Laser-Textured Ni-Felt	10.35-10.55 ORAL (15'+5') <u>Raffaele Liberatore</u> , ENEA Overview of the International Energy Agency's Activities on Energy Storage	
11.00-11.30 COFFEE BREAK		
Room 1 - ENRICO	Room 2 - FEDERICO	Room 3 - GUGLIELMO
HYDROGEN PRODUCTION BY WATER ELECTROLYSIS Chair: Matthias Schulz, Fraunhofer - Institute for Ceramic Technologies and Systems (IKTS), Germany	Ricerca di Sistema PTR 2025-2027 ENERGY STORAGE TECHNOLOGIES: KEY ENABLERS OF SUSTAINABILITY AND ENERGY SECURITY Session 2. National research achievements in energy storage Chairs: Omar Perego, RSE, Italy Margherita Moreno, ENEA, Italy	GRIPHUS PROJECT Green Innovative Photocatalytic systems for CO ₂ Utilization to produce e-fuels Chair: Adele Brunetti, ITM-CNR, Italy

11.30-11.50	11.30-11.50	11.30-11.50
ORAL (15'+5') C063 <u>Ghenwa El Chawich</u> , CEA LITEN, France Performance and Durability Improvement of LSCF Electrode for Solid Oxide Electrolysis	ORAL (15'+5') C194 <u>Alessandra Di Blasi</u> , CNR-ITAE, Italy Energy Storage Innovation in Italy: Battery Technology Evolution and the "Ricerca di Sistema" Programme	ORAL (20') C056 <u>Eugene A. Kotomin</u> , Institute of Solid State Physics, University of Latvia, Latvia First Principles Calculations of SrTiO₃ Engineering with Bi-Based Heterostructures for Efficient Photostimulated Hydrogen Production
11.50-12.10	11.50-12.05	11.50-12.10
ORAL (15'+5') C074 <u>Lorenzo Vittorio Dell'Acqua</u> , Università degli studi Milano-Bicocca, Italy Platinum Based Cathode for Hydrogen Production through Plasma-Based Synthesis	ORAL (10'+5') C096 <u>Rocco Cancelliere</u> , ENEA Bio-Functionalized Electrospun Multilayer Membranes and Sustainable Aqueous Electrodes for Lithium-Ion Batteries	ORAL (20') C061 <u>Yuri Mastrokov</u> , Institute of Solid State Physics, University of Latvia, Latvia Density Functional Theory Calculations on g-C₃N₄/SrTiO₃ Heterostructure
12.10-12.30	12.05-12.20	12.10-12.40
ORAL (15'+5') C092 <u>Anna Giulia Cardone</u> , Politecnico di Torino, Italy La(OH)₃-IrO_x Catalysts for Efficient Oxygen Evolution Reaction in Acidic Environment	ORAL (10'+5') C199 <u>Maria Assunta Navarra</u> , Sapienza Università di Roma Low-Transition-Temperature Electrolytes for Rechargeable Zinc Batteries	INVITED (30') C155 <u>Paola Rizzo</u> , Dipartimento di Chimica e Biologia and INSTM Research Unit, Università degli Studi di Salerno, Italy Functionalized Membranes Based on poly(2,6-dimethyl-1,4-phenylene)oxide (PPO) with Tunable Micro and Macroporosity: Structural Features and Applications
12.30-12.50	12.20-12.35	
ORAL (15'+5') C175 <u>Roberto Luigi Oliveri</u> , University of Palermo, Italy Ni Alloy Nanowire Electrodes Integrated in a Zero-Gap Alkaline Water Electrolyzer	ORAL (10'+5') C193 <u>Angelo Freni</u> , CNR-ICCOM New Composite Adsorbents for Thermochemical Heat Storage	
12.50-13.10	12.35-12.50	
ORAL (15'+5') C178 <u>Ozgur Colpan</u> , Dokuz Eylül University, Türkiye Effect of Balance-of-Plant Design Parameters on the Load-Dependent Specific Energy Consumption of PEM Water Electrolyzer	ORAL (10'+5') C200 <u>Sonia Longo</u> , Università di Palermo Sustainable Energy Storage: Assessing Innovative Materials through Life Cycle Assessment	
	12.50-13.05	
	ORAL (10'+5') <u>Giuseppe Antonio Elia</u> , Politecnico di Torino An Overview of Polymer-Based Electrolytes with High Ionic Mobility for Advanced All-Solid-State Lithium Batteries	
13.10-14.30 LUNCH		
Room 1 - ENRICO	Room 2 - FEDERICO	Room 3 - GUGLIELMO
THERMOCHEMICAL AND CATALYTIC ROUTES TO HYDROGEN AND SYNGAS	SUSTAINABILITY ASSESSMENT AND RESEARCH INTEGRITY	HYDROGEN VALLEYS AND ENERGY SYSTEM SCENARIOS
Chair: Catia Cannilla, CNR-ITAE, Italy	Chair: Elisabetta Di Bartolomeo, University of Rome Tor Vergata, Italy	Chair: Laura Andaloro, CNR-ITAE, Italy
14.30-14.50	14.30-14.50	14.30-14.50
ORAL (15'+5') C136 <u>Gianluca Landi</u> , CNR-STEMS, Italy Hydrogen and High-Added Value Production through an Innovative Borate-Boosted Bio-Alcohol Upgrading	ORAL (15'+5') C014 <u>Alicia Benitez</u> , Institute of Climate and Energy Systems (ICE), Germany From CO₂ to Power: Assessing the Environmental Impacts of Potassium Formate as Chemical Energy Carrier	ORAL (15'+5') C108 <u>Elena Surra</u> , HyLab - Green Hydrogen Collaborative Laboratory, Portugal Digital Twin Framework for Pre-Deployment Planning of the H2tALENT Green Hydrogen Valley in Alentejo
14.50-15.10	14.50-15.10	14.50-15.10
ORAL (15'+5') C006 <u>Matteo Battaglia</u> , University of Rome Tor Vergata, Italy	ORAL (15'+5') C044 <u>Mauro Giorgianni</u> , CNR-ITAE, Italy A Dual Sustainability Perspective on Photoelectrolysis: Integrated	ORAL (15'+5') C111 <u>Adriano Valle</u> , Sapienza University of Rome, Italy

