PROGRAMME

2nd International Congress on Sustainable Energy and related Technologies

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

Organized by

Hyland Enterprise
Innovation, ideas, inspiring events

Endorsed by: E-MRS European Materials Research Society

Università degli Studi di Palermo

DOTTORATO TRANSIZIONE ECOLOGICA

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 CO_2

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

<table>
<tr><th>Room 1 - ENRICO</th><th>Room 3 - GUGLIELMO</th></tr>
<tr><td>IAGE ITALY ROUND TABLE
Challenges and perspectives of green energy in the next decade

Chair:
Adolfo Iulianelli, ITM-CNR, Italy</td><td>ADVANCED BATTERY MATERIALS AND CELL DESIGN

Chair:
Artur Bekisch, Fraunhofer - Institut für Keramische Technologien und Systeme IKTS, Germany</td></tr>
<tr><td>15.30-17.30</td><td>15.30-15.50</td></tr>
<tr><td rowspan="11">15.30-17.30 | ROUND TABLE (120 min)

Invited speakers:
Luigi Crema
President of Hydrogen Europe Research & Director of FBK Institute
Vincenzo Palma
Full Professor at University of Salerno & Vice-President of IAGE-Italy
Ozgur C. Colpan
Full Professor at Dokuz Eylul University & President of IAGE-Türkiye
Leonarda Liotta
Research Director at the National Research Council of Italy
Jan Veres
Researcher at VSB-Technical University of Ostrava & next President of IAGE-Czech Republic
Gianluca Landi
Senior Researcher at the National Research Council & Member of IAGE-Italy

Moderator:
Adolfo IULIANELLI
Senior Researcher at the National Research Council of Italy and President of IAGE-Italy</td><td>ORAL (15'+5') C027
Giovanni Ceccio, 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</td></tr>
<tr><td>15.50-16.10</td></tr>
<tr><td>ORAL (15'+5') C057
Concetta Busacca, CNR-ITAE, Italy
High Active-Mass Free-Standing $Na_4MnCr(PO_4)_3$/CNF Cathodes for Sodium-Ion Batteries</td></tr>
<tr><td>16.10-16.30</td></tr>
<tr><td>ORAL (15'+5') C140
Gabriele Brugnetti, RSE S.p.A., Italy
Controlled Thermal Oxidation of $Ti_3Al_{(1-x)}Tm_xC_2$ (Tm = Sn, Si) MAX Phases for the Development of Nanostructured Li/Na-Ion Battery Anodes</td></tr>
<tr><td>16.30-16.50</td></tr>
<tr><td>ORAL (15'+5') C053
Benedetta Brancato, CNR-ITAE, Italy
Planar Cell Design for Improved Performance of NaI–$AlCl_3$ Eutectic-Based Molten Sodium Batteries</td></tr>
<tr><td>16.50-17.10</td></tr>
<tr><td>ORAL (15'+5') C054
Leone Frusteri, CNR-ITAE, Italy
Advancing Planar NASICON Batteries Through Ni–Fe Composites for Improved Performance Under Mild Thermal Conditions</td></tr>
<tr><td>17.10-17.30</td></tr>
<tr><td>ORAL (15'+5') C076
Alberto Affranchi, Università degli Studi di Palermo, Italy
Environmental Analysis of a Nanowire Lead-Acid Battery Cell</td></tr>
<tr><td>17.30-17.50</td></tr>
<tr><td>ORAL (15'+5') C115
Matthias Schulz, Fraunhofer Institute for Ceramic Technologies and Systems (IKTS), Germany
Water-Based Extruded LFP and NMO Electrodes for Sustainable SIB and NIB</td></tr>
<tr><td colspan="2">18.00 – 20.00 SICILIAN SUMMER BREAK
at NH Palermo Hotel, Foro Italico Umberto I, 22/B</td></tr>
</table>

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** *Session 1. European Initiatives and the International Landscape: Aligning Policy, Industry, and Research for Greater Competitiveness* 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	9.00-9.35	9.00-9.15
KEYNOTE (25'+10') *C122* Cristina Cordas, *NOVA University of Lisbon, Portugal* **Bio-Inspired Electrochemical Systems for Sustainable Hydrogen Across the Value Chain**	KEYNOTE (25'+10') Ivan Matejak, *EERA* **European Context on Battery Initiatives**	INTRODUCTION (15') Adele Brunetti, *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	9.35-9.55	9.15-9.45
ORAL (15'+5') *C075* Vincenzo Baglio, *CNR-ITAE, Italy* **$NiFe_2O_4$ as an Efficient and Stable Anode for AEM Water Electrolysers**	ORAL (15'+5') *C197* Margherita Moreno, *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**	INVITED (30') *C107* Evangelos P. Favvas, *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	9.55-10.15	9.45-10.05
ORAL (15'+5') *C001* Hubert Girault, *École Polytechnique Fédérale de Lausanne, Switzerland* **Shunt, Parasitic and Reverse Currents in Bipolar Electrode Stacks**	ORAL (15'+5') Omar Perego, *RSE* **Challenges and Opportunities for the National Battery Value Chain**	ORAL (20') *C071* M. Maček Kržmanc, *Advanced Materials Department, Jožef Stefan Institute, Slovenia* **Engineering 2D $SrTiO_3$ Nanostructures for Enhanced Photocatalytic H_2 Evolution through Aurivillius-Phase $Bi_4Ti_3O_{12}$ Transformation**
10.15-10.35	10.15-10.35	10.05-10.25
ORAL (15'+5') *C010* Martina De Bonis, *Università della Calabria, Italy* **Effect of Conveniently Functionalized Nanomaterials on Anion Exchange Membranes for Water Electrolysis**	ORAL (15'+5') Speaker to be confirmed **INDUSTRIAL PERSPECTIVE FOR THE FUTURE OF STATIONARY ENERGY STORAGE**	ORAL (20') Elisa Avruscio, *Istituto per la Tecnologia delle Membrane "Enrico Drioli", CNR-ITM, Italy* **Advanced Photocatalytic Membranes for CO_2 Valorization**
10.35-10.55	10.35-10.55	
ORAL (15'+5') *C032* Caterina Gaudiuso, *CNR-IFN, Italy* **Improved Electrolytic Cell Performance Using Laser-Textured Ni-Felt**	ORAL (15'+5') Raffaele Liberatore, *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* Ghenwa El Chawich, *CEA LITEN, France* **Performance and Durability Improvement of LSCF Electrode for Solid Oxide Electrolysis**	ORAL (15'+5') *C194* Alessandra Di Blasi, *CNR-ITAE, Italy* **Energy Storage Innovation in Italy: Battery Technology Evolution and the "Ricerca di Sistema" Programme**	ORAL (20') *C056* Eugene A. Kotomin, *Institute of Solid State Physics, University of Latvia, Latvia* **First Principles Calculations of $SrTiO_3$ 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* Lorenzo Vittorio Dell'Acqua, *Università degli studi Milano-Bicocca, Italy* **Platinum Based Cathode for Hydrogen Production through Plasma-Based Synthesis**	ORAL (10'+5') *C096* Rocco Cancelliere, *ENEA* **Bio-Functionalized Electrospun Multilayer Membranes and Sustainable Aqueous Electrodes for Lithium-Ion Batteries**	ORAL (20') *C061* Yuri Mastrikov, *Institute of Solid State Physics, University of Latvia, Latvia* **Density Functional Theory Calculations on g-C_3N_4/$SrTiO_3$ Heterostructure**