Synthesis and Characterization of Pelletized Perovskites for Green Hydrogen Production by Two-Step Thermochemical Water Splitting Cycle	Environmental and Economic Life Cycle Assessment of Green Hydrogen Production	Market-driven rolling day-ahead optimization of hydropower revenues through flexible electricity and hydrogen production
15.10-15.30 ORAL (15'+5') C060 <u>Salvatore Francesco Cannone</u> , <i>Politecnico di Torino, Italy</i> Integrated System Analysis of Biogas-to-Methanol Production with Upstream CO₂ Capture by Calcium Looping and Ceria-Based Chemical Looping Syngas	15.10-15.30 ORAL (15'+5') C083 <u>Antonino D'Amico</u> , <i>University of Palermo, Italy</i> Energy and Environmental Performance Assessment of a Bio-Based Electrode Manufacturing for Vanadium Redox Flow Battery	15.10-15.30 ORAL (15'+5') C121 <u>Andrea Salerno</u> , <i>Università degli Studi di Palermo, Italy</i> Sustainable Systems: An Adaptive Management Framework for Planning, Performance, Reporting and Strategic Orientation
15.30-15.50 ORAL (15'+5') C094 <u>Gabriele Cali</u> , <i>Sotacarbo, Italy</i> Gasification of Plastic Waste with Oxygen and Steam in a Large Pilot Scale Gasifier	15.30-15.50 ORAL (15'+5') C091 <u>Marta Bonura</u> , <i>University of Palermo, Italy</i> Valorization of Saltworks Bittern for Mg(OH)₂ Production: A Life Cycle Assessment	15.30-15.50 ORAL (15'+5') C130 <u>Filippo Luca Alberto Munafò</u> , <i>Università degli Studi di Palermo, Italy</i> Modelling of a Gas Transmission Network for Hydrogen Injection: A Case Study of Sicily
15.50-16.10 ORAL (15'+5') C157 <u>Negin Roshan</u> , <i>ENEA, Italy</i> Laboratory-scale study of methane/biogas pyrolysis in molten salts	15.50-16.10 ORAL (15'+5') C120 <u>Carmelo Mineo</u> , <i>ICAR-CNR, Italy</i> Human-Robot Collaborative Assembly and Quality Assurance in Proton Exchange Membrane Fuel Cells	15.50-16.10 ORAL (15'+5') C131 <u>Mariya E. Ivanova</u> , <i>Trakia University, Bulgaria</i> White Hydrogen in the Energy Transition: Technical Challenges and Research Frontiers
16.10-16.30 ORAL (15'+5') C176 <u>Luca Cosentino</u> , <i>CNR-ISMN, Italy</i> Methane Chemical Looping over Ni-Based Oxygen Carriers for Sustainable Hydrogen Production	16.10-16.30 ORAL (15'+5') C132 <u>Olivier Joubert</u> , <i>Nantes Université-FRH2-CNRS-IMN, France</i> Recycling Processes for Solid Oxide Electrolysis Cells	16.10-16.30 ORAL (15'+5') C138 <u>Giuseppe Edoardo Dino</u> , <i>ENEA, Italy</i> The Role of Electricity Storage in the Future Italian Energy Scenarios
16.30-16.50 ORAL (15'+5') C186 <u>Antonio Caivano</u> , <i>ENEA, Italy</i> Pilot-Scale Syngas Upgrading by Two-Stage Catalytic Tar Cracking Based on Dolomite and Ni/Alumina	16.30-16.50 ORAL (15'+5') C104 <u>Antonio Patti</u> , <i>Monash University, Australia</i> True or False? The Threat of Fake Scientific Information	16.30-16.50 ORAL (15'+5') C174 <u>Domenico Borello</u> , <i>Sapienza Università di Roma, Italy</i> Cost and Robustness of Optimized cross-Mediterranean Green-Blue Hydrogen Supply Chains under 2050 Policy Scenarios
16.50-17.10 ORAL (15'+5') C098 <u>Roberta Russo</u> , <i>CNR-STEMS, Italy</i> Solar Hydrogen Production via Methane Chemical Looping Cycles Using a γ-Al₂O₃ Supported Perovskite Catalyst	16.50-17.10 ORAL (15'+5') C179 <u>Cansu Kaya</u> , <i>Springer Verlag GmbH, Germany</i> Best Practices for Scientific Manuscript Preparation and Ethical Use of AI Tools	16.50-17.10 ORAL (15'+5') C185 <u>Francesco Reda</u> , <i>VTT, Finland</i> BalticSeaH2: Demonstrating Hydrogen Economy with the Largest Cross-Border Hydrogen Valley in Europe, Building up the Vision

18.30-21.00 | POSTER SESSION AND WINE TASTING

at Botanical Garden, Via Lincoln, 2

*The Botanical Garden spans almost 10 hectares and hosts an extraordinary variety of plant species from all over the world.***Please remove your poster at the end of the session.** The conference organizers will not be responsible for posters that are not removed.

Day 3 | 3 SEPTEMBER — NH Palermo Hotel (Foro Italico Umberto I, 22/B)