12.10-12.30	12.05-12.20	12.10-12.40
ORAL (15'+5') *C092* Anna Giulia Cardone, *Politecnico di Torino, Italy* **$La(OH)_3$-IrO_x Catalysts for Efficient Oxygen Evolution Reaction in Acidic Environment**	ORAL (10'+5') *C199* Maria Assunta Navarra, *Sapienza Università di Roma* **Low-Transition-Temperature Electrolytes for Rechargeable Zinc Batteries**	INVITED (30') *C155* Paola Rizzo, *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* Roberto Luigi Oliveri, *University of Palermo, Italy* **Ni Alloy Nanowire Electrodes Integrated in a Zero-Gap Alkaline Water Electrolyzer**	ORAL (10'+5') *C193* Angelo Freni, *CNR-ICCOM* **New Composite Adsorbents for Thermochemical Heat Storage**	
12.50-13.10	12.35-12.50	
ORAL (15'+5') *C178* Ozgur Colpan, *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* Sonia Longo, *Università di Palermo* **Sustainable Energy Storage: Assessing Innovative Materials through Life Cycle Assessment**	
	12.50-13.05	
	ORAL (10'+5') Giuseppe Antonio Elia, *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 Chair: Catia Cannilla, CNR-ITAE, Italy	**SUSTAINABILITY ASSESSMENT AND RESEARCH INTEGRITY** Chair: Elisabetta Di Bartolomeo, University of Rome Tor Vergata, Italy	**HYDROGEN VALLEYS AND ENERGY SYSTEM SCENARIOS** Chair: Laura Andaloro, CNR-ITAE, Italy
14.30-14.50	14.30-14.50	14.30-14.50
ORAL (15'+5') *C136* Gianluca Landi, *CNR-STEMS, Italy* **Hydrogen and High-Added Value Production through an Innovative Borate-Boosted Bio-Alcohol Upgrading**	ORAL (15'+5') *C014* Alicia Benitez, *Institute of Climate and Energy Systems (ICE), Germany* **From CO_2 to Power: Assessing the Environmental Impacts of Potassium Formate as Chemical Energy Carrier**	ORAL (15'+5') *C108* Elena Surra, *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* Matteo Battaglia, *University of Rome Tor Vergata, Italy*	ORAL (15'+5') *C044* Mauro Giorgianni, *CNR-ITAE, Italy* **A Dual Sustainability Perspective on Photoelectrolysis: Integrated**	ORAL (15'+5') *C111* *Adriano Valle, 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	15.10-15.30	15.10-15.30
ORAL (15'+5') *C060* Salvatore Francesco Cannone, *Politecnico di Torino, Italy* **Integrated System Analysis of Biogas-to-Methanol Production with Upstream CO_2 Capture by Calcium Looping and Ceria-Based Chemical Looping Syngas**	ORAL (15'+5') *C083* Antonino D'Amico, *University of Palermo, Italy* **Energy and Environmental Performance Assessment of a Bio-Based Electrode Manufacturing for Vanadium Redox Flow Battery**	ORAL (15'+5') *C121* Andrea Salerno, *Università degli Studi di Palermo, Italy* **Sustainable Systems: An Adaptive Management Framework for Planning, Performance, Reporting and Strategic Orientation**
15.30-15.50	15.30-15.50	15.30-15.50
ORAL (15'+5') *C094* Gabriele Cali, *Sotacarbo, Italy* **Gasification of Plastic Waste with Oxygen and Steam in a Large Pilot Scale Gasifier**	ORAL (15'+5') *C091* Marta Bonura, *University of Palermo, Italy* **Valorization of Saltworks Bittern for $Mg(OH)_2$ Production: A Life Cycle Assessment**	ORAL (15'+5') *C130* Filippo Luca Alberto Munafò, *Università degli Studi di Palermo, Italy* **Modelling of a Gas Transmission Network for Hydrogen Injection: A Case Study of Sicily**
15.50-16.10	15.50-16.10	15.50-16.10
ORAL (15'+5') *C157* Negin Roshan, *ENEA, Italy* **Laboratory-scale study of methane/biogas pyrolysis in molten salts**	ORAL (15'+5') *C120* Carmelo Mineo, *ICAR-CNR, Italy* **Human-Robot Collaborative Assembly and Quality Assurance in Proton Exchange Membrane Fuel Cells**	ORAL (15'+5') *C131* Mariya E. Ivanova, *Trakia University, Bulgaria* **White Hydrogen in the Energy Transition: Technical Challenges and Research Frontiers**
16.10-16.30	16.10-16.30	16.10-16.30
ORAL (15'+5') *C176* Luca Cosentino, *CNR-ISMN, Italy* **Methane Chemical Looping over Ni-Based Oxygen Carriers for Sustainable Hydrogen Production**	ORAL (15'+5') *C132* Olivier Joubert, *Nantes Université-FRH2-CNRS-IMN, France* **Recycling Processes for Solid Oxide Electrolysis Cells**	ORAL (15'+5') *C138* Giuseppe Edoardo Dino, *ENEA, Italy* **The Role of Electricity Storage in the Future Italian Energy Scenarios**
16.30-16.50	16.30-16.50	16.30-16.50
ORAL (15'+5') *C186* Antonio Caivano, *ENEA, Italy* **Pilot-Scale Syngas Upgrading by Two-Stage Catalytic Tar Cracking Based on Dolomite and Ni/Alumina**	ORAL (15'+5') *C104* Antonio Patti, *Monash University, Australia* **True or False? The Threat of Fake Scientific Information**	ORAL (15'+5') *C174* Domenico Borello, *Sapienza Università di Roma, Italy* **Cost and Robustness of Optimized cross-Mediterranean Green–Blue Hydrogen Supply Chains under 2050 Policy Scenarios**
16.50-17.10	16.50-17.10	16.50-17.10
ORAL (15'+5') *C098* Roberta Russo, *CNR-STEMS, Italy* **Solar Hydrogen Production via Methane Chemical Looping Cycles Using a γ-Al_2O_3 Supported Perovskite Catalyst**	ORAL (15'+5') *C179* Cansu Kaya, *Springer Verlag GmbH, Germany* **Best Practices for Scientific Manuscript Preparation and Ethical Use of AI Tools**	ORAL (15'+5') *C151* Martina Totaro, *University of Messina / CNR-ITAE, Italy* **Energy Consumption Analysis and Life Cycle Assessment of a Li-Ion Battery Pack for a Lower-Limb Assistive Exoskeleton**