Registration Desk: 8.30-12.30 / 14.30-17.30

Room 1 - ENRICO	Room 2 - FEDERICO	Room 3 - GUGLIELMO
HYDROGEN PRODUCTION BY WATER ELECTROLYSIS Chair: Vincenzo Baglio, CNR-ITAE, Italy	MEMBRANE AND ELECTRIFIED REACTORS FOR PROCESS INTENSIFICATION Chair: Giuseppina Iervolino, University of Salerno, Italy	RISEnergy Session 1. Research Infrastructure networks in Europe: best practices, challenges and barriers: the experience of the RISEnergy ecosystem. Chair: Gabriele Gaffuri, EERA, Belgium
9.00-9.35	9.00-9.35	
KEYNOTE (25'+10') C129 <u>Maria Retuerto</u> , CSIC, Spain Insights into the Reconstruction of Mixed Oxides during Acidic OER	KEYNOTE (25'+10') C011 <u>Adele Brunetti</u> , ITM-CNR, Italy Sustainable Hydrogen Upgrading from Syngas through Ultra-Microporous Carbon Hollow Fiber Membranes	
9.35-9.55	9.35-9.55	9.50-11.00
ORAL (15'+5') C018 <u>Saveria Santangelo</u> , Mediterranean University of Reggio Calabria, Italy High-Entropy Oxides with Sacrificial High-Valence Metals to Obtain Efficient and Stable Electrocatalysts for Water Oxidation in AEM Electrolyzers	ORAL (15'+5') C024 <u>Riccardo Ferretti</u> , Eindhoven University of Technology (TU/e), Netherlands Development of Highly Selective Multichannel Carbon Molecular Sieve Membranes for Hydrogen Purification	Session 1 (70') Speakers: Gabriele Gaffuri (moderator, EERA), Monica Fabrizio (panellist 1, CNR), Gabriella Ferruzzi (panellist 2, ENEA), Sawako Nakamae (panellist 3, CEA) Agenda: • Introduction: role of Research Infrastructures for EU energy transition (10') • Panel on best practices, challenges and barriers to Research Infrastructures access and sustainability, and the role of data and metadata (50') • Q&A with the public (10')
9.55-10.15	9.55-10.15	
ORAL (15'+5') C114 <u>Artur Bekisch</u> , Fraunhofer - Institut für Keramische Technologien und Systeme IKTS, Germany KapMemLyse: Integrating Capillary Feeding and AEM Technology for Efficient, Noble Metal Free High Pressure Water Electrolysis	ORAL (15'+5') C169 <u>Chiara Maffei</u> , University of Salerno, Italy Enhancing Selectivity to Propylene in the Propane Dehydrogenation Process by Joule-Heated Pt-Sn Based Catalytic Foams	
10.15-10.35	10.15-10.50	
ORAL (15'+5') C124 <u>Valentina Bugliarelli</u> , Politecnico di Torino, Italy Innovative Functional Groups to Improve Thermal Durability and Performance of Anion Exchange Membranes for Green Hydrogen Production	KEYNOTE (25'+10') C086 <u>Giampiero Groppi</u> , Politecnico di Milano, Italy EMERALD: Modeling and Experimental Validation of a Novel Radial-Current eReactor for Intensified Endothermic Catalytic Processes	
10.35-10.55		
ORAL (15'+5') C150 <u>Rosalba Passalacqua</u> , University of Messina, Italy Electrochemical Water Oxidation for In-Orbit Hydrogen Peroxide Production		
11.00-11.30 COFFEE BREAK		
Room 1 - ENRICO	Room 2 - FEDERICO	Room 3 - GUGLIELMO
THERMAL ENERGY STORAGE AND HEAT MANAGEMENT Chair: Raffaele Liberatore, ENEA, Italy	MEMBRANE AND ELECTRIFIED REACTORS FOR PROCESS INTENSIFICATION Chair: Maria Goula, University of Western Macedonia, Greece	RISEnergy Session 2. From Idea to Impact: How RISEnergy Research Infrastructures and Services Foster Innovation Chair: Gabriele Gaffuri, EERA, Belgium
11.30-11.50	11.30-12.05	11.30-12.40
ORAL (15'+5') C022 <u>Sergio Bobbo</u> , CNR-ITC, Italy Advancing Thermal Energy Storage Systems: Progress of the ECHO Project	KEYNOTE (25'+10') C171 <u>Vincenzo Palma</u> , University of Salerno, Italy Low Temperature H₂ Production by HLC Cracking in Electrified Structured Reactors Integrated with Supported Pd Membrane	Session 2 (70') Speakers: Olga Suminska-Ebersoldt (KIT), Venizelos Efthymiou (EPL), Holger Ihssen (panellist 1, Helmholtz),