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* Maria Retuerto, *CSIC, Spain* **Insights into the Reconstruction of Mixed Oxides during Acidic OER**	KEYNOTE (25'+10') *C011* Adele Brunetti, *ITM-CNR, Italy* **Sustainable Hydrogen Upgrading from Syngas through Ultra-Microporous Carbon Hollow Fiber Membranes**	
9.35-9.55	9.35-9.55	9.30-11.00
ORAL (15'+5') *C018* Saveria Santangelo, *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* Riccardo Ferretti, *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 • Panel on best practices, challenges and barriers to Research Infrastructures access and sustainability, and the role of data and metadata • Q&A with the public
9.55-10.15	9.55-10.15	
ORAL (15'+5') *C114* Artur Bekisch, *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* Chiara Maffei, *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* Valentina Bugliarelli, *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* Giampiero Groppi, *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* Rosalba Passalacqua, *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: Olga Sumińska-Ebersoldt, KIT, Germany
11.30-11.50	11.30-12.05	11.30-13.00
ORAL (15'+5') *C022* Sergio Bobbo, *CNR-ITC, Italy* **Advancing Thermal Energy Storage Systems: Progress of the ECHO Project**	KEYNOTE (25'+10') *C171* Vincenzo Palma, *University of Salerno, Italy* **Low Temperature H_2 Production by HLC Cracking in Electrified Structured Reactors Integrated with Supported Pd Membrane**	**Session 2 (70')** **Speakers**: Olga Sumińska-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 • European research infrastructure - Venizelos Efthymiou • Access to RISEnergy RI – reasons, idea behind it, rules – Olga Sumińska-Ebersoldt • Panel on Success stories – experiences of RISEnergy TNA user
ORAL (15'+5') *C049* Roberta De Salvo, *CNR-ITAE, Italy* **Sustainable Aqueous Synthesis of MIL-100(Fe): A Promising MOF for Water Sorption Applications**	ORAL (15'+5') *C031* Ivo Roghair, *Eindhoven University of Technology, Netherlands* **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* Gabriela Squarzoni, *RSE S.p.A., Italy* **Coupled ATES–DHN Simulations: Assessing the Impact of Hydrogeological, Thermal and Energy Parameters on Integrated System Performance**	ORAL (15'+5') *C012* Alessia Marotta, *University of Salerno, Italy* **Electrified Sorption-Enhanced Catalytic Dry Reforming of Methane for Clean Hydrogen Production**	
12.30-12.50	12.45-13.05	
ORAL (15'+5') *C137* Daniele Nicolini, *ENEA, Italy* **Medium-Temperature Energy Storage Systems Using Concrete and Phase Change Materials**	ORAL (15'+5') *C196* Alberto Zambon, *Eindhoven University of Technology, The Netherlands* **Polishing Methane-Containing Gas Streams to Natural Gas Grid Specifications Using Alumina-Carbon Molecular Sieve Membranes**	
12.50-13.10		
ORAL (15'+5') *C135* Raffaele Liberatore, *ENEA, Italy* **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 Chair: Luca Turchetti, ENEA, Italy	**CO_2 AND WASTE CONVERSION TO E-FUELS AND CHEMICALS** Chair: Consuelo Alvarez-Galvan, Instituto de Catálisis y Petroleoquímica - CSIC, Spain	**FUEL CELLS AND ENERGY SYSTEM APPLICATIONS** Chair: Francesca Deganello, CNR-ISMN, Italy
14.30-14.45	14.30-15.05	14.30-15.05
INTRODUCTION (15') Luca Turchetti, *ENEA, Italy* *Head of the Project "Hydrogen Technologies and End Uses"*	KEYNOTE (25'+10') *C126* Laurent Piccolo, *IRCELYON, France* **Dual-Function Materials for Low-Temperature Integrated CO_2 Capture/methanation**	KEYNOTE (25'+10') *C048* K. Andreas Friedrich, *German Aerospace Center (DLR), Germany* **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* Damien Tasso, *ENGIE Lab CRIGEN, France* **CFD Study of Ammonia Synthesis and Cracking in Membrane Reactor with Periodic Open Cellular Structure, for Long-Term Hydrogen Storage**	ORAL (15'+5') *C038* Serena Todaro, *CNR-ITAE, Italy* **Zeolite-Templated Carbons as Effective Supports for Boosting Copper Catalyst Functionality in CO_2-to-methanol Production**	ORAL (15'+5') *C016* Marta Ippolito, *University of Palermo, Italy* **Ni Exsolution and Defect Chemistry of La(Sr)Mn(Ni,Cr)O_3 for SOFC and SOEC Electrodes**
15.05-15.25	15.25-15.45	15.25-15.45
ORAL (15'+5') *C072* Luca Vergani, *Politecnico di Milano, Italy* **Electrified Membrane Reactor for NH_3 Decomposition: Combining H_2 Scavenging and Effective Heat Supply**	ORAL (15'+5') *C020* Giuseppe Barbieri, *ITM-CNR, Italy* **Stability Enhancement in Methanol-to-DME Catalytic Membrane Contactors Enabled by Bilayer ZSM-5 Membranes**	ORAL (15'+5') *C036* Federica Patti, *Università del Salento, Italy* **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* Filippo Bossola, *CNR-SCITEC, Italy* **Robust Fe/C Catalysts from Simple Preparation for Stable Ammonia Decomposition**	ORAL (15'+5') *C064* Andrea Ruggiu *Sotacarbo SpA, Italy* **New Environmentally Friendly Mechanochemical Synthesis of Cu-Based Catalysts for E-Methanol Production**	ORAL (15'+5') *C161* Philippe Mandin, *Université de Bretagne Sud, France* **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* Valentina Cechetto, *Eindhoven University of Technology, Netherlands* **Performance Evaluation of Structured POCS Catalysts for Hydrogen Production via Ammonia Decomposition**	ORAL (15'+5') *C082* Matteo Ambrosetti, *Politecnico di Milano, Italy* **Electrified Reverse Water Gas Shift: An Experimental and Modelling Study on a Joule-Heated Packed Foam Reactor**	ORAL (15'+5') *C185* Francesco Reda, *VTT, Finland* **BalticSeaH2: Demonstrating Hydrogen Economy with the Largest Cross-Border Hydrogen Valley in Europe, Building up the Vision**
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	**CO_2 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* Eugenio Meloni *University of Salerno, Italy* **Hydrogen Production via Ammonia Cracking Reaction: Impact of Support Material on Catalytic Performance**	ORAL (15'+5') *C009* Chiara Corrente, *CNR-ITAE, Italy* **Operando DRIFT Investigation of Cu-Based Catalysts during CO_2 Conversion to Methanol in Presence of Green Hydrogen**	KEYNOTE (25'+10') *C182* Olga Sumińska-Ebersoldt, *KIT, Germany* **EERA Joint Programme on Energy Storage**
17.20-17.40	17.20-17.40	17.35-17.55
ORAL (15'+5') *C134* Davide Cosio *University of Messina, Italy* **Ammonia as a H_2 Carrier: Advances in NH_3 Decomposition Technologies and Integration in the Green Value Chain**	ORAL (15'+5') *C093* Riccardo Ometto *Politecnico di Milano, Italy* **CO_2-to-Methanol Synthesis: Experimental, Modeling, and Process Assessment of Cu-, In, and ZnZr-Based Catalysts**	ORAL (15'+5') *C095* Angelo Di Mauro *University of Catania, Italy* **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* Chiara Falchetta *University of Salerno, Italy* **Ammonia Cracking Electrified Structured Reactor Coupled with PEM Fuel Cell for Power Generation**	ORAL (15'+5') *C164* Liberato Cafiero *University of Salerno, Italy* **Near-Ambient CO_2 Activation with Ultra-High Methane Selectivity**	ORAL (15'+5') *C087* Francesco Lufrano *CNR-ITAE, Italy* **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* Domenico Maccarrone *CNR-ITAE, Italy* **Structure-activity relationships in Mg-doped $LaNiO_3$-derived catalysts for low-temperature ammonia decomposition**	ORAL (15'+5') *C097* Ramiro Ruiz-Rosas *University of Málaga, Spain* **Effect of Phosphorus Content in Ni Catalysts Supported on Activated Carbons Derived from Residual Biomass in CO_2 Hydrogenation**	ORAL (15'+5') *C125* Angelo Di Mauro *University of Catania, Italy* **Waste Derived MoS_2 Nanostructures for High-Performance Supercapacitors**
18.20-18.40	18.20-18.40	
ORAL (15'+5') *C079* Yi Qiu *Politecnico di Milano, Italy* **Kinetic and Mechanistic Study of NH_3 Decomposition over Highly Active Ru/CeO_2 Catalysts**	ORAL (15'+5') *C100* Edoardo Nicolucci *Sapienza University of Rome, Italy* **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. *An elegant 19th-century building in the heart of Palermo, with beautifully decorated neoclassical interiors.* **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