11.50-12.10	12.05-12.25	Francesco Zimbardi (panellist 2, ENEA), Ana Romero Gutiérrez (panellist 3, UCLM) Agenda: • Introduction (10') • European research infrastructure - Venizelos Efthymiou (20') • Access to RISEnergy RI – reasons, idea behind it, rules – Olga Suminska-Ebersoldt (20') • Panel on Success stories – experiences of RISEnergy TNA user (20')
ORAL (15'+5') C049 <u>Roberta De Salvo</u> , <i>CNR-ITAE, Italy</i> Sustainable Aqueous Synthesis of MIL-100(Fe): A Promising MOF for Water Sorption Applications	ORAL (15'+5') C031 <u>Ivo Roghair</u> , <i>Eindhoven University of Technology, Netherlands</i> Enhancing Efficiency and Process Optimization Using OpenFOAM Three-Dimensional Simulation for Induction Heating	
12.10-12.30	12.25-12.45	
ORAL (15'+5') C143 <u>Gabriela Squarzon</u> , <i>RSE S.p.A., Italy</i> Coupled ATEs–DHN Simulations: Assessing the Impact of Hydrogeological, Thermal and Energy Parameters on Integrated System Performance	ORAL (15'+5') C012 <u>Alessia Marotta</u> , <i>University of Salerno, Italy</i> Electrified Sorption-Enhanced Catalytic Dry Reforming of Methane for Clean Hydrogen Production	
12.30-12.50	12.45-13.05	
ORAL (15'+5') C137 <u>Daniele Nicolini</u> , <i>ENEA, Italy</i> Medium-Temperature Energy Storage Systems Using Concrete and Phase Change Materials	ORAL (15'+5') C196 <u>Alberto Zambon</u> , <i>Eindhoven University of Technology, The Netherlands</i> Polishing Methane-Containing Gas Streams to Natural Gas Grid Specifications Using Alumina-Carbon Molecular Sieve Membranes	
12.50-13.10		
ORAL (15'+5') C135 <u>Raffaele Liberatore</u> , <i>ENEA, Italy</i> High-Temperature Energy Storage via Reaction Cycles Involving the Use of Thermo-Chemical Materials in Fluidized Beds		
13.10-14.30 LUNCH		
Room 1 - ENRICO	Room 2 - FEDERICO	Room 3 - GUGLIELMO
Ricerca di Sistema PTR 2025-2027 AMMONIA AS A HYDROGEN CARRIER IN THE ENERGY TRANSITION	CO₂ AND WASTE CONVERSION TO E-FUELS AND CHEMICALS	FUEL CELLS AND ENERGY SYSTEM APPLICATIONS
Chair: Luca Turchetti, ENEA, Italy	Chair: Consuelo Alvarez-Galvan, Instituto de Catálisis y Petroleoquímica - CSIC, Spain	Chair: Francesca Deganello, CNR-ISMN, Italy
14.30-14.45	14.30-15.05	14.30-15.05
INTRODUCTION (15') <u>Luca Turchetti</u> , <i>ENEA, Italy</i> <i>Head of the Project “Hydrogen Technologies and End Uses”</i>	KEYNOTE (25'+10') C126 <u>Laurent Piccolo</u> , <i>IRCELYON, France</i> Dual-Function Materials for Low-Temperature Integrated CO₂ Capture/methanation	KEYNOTE (25'+10') C048 <u>K. Andreas Friedrich</u> , <i>German Aerospace Center (DLR), Germany</i> Scalable Production of Pt Catalyst Embedded in Nanoscale Carbon Network for Durable Fuel Cells
14.45-15.05	15.05-15.25	15.05-15.25
ORAL (15'+5') C073 <u>Damien Tasso</u> , <i>ENGIE Lab CRIGEN, France</i> CFD Study of Ammonia Synthesis and Cracking in Membrane Reactor with Periodic Open Cellular Structure, for Long-Term Hydrogen Storage	ORAL (15'+5') C038 <u>Serena Todaro</u> , <i>CNR-ITAE, Italy</i> Zeolite-Templated Carbons as Effective Supports for Boosting Copper Catalyst Functionality in CO₂-to-methanol Production	ORAL (15'+5') C016 <u>Marta Ippolito</u> , <i>University of Palermo, Italy</i> Ni Exsolution and Defect Chemistry of La(Sr)Mn(Ni,Cr)O₃ for SOFC and SOEC Electrodes
15.05-15.25	15.25-15.45	15.25-15.45
ORAL (15'+5') C072 <u>Luca Vergani</u> , <i>Politecnico di Milano, Italy</i> Electrified Membrane Reactor for NH₃ Decomposition: Combining H₂ Scavenging and Effective Heat Supply	ORAL (15'+5') C020 <u>Giuseppe Barbieri</u> , <i>ITM-CNR, Italy</i> Stability Enhancement in Methanol-to-DME Catalytic Membrane Contactors Enabled by Bilayer ZSM-5 Membranes	ORAL (15'+5') C036 <u>Federica Patti</u> , <i>Università del Salento, Italy</i> 3D Multiphysics Modeling of Reversible Solid Oxide Bottom Cell
15.25-15.45	15.45-16.05	15.45-16.05
ORAL (15'+5') C078 <u>Filippo Bossola</u> , <i>CNR-SCITEC, Italy</i> Robust Fe/C Catalysts from Simple Preparation for Stable Ammonia Decomposition	ORAL (15'+5') C064 <u>Andrea Ruggiu</u> <u>Sotacarbo SpA, Italy</u> New Environmentally Friendly Mechanochemical Synthesis of Cu-Based Catalysts for E-Methanol Production	ORAL (15'+5') C161 <u>Philippe Mandin</u> , <i>Université de Bretagne Sud, France</i> European Project Funded C3POe: Sustainable Plug & Play Water Electricity Coupling for Islands and Isolated Coastal Sites — Optimal Design of an off-grid

		Hybrid Renewable Energy System Involving Batteries, Hydrogen and Producing Water and Electricity
15.45-16.05	16.05-16.25	16.05-16.25
ORAL (15'+5') C116 <u>Valentina Cechetto</u> , <i>Eindhoven University of Technology, Netherlands</i> Performance Evaluation of Structured POCS Catalysts for Hydrogen Production via Ammonia Decomposition	ORAL (15'+5') C082 <u>Matteo Ambrosetti</u> , <i>Politecnico di Milano, Italy</i> Electrified Reverse Water Gas Shift: An Experimental and Modelling Study on a Joule-Heated Packed Foam Reactor	ORAL (15'+5') C151 <u>Martina Totaro</u> , <i>University of Messina / CNR-ITAE, Italy</i> Energy Consumption Analysis and Life Cycle Assessment of a Li-Ion Battery Pack for a Lower-Limb Assistive Exoskeleton
16.30-17.00 COFFEE BREAK		
Room 1 - ENRICO	Room 2 - FEDERICO	Room 3 - GUGLIELMO
Ricerca di Sistema PTR 2025-2027 AMMONIA AS A HYDROGEN CARRIER IN THE ENERGY TRANSITION Chair: Luca Turchetti, ENEA, Italy	CO₂ AND WASTE CONVERSION TO E-FUELS AND CHEMICALS Chair: Matteo Ambrosetti, Politecnico di Milano, Italy	SUPERCAPACITORS AND ADVANCED ELECTRODE MATERIALS Chair: Francesco Lufrano, CNR-ITAE, Italy
17.00-17.20	17.00-17.20	17.00-17.35
ORAL (15'+5') C168 <u>Eugenio Meloni</u> <i>University of Salerno, Italy</i> Hydrogen Production via Ammonia Cracking Reaction: Impact of Support Material on Catalytic Performance	ORAL (15'+5') C009 <u>Chiara Corrente</u> , <i>CNR-ITAE, Italy</i> Operando DRIFT Investigation of Cu-Based Catalysts during CO₂ Conversion to Methanol in Presence of Green Hydrogen	KEYNOTE (25'+10') C182 <u>Olga Suminska-Ebersoldt</u> , <i>KIT, Germany</i> EERA Joint Programme on Energy Storage
17.20-17.40	17.20-17.40	17.35-17.55
ORAL (15'+5') C134 <u>Davide Cosio</u> <i>University of Messina, Italy</i> Ammonia as a H₂ Carrier: Advances in NH₃ Decomposition Technologies and Integration in the Green Value Chain	ORAL (15'+5') C093 <u>Riccardo Ometto</u> <i>Politecnico di Milano, Italy</i> CO₂-to-Methanol Synthesis: Experimental, Modeling, and Process Assessment of Cu-, In, and ZnZr-Based Catalysts	ORAL (15'+5') C095 <u>Angelo Di Mauro</u> <i>University of Catania, Italy</i> Volcanic Ash as Sustainable Inorganic Support for Supercapacitors Electrodes
17.40-18.00	17.40-18.00	17.55-18.15
ORAL (15'+5') C167 <u>Chiara Falchetta</u> <i>University of Salerno, Italy</i> Ammonia Cracking Electrified Structured Reactor Coupled with PEM Fuel Cell for Power Generation	ORAL (15'+5') C164 <u>Liberato Cafiero</u> <i>University of Salerno, Italy</i> Near-Ambient CO₂ Activation with Ultra-High Methane Selectivity	ORAL (15'+5') C087 <u>Francesco Lufrano</u> <i>CNR-ITAE, Italy</i> Fluorine-Free Polymer Electrolyte Membrane for Advanced High-Electrochemical Performances 2 V Solid-State Asymmetric Supercapacitor
18.00-18.20	18.00-18.20	18.15-18.35
ORAL (15'+5') C109 <u>Domenico Maccarrone</u> <i>CNR-ITAE, Italy</i> Structure-activity relationships in Mg-doped LaNiO₃-derived catalysts for low-temperature ammonia decomposition	ORAL (15'+5') C097 <u>Ramiro Ruiz-Rosas</u> <i>University of Málaga, Spain</i> Effect of Phosphorus Content in Ni Catalysts Supported on Activated Carbons Derived from Residual Biomass in CO₂ Hydrogenation	ORAL (15'+5') C125 <u>Angelo Di Mauro</u> <i>University of Catania, Italy</i> Waste Derived MoS₂ Nanostructures for High-Performance Supercapacitors
18.20-18.40	18.20-18.40	
ORAL (15'+5') C079 <u>Yi Qiu</u> <i>Politecnico di Milano, Italy</i> Kinetic and Mechanistic Study of NH₃ Decomposition over Highly Active Ru/CeO₂ Catalysts	ORAL (15'+5') C100 <u>Edoardo Nicolucci</u> <i>Sapienza University of Rome, Italy</i> Quantifying the Impact of Waste Heterogeneity on Gasification Performance: A Deep Learning-Based Surrogate Modeling Approach for Syngas and Tar Prediction	
20.30 GALA DINNER at Palazzo Francavilla, Via Ruggiero Settimo, 8. <i>An elegant 19th-century building in the heart of Palermo, with beautifully decorated neoclassical interiors.</i> Please note that, owing to the nature of the venue, admission to the Gala Dinner is reserved exclusively for guests WHO HAVE REACHED THE AGE OF 18. ATTENTION: TICKETS WILL BE REQUIRED!		

Day 4 | 4 SEPTEMBER — NH Palermo Hotel (Foro Italico Umberto I, 22/B)

Registration Desk: 8.30-13.30

Room 1 - ENRICO	Room 2 - FEDERICO	Room 3 - GUGLIELMO
CO₂ AND WASTE CONVERSION TO E-FUELS AND CHEMICALS Chair: Valentina Cechetto, Eindhoven University of Technology, Netherlands	SOLAR-DRIVEN HYDROGEN PRODUCTION AND CHEMICAL STORAGE Chair: Alexandr N. Simonov, Monash University, Australia	LOW- AND HIGH-TEMPERATURE FUEL CELLS Chair: K. Andreas Friedrich, German Aerospace Center (DLR), Germany
9.00-9.35 KEYNOTE (25'+10') C105 <u>Leonarda Francesca Liotta</u> , <i>CNR-ISMN, Italy</i> Exploring the Effect of Ce and Cu Doping on Ni/MgO Catalysts for CH ₄ Dry Reforming and CH ₄ Activation	9.00-9.20 ORAL (15'+5') C019 <u>Claudio Maria Pecoraro</u> , <i>University of Palermo, Italy</i> Tailoring Anodized WO ₃ Nanostructures for Photoelectrolysis of Biomass Containing Solutions and Photocatalytic Air Purification	9.00-9.35 KEYNOTE (25'+10') C133 <u>Vincenzo Esposito</u> , <i>Technical University of Denmark</i> Architected 3D-Printed Fuel Cells and Next-Generation Ceramic Energy Platforms
9.35-10.00 INVITED (20'+5') C025 <u>Adolfo Iulianelli</u> , <i>ITM-CNR, Italy</i> CO ₂ Valorization into Synthetic Methane by an Integrated CO ₂ -methanation Reactor Combined with a Bio-Polymeric Membrane Separation System: An Experimental Study Combined to Exergy and Cost Analyses	9.20-9.40 ORAL (15'+5') C084 <u>Ivan Mastronardo</u> , <i>CNR-ITAE, Italy</i> Scalable Electrospinning Synthesis of CuO and Fe ₂ O ₃ Electrodes for Photoelectrolysis	9.35-10.10 KEYNOTE (25'+10') C149 <u>Fabio Coral Fonseca</u> , <i>Instituto de Pesquisas Energéticas e Nucleares, Brazil</i> Active Materials for Biofuel Conversion in High Temperature Electrochemical Cells
10.00-10.20 ORAL (15'+5') C166 <u>Laura Chianese</u> , <i>University of Salerno, Italy</i> Methanol Production from CO ₂ Hydrogenation over Cu Supported on Black-TiO ₂	9.40-10.00 ORAL (15'+5') C118 <u>Qayam Ud Din</u> , <i>University of Salerno, Italy</i> Atmospheric Plasma Jet Synthesis of Ag/TiO ₂ Photocatalysts for Hydrogen Production and Pharmaceutical Pollutant Degradation	10.10-10.30 ORAL (15'+5') C008 <u>Hamish Andrew Miller</u> , <i>CNR-ICCOM, Italy</i> Activity-Structure Dependence on Surface Crystal Phase of Alloy Pd-Cu Nanoparticles for the Hydrogen Oxidation Reaction
10.20-10.40 ORAL (15'+5') C165 <u>Giovanni Palma</u> , <i>European Research Institute of Catalysis (ERIC aisbl), Italy</i> Dimensionless Framework for CO ₂ Splitting in DBD Plasma Reactors	10.00-10.20 ORAL (15'+5') C154 <u>Marina Ratova</u> , <i>Manchester Metropolitan University, UK</i> Stoichiometric Control of Co-Sputtered BiVO ₄ Thin Films for Enhanced Photoelectrochemical Water Oxidation	10.30-10.50 ORAL (15'+5') C015 <u>Carlo Tregambe</u> , <i>ICI Powering Evolution, Italy</i> SO-FREE: From System Architecture to Commissioning of a Multi-Fuel SOFC Platform
10.40-11.00 ORAL (15'+5') C052 <u>Andrea Zaffora</u> , <i>University of Palermo, Italy</i> PGM-Free Metal-Functionalized TiO ₂ Nanotubes Electrodes for Alcohol Oxidation toward Coupled Green Hydrogen and Value-Added Chemicals Production	10.20-10.40 ORAL (15'+5') C037 <u>Domenico Ferrero</u> , <i>Politecnico di Torino, Italy</i> Experimental Assessment and System-Level Analysis of Aluminum-Based Hydrogen Storage	10.50-11.10 ORAL (15'+5') C058 <u>Elisabetta Di Bartolomeo</u> , <i>University of Rome Tor Vergata, Italy</i> Double Substituted Co-Free Perovskite Oxides for Reversible Solid Oxide Cells (RSOCs)
11.00-11.20 ORAL (15'+5') C099 <u>Pascal Fongarland</u> , <i>IRCELYON - UNIV LYON 1, France</i> SERP Methanol Synthesis from CO ₂ /H ₂ : From Experiment to Simulation to Optimize an Intensified Process	10.40-11.00 ORAL (15'+5') C047 <u>Alessandra Palella</u> , <i>CNR-ITAE, Italy</i> Catalytic Dehydrogenation-Hydrogenation of Organic Carriers for Clean Hydrogen Generation and Storage: Exploitation of Different Bio-Molecules and Catalyst Optimization	11.10-11.30 ORAL (15'+5') C103 <u>Francesco Mazzeo</u> , <i>CNR-ITAE, Italy</i> A Reduced-Physics 3D CFD Model for Field-Driven Design of TPMS Flow Fields in PEMFC Bipolar Plates
11.20-11.40 ORAL (15'+5') C163 <u>Emilia Saraceno</u> , <i>University of Salerno, Italy</i> Waste-to-Fuel: Efficient Conversion of Plastic Waste to Methane via Catalytic Hydrogasification in an Optimized Reactor Configuration	11.00-11.20 ORAL (15'+5') C080 <u>Yi Qiu</u> , <i>Politecnico di Milano, Italy</i> Investigation of Steam-Iron Process for Hydrogen Storage over Fused Fe-Based Materials	11.30-11.50 ORAL (15'+5') C127 <u>Francesca Stella</u> , <i>IIT - Center for Sustainable Future Technologies, Italy</i> Polybenzimidazoles Architectures for High-Temperature Proton-Exchange Membranes