CO_2 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	9.00-9.20	9.00-9.35
KEYNOTE (25'+10') *C105* Leonarda Francesca Liotta, *CNR-ISMN, Italy* **Exploring the Effect of Ce and Cu Doping on Ni/MgO Catalysts for CH_4 Dry Reforming and CH_4 Activation**	ORAL (15'+5') *C019* Claudio Maria Pecoraro, *University of Palermo, Italy* **Tailoring Anodized WO_3 Nanostructures for Photoelectrolysis of Biomass Containing Solutions and Photocatalytic Air Purification**	KEYNOTE (25'+10') *C133* Vincenzo Esposito, *Technical University of Denmark* **Architected 3D-Printed Fuel Cells and Next-Generation Ceramic Energy Platforms**
9.35-10.00	9.20-9.40	9.35-10.10
INVITED (20'+5') *C025* Adolfo Iulianelli, *ITM-CNR, Italy* **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**	ORAL (15'+5') *C084* Ivan Mastronardo, *CNR-ITAE, Italy* **Scalable Electrospinning Synthesis of CuO and Fe_2O_3 Electrodes for Photoelectrolysis**	KEYNOTE (25'+10') *C149* Fabio Coral Fonseca, *Instituto de Pesquisas Energéticas e Nucleares, Brazil* **Active Materials for Biofuel Conversion in High Temperature Electrochemical Cells**
10.00-10.20	9.40-10.00	10.10-10.30
ORAL (15'+5') *C166* Laura Chianese, *University of Salerno, Italy* **Methanol Production from CO_2 Hydrogenation over Cu Supported on Black-TiO_2**	ORAL (15'+5') *C118* Qayam Ud Din, *University of Salerno, Italy* **Atmospheric Plasma Jet Synthesis of Ag/TiO_2 Photocatalysts for Hydrogen Production and Pharmaceutical Pollutant Degradation**	ORAL (15'+5') *C008* Hamish Andrew Miller, *CNR-ICCOM, Italy* **Activity-Structure Dependance on Surface Crystal Phase of Alloy Pd-Cu Nanoparticles for the Hydrogen Oxidation Reaction**
10.20-10.40	10.00-10.20	10.30-10.50
ORAL (15'+5') *C165* Giovanni Palma, *European Research Institute of Catalysis (ERIC aisbl), Italy* **Dimensionless Framework for CO_2 Splitting in DBD Plasma Reactors**	ORAL (15'+5') *C154* Marina Ratova, *Manchester Metropolitan University, UK* **Stoichiometric Control of Co-Sputtered $BiVO_4$ Thin Films for Enhanced Photoelectrochemical Water Oxidation**	ORAL (15'+5') *C015* Carlo Tregambe, *ICI Powering Evolution, Italy* **SO-FREE: From System Architecture to Commissioning of a Multi-Fuel SOFC Platform**
10.40-11.00	10.20-10.40	10.50-11.10
ORAL (15'+5') *C052* Andrea Zaffora, *University of Palermo, Italy* **PGM-Free Metal-Functionalized TiO_2 Nanotubes Electrodes for Alcohol Oxidation toward Coupled Green Hydrogen and Value-Added Chemicals Production**	ORAL (15'+5') *C037* Domenico Ferrero, *Politecnico di Torino, Italy* **Experimental Assessment and System-Level Analysis of Aluminum-Based Hydrogen Storage**	ORAL (15'+5') *C058* Elisabetta Di Bartolomeo, *University of Rome Tor Vergata, Italy* **Double Substitued Co-Free Perovskite Oxides for Reversible Solid Oxide Cells (RSOCs)**
11.00-11.20	10.40-11.00	11.10-11.30
ORAL (15'+5') *C163* Emilia Saraceno, *University of Salerno, Italy* **Waste-to-Fuel: Efficient Conversion of Plastic Waste to Methane via Catalytic Hydrogasification in an Optimized Reactor Configuration**	ORAL (15'+5') *C047* Alessandra Palella, *CNR-ITAE, Italy* **Catalytic Dehydrogenation-Hydrogenation of Organic Carriers for Clean Hydrogen Generation and Storage: Exploitation of Different Bio-Molecules and Catalyst Optimization**	ORAL (15'+5') *C103* Francesco Mazzeo, *CNR-ITAE, Italy* **A Reduced-Physics 3D CFD Model for Field-Driven Design of TPMS Flow Fields in PEMFC Bipolar Plates**
11.20-11.40	11.00-11.20	11.30-11.50
ORAL (15'+5') *C021* Elisa Avruscio, *ITM-CNR, Italy* **Through-Flow Catalytic Membrane Contactors for Intensified Dimethyl Ether Synthesis: Comparison Between BEA Zeolite And γ-Al_2O_3 Membranes**	ORAL (15'+5') *C080* Yi Qiu, *Politecnico di Milano, Italy* **Investigation of Steam-Iron Process for Hydrogen Storage over Fused Fe-Based Materials**	ORAL (15'+5') *C127* Francesca Stella, *IIT - Center for Sustainable Future Technologies, Italy* **Polybenzimidazoles Architectures for High-Temperature Proton-Exchange Membranes**
	11.20-11.40	
	ORAL (15'+5') *C145*	