11.40-12.00	11.20-11.40	
ORAL (15'+5') C021 <u>Elisa Avruscio, ITM-CNR, Italy</u> Through-Flow Catalytic Membrane Contactors for Intensified Dimethyl Ether Synthesis: Comparison Between BEA Zeolite And γ-Al₂O₃ Membranes	ORAL (15'+5') C145 <u>Valeria Di Sarli, CNR-STEMS, Italy</u> Closed-Vessel Explosion of Ammonia-Hydrogen Mixtures in Air	
12.00-12.30 COFFEE BREAK		
12.30-12.45 BEST STUDENT AWARD Chair: Cristina Italiano, Hyland Enterprise, Italy		
12.45-13.00 CLOSING CEREMONY Chair: Stefano Trocino, Hyland Enterprise, Italy		

OPTIONAL SOCIAL ACTIVITY | A TASTE OF SICILY AT TENUTA SALLIER DE LA TOUR
Friday, 4 September 2026

- €60 per person without transport
- €100 per person including transport, which will be organised directly by the estate

An exclusive afternoon in the hills near Palermo, at the wine estate whose labels will accompany one of the ICSET 2026 conference evenings: visit of the historic Liberty-style cellar, walk through the vineyards and guided tasting inspired by the territory of Monreale.

INDICATIVE PROGRAMME

17:00 Departure from Palermo

17:45 Arrival at the estate and welcome

- Tour of the historic La Monaca winery and barrel cellar
- Vineyard walk with the hospitality manager
- Guided tasting of the estate's six wines
- Tasting of Tasca d'Almerita olive oil
- Seasonal local specialties, including olives, cheeses and cured meats

19:30 Departure from the estate

20:15 Expected arrival in Palermo

WINES: *Inzolia · Grillo · Madammarosè · Syrah · Nero d'Avola · La Monaca*

SATELLITE EVENTS**GRIPHUS Project**

Green Innovative Photocatalytic systems for CO₂ Utilization to produce e-fuels

RISEnergy Project

Research Infrastructure networks in Europe: best practices, challenges and barriers: the experience of the RISEnergy ecosystem

Round Table

Challenges and Perspectives of Green Energy in the Next Decade - Round Table organised by IAGE-Italy

From Idea to Impact: How RISEnergy Research Infrastructures and Services Foster Innovation

Special Session Ricerca di Sistema PTR 2025-2027

Electrochemical and Thermal Storage Technologies

Ammonia as a Hydrogen Carrier in the Energy Transition

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	LABFOR S.r.l. — www.labfor.com Italian company founded in 2003 and headquartered in Catania, supplying scientific instrumentation, laboratory equipment, chemical reagents, consumables and technical laboratory furnishings, supporting clients from consultancy and laboratory design to installation and after-sales assistance.

Supporting Projects and Associations

	GRIPHUS Project Green Innovative Photocatalytic systems for CO ₂ Utilization to produce e-fuels.
	AMBHER Project — www.ambherproject.eu AMBHER (Ammonia and MOF based Hydrogen for Europe) is a European project providing a holistic approach to tackle the short and long term energy storage challenges raised by the high degree of electrification our society is aiming for.
	RISEnergy Project Research Infrastructure Services for Renewable Energy.
	RdS — Ricerca di Sistema (www.csea.it) Ricerca di Sistema projects: 1.2 — Electrochemical and Thermal Storage Technologies; 1.3 — Hydrogen Technologies and End Uses.
	IAGE Italy International Association for Green Energy — Italian chapter.

Endorsements

Endorsed by:  European Materials Research Society	E-MRS — European Materials Research Society The Conference is endorsed by the European Materials Research Society.
 Università degli Studi di Palermo	Università degli Studi di Palermo With the Dottorato in Transizione Ecologica.
 DOTTORATO TRANSIZIONE ECOLOGICA	Dottorato Transizione Ecologica PhD programme in Ecological Transition, Università degli Studi di Palermo.
 TASCA® CONTI D'ALMERITA	Tasca d'Almerita — Conti d'Almerita (tascadalmerita.it) One of Sicily's most renowned wine producers, family-owned since 1830, cultivating vineyards across five distinctive Sicilian estates. A pioneer in sustainable viticulture and a certified B Corp, combining excellence, sustainability and authentic Sicilian hospitality.

LIST OF POSTERS

Poster Session and Wine Tasting —2 September 2026, 18.30, Botanical Garden (Via Lincoln 2, Palermo)

C002 <u>Chulhee Jo</u> Inha University, Korea	Harnessing Low-Velocity Tidal Currents: Duct-Optimized Turbines and Diver-Less Maintenance for Bridge-Integrated Power
C003 <u>Antonio Benigno</u> Politecnico di Torino, Italy	Cathode Materials and Electrolyte Formulations for Emerging Potassium-Sulfur Batteries
C013 <u>Carlos Martínez Gómez</u> Instituto de Catálisis y Petroleoquímica – CSIC, Spain	Efficient MOF-Based Catalysts for the Direct Synthesis of Dimethyl Carbonate (DMC) from CO₂ and Methanol
C033 <u>Anna Zielińska</u> AGH University of Science and Technology, Poland	Possibility of steam electrolysis in double sided solid oxide cells
C039 <u>Adele Brunetti</u> ITM-CNR, Italy	High-Purity Hydrogen Production from Ammonia Using Integrated Pd–Ag Membrane Reactors with Structured Catalysts
C043 <u>Irene Guagliardo</u> Centro di Sostenibilità e Transizione ecologica (UNIPA), Italy	Multicriteria Decision Analysis Methodologies: A Review Applied to the Energy Sector
C045 <u>Girolama Airò Farulla</u> CNR-ITAE, Italy	Machine Learning-Based Control of a SOFC System Under Variable Load Conditions
C046 <u>Carmine Arnese</u> CNR-ITAE, Italy	Design and Validation of a 10 cm² Tandem Photoelectrochemical Prototype for Water Splitting Using Non-Critical Raw Materials
C050 <u>Laura Andaloro</u> CNR-ITAE, Italy	Realization and Experimental Validation of a PEM Fuel Cell Stack Operating with Oxygen-Enriched for Naval Applications
C051 <u>Ilenia Belviso</u> CNR-ITAE, Italy	Virtual Assembly of a PEMFC Stack for Marine Applications with Oxygen-Enriched Simulated Air
C055 <u>Manfredi Picciotto Maniscalco</u> CNR-ITAE, Italy	Environmental Assessment of the Manufacturing Phase of an Innovative SOFC System Fed with Ammonia
C059 <u>Luigi Vadacca</u> Ricerca sul Sistema Energetico – RSE S.p.A, Italy	Underground Hydrogen Storage in Deep Saline Aquifers: A Geological Feasibility Study for the Italian Context
C065 <u>Federica Salmeri</u> CNR-ITAE, Italy	Sea Plant Derived Biocarbon as Electrocatalysts Support for DMFC
C067 <u>Rossana Giaquinta</u> CNR-ITAE, Italy	Sustainable Materials for Hydrogen Production via Tandem Photoelectrolysis and Alkaline Electrolysis
C070 <u>Eleonora La Greca</u> CNR-ISMN, Italy	Integrated VOC Oxidation and Thermo/Photothermo Methane Reforming over Ni/Gd-Zr-Modified Ceria
C077 <u>Yuriy Kucherenko</u> Forschungszentrum Jülich GmbH (FZJ), Germany	Pyrazole- and Tetrazole-Based Conducting Salts for SIB Electrolytes
C085 <u>Ivan Mastronardo</u> CNR-ITAE, Italy	Crystal Phase Evolution of Thin Films of Fe₂O₃
C101 <u>Rocco Cancelliere</u> ENEA, Italy	Engineering Biochar as a Dual-Function Carbon Platform for Sodium/Lithium Storage and Electrochemical Sensing

C106 <u>Carmelo Lo Vecchio</u> CNR-ITAE, Italy	Low-Cost Ti-Doped Hematite and $\text{Cu}_2\text{Cr}_2\text{O}_5$ Photoelectrodes for Tandem Photoelectrochemical Hydrogen Production
C110 <u>Benedetta Brancato</u> CNR-ITAE, Italy	Synthesis and Characterization of NaSiCON-Based Electrolytes Doped with Transition Metals
C112 <u>Georgios Siakavelas</u> University of Western Macedonia, Greece	Effect of Reaction Parameters on Cracking and Selective Catalytic Deoxygenation of Bio-Oil Model Compound to Produce Renewable Fuel over Ni-Based Sustainable Catalysts
C113 <u>Nikolaos Charisiou</u> University of Western Macedonia, Greece	Upgrading of Biomass-Derived Bio-Oil to Gasoline and Diesel-Range Hydrocarbons over Resource-Efficient Sustainable Catalysts via Catalytic Cracking and Hydrodeoxygenation: Innovation and Prospects
C117 <u>Omid Hosseinaei</u> RISE Research Institutes of Sweden, Sweden	Sustainable Production of Bio-Based Graphite for Lithium-Ion Batteries
C119 <u>Angeliki Latsiou</u> University of Western Macedonia, Greece	Influence of Alkali Metal Promotion (K, Na, Cs) on Selectivity and Productivity of CuFeZn/m-ZrO_2 Catalysts in CO_2 Hydrogenation
C142 <u>Omar Perego</u> Ricerca sul Sistema Energetico – RSE S.p.A, Italy	Design and Sizing of a Demonstration Plant for the Analysis of the Summer Solar Desorption Process in an Open-Cycle Thermochemical Seasonal Storage System
C144 <u>Ernestino Lufrano</u> CNR-ITAE, Italy	Sulfonated Polysulfone and Nanocomposite Polymer Electrolyte Membranes for Advanced Power Devices
C148 <u>Giuseppe De Lorenzo</u> CNR-ITAE, Italy	Thermo-Fluid Dynamic Analysis of the Air Pre-Heater for a SOFC System Fed by Ammonia
C156 <u>Andrea Pacino</u> CNR-ITAE, Italy	Pressurisation Strategies for Solid Oxide Electrolysis Cells: A Comparative Overview
C158 <u>Yohannes Shuka Jara</u> University of Messina, Italy	Electrochemical Water Oxidation for In-Orbit H_2O_2 Production: TRL-4 Validation in a Flow-Cell Reactor
C159 <u>Angela Maria Ronsisvalle</u> IUSS – Scuola Universitaria Superiore Pavia, Italy	Electrochemical Water Oxidation for In-Orbit H_2O_2 Production: Insights on Mechanism from RRDE Analysis
C162 <u>Šurbhi Agarwal</u> Ústav jaderné fyziky AV ČR, v. v. i., Czech Republic	Multifunctional GeTeSe Chalcogenide as a Promising Electrode Material for Advanced Lithium-Ion Batteries
C170 <u>Chiara Maffei</u> University of Salerno, Italy	Multiphysics Finite Element Modeling of Electrified Structured Catalysts for Sustainable Hydrogen Production
C172 <u>Michele Pellegrino</u> University of Salerno, Italy	Enhanced Photocatalytic Hydrogen Production from Glycerol over $\text{g-C}_3\text{N}_4$ Prepared by Supercritical CO_2 Micronization Route
C173 <u>Orazio Di Blasi</u> CNR-ITAE, Italy	Sustainable Bio-MOF-Derived Carbon Nanofibrous Electrocatalysts for Vanadium Redox Flow Batteries
C177 <u>Stefano Trocino</u> CNR-ITAE, Italy	Harmonized Test Protocols and Training Programs for Green Hydrogen Production, Storage/Conversion and Fuel Cell Technologies
C181 <u>Patrizia Frontera</u> Università Mediterranea di Reggio Calabria, Italy	Ionic Liquid-Modified Hybrid Polymeric Materials for Thermal Energy Storage Applications
C188 <u>Chiara Aliotta</u>	An Integrated Experimental and Molecular Dynamics Approach to Correlate Oxide-Ion Framework and Functional Properties in Doped SrFeO_3 Electrocatalysts

CNR-ISMN, Italy	
C189 <u>Francesco Zimbardi</u> ENEA, Italy	Green Hydrogen Generation and Biomass Degradation via a Phosphomolybdic Acid-Mediated Electrochemical Approach
C195 <u>Catia Cannilla</u> CNR-ITAE, Italy	Catalytic Supercritical Water Gasification of Wet Agro-Industrial Residues: Tailoring Renewable Gas Production through Ni-Based Catalysts
C205 <u>Ramiro Ruiz-Rosas</u> University of Málaga, Spain	RePUComp: combined polyurethane recycling and sewage sludge valorization through thermochemical valorization

MONDAY August 31 st	TUESDAY September 1 st	WEDNESDAY September 2 nd	THURSDAY September 3 rd	Friday September 4 th	
Registration & Welcome Cocktail 18:00-20:00	Opening Remarks 09:00 - 09:15	❑ Hydrogen production by water electrolysis ❑ Special Session (1) RdS, PTR 25-27 - <i>Energy storage technologies: Key enablers of sustainability and energy security</i> ❑ Side Event (Session 1): GRIPHUS Project 09:00 - 11:00	❑ Hydrogen production by water electrolysis ❑ Membrane and electrified reactors for process intensification ❑ Side Event (Session 1): RISEnergy 09:00 - 11:00	❑ CO₂ and waste conversion to e-fuels and chemicals ❑ Solar-driven hydrogen production and chemical storage ❑ Low- and high-temperature fuel cells 09:00 - 12:00	
	PLENARY I 09:15 - 10:05	Coffee Break 11:00 - 11:30	Coffee Break 11:00 - 11:30	Coffee Break 12:00 - 12:30	
	PLENARY II 10:05 - 10:55				
	Coffee Break 10:55 - 11:25	❑ Hydrogen production by water electrolysis ❑ Special Session (2): RdS, PTR 25-27 - <i>Energy storage technologies: Key enablers of sustainability and energy security</i> ❑ Side Event (Session 2): GRIPHUS Project 11:30 - 13:10	❑ Thermal energy storage and heat management ❑ Membrane and electrified reactors for process intensification ❑ Side Event (Session 2): RISEnergy 11:30 - 13:10	Best Student Awards 12:30 - 12:45	
	PLENARY III 11:25 - 12:15	Lunch 13:10 - 14:30	Lunch 13:10 - 14:30		
	PLENARY IV 12:15 - 13:05			❑ Special Session (1): RdS 25-27, <i>Ammonia as a Hydrogen Carrier in the Energy Transition</i> ❑ CO₂ and waste conversion to e-fuels and chemicals ❑ Fuel cells and energy system applications 14:30 - 16:30	Closing Ceremony 12:45 - 13:00
	Special Award Presentation 13:05 - 13:25	Poster Session and Wine Tasting “Botanic Garden” 18:30 - 21:00	Coffee Break 16:30 - 17:00	Special Session (2): RdS 25-27, <i>Ammonia as a Hydrogen Carrier in the Energy Transition</i>	
	Closing remarks 13:25 - 13:35				
	Free Lunch 13:35 - 15:30	Gala Dinner “Francavilla Palace” 20:30			
	❑ Side event: IAGE-Italy Round Table ❑ Advanced battery materials and cell design 15:30 - 18:00				
Sicilian Summer Break 18:00 - 20:00					