	Valeria Di Sarli, *CNR-STEMS, Italy* **Closed-Vessel Explosion of Ammonia–Hydrogen Mixtures in Air**	

11.50-12.30 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
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

SATELLITE EVENTS
GRIPHUS Project
Green Innovative Photocatalytic systems for CO_2 Utilization to produce e-fuelS
RISEnergy Project
Research Infrastructure networks in Europe: best practices, challenges and barriers: the experience of the RISEnergy ecosystem
From Idea to Impact: How RISEnergy Research Infrastructures and Services Foster Innovation
Round Table
Challenges and Perspectives of Green Energy in the Next Decade - Round Table organised by IAGE-Italy
Special Session Ricerca di Sistema PTR 2025-2027
Electrochemical and Thermal Storage Technologies
Ammonia as a Hydrogen Carrier in the Energy Transition

SPONSORSHIP

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Supporting Projects and Associations

GRIPHUS	**GRIPHUS Project** Green Innovative Photocatalytic systems for CO_2 Utilization to produce e-fuelS.
AMBHER	**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	**RISEnergy Project** Research Infrastructure Services for Renewable Energy.
RdS RICERCA DI SISTEMA	**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	**IAGE Italy** International Association for Green Energy — Italian chapter.

Endorsements

Endorsed by: E-MRS 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 Chulhee Jo Inha University, Korea	**Harnessing Low-Velocity Tidal Currents: Duct-Optimized Turbines and Diver-Less Maintenance for Bridge-Integrated Power**
C003 Antonio Benigno Politecnico di Torino, Italy	**Cathode Materials and Electrolyte Formulations for Emerging Potassium-Sulfur Batteries**
C013 Carlos Martínez Gómez Instituto de Catálisis y Petroleoquímica – CSIC, Spain	**Efficient MOF-Based Catalysts for the Direct Synthesis of Dimethyl Carbonate (DMC) from CO_2 and Methanol**
C033 Anna Zielińska AGH University of Science and Technology, Poland	**Possibility of steam electrolysis in double sided solid oxide cells**
C034 Anna Zielińska AGH University of Science and Technology, Poland	**From Photovoltaics to Hydrogen Technologies: A Universal LSTM-Based Model for Market Development Forecasting**
C039 Adele Brunetti ITM-CNR, Italy	**High-Purity Hydrogen Production from Ammonia Using Integrated Pd–Ag Membrane Reactors with Structured Catalysts**
C043 Irene Guagliardo Centro di Sostenibilità e Transizione ecologica (UNIPA), Italy	**Multicriteria Decision Analysis Methodologies: A Review Applied to the Energy Sector**
C045 Girolama Airò Farulla CNR-ITAE, Italy	**Machine Learning-Based Control of a SOFC System Under Variable Load Conditions**
C046 Carmine Arnese CNR-ITAE, Italy	**Design and Validation of a 10 cm² Tandem Photoelectrochemical Prototype for Water Splitting Using Non-Critical Raw Materials**
C050 Laura Andaloro CNR-ITAE, Italy	**Realization and Experimental Validation of a PEM Fuel Cell Stack Operating with Oxygen-Enriched for Naval Applications**
C051 Ilenia Belviso CNR-ITAE, Italy	**Virtual Assembly of a PEMFC Stack for Marine Applications with Oxygen-Enriched Simulated Air**
C055 Manfredi Picciotto Maniscalco CNR-ITAE, Italy	**Environmental Assessment of the Manufacturing Phase of an Innovative SOFC System Fed with Ammonia**
C059 Luigi Vadacca 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 Federica Salmeri CNR-ITAE, Italy	**Sea Plant Derived Biocarbon as Electrocatalysts Support for DMFC**
C067 Rossana Giaquinta CNR-ITAE, Italy	**Sustainable Materials for Hydrogen Production via Tandem Photoelectrolysis and Alkaline Electrolysis**
C068 Giuseppina Ciulla University of Palermo, Italy	**Assessing Energy Resilience of Buildings and Districts under Heatwave Scenarios: the Case of Monreale**
C070 Eleonora La Greca CNR-ISMN, Italy	**Integrated VOC Oxidation and Thermo/Photothermo Methane Reforming over Ni/Gd-Zr-Modified Ceria**
C077 Yuriy Kucherenko Forschungszentrum Jülich GmbH (FZJ), Germany	**Pyrazole- and Tetrazole-Based Conducting Salts for SIB Electrolytes**

C085 Ivan Mastronardo CNR-ITAE, Italy	**Crystal Phase Evolution of Thin Films of Fe_2O_3**
C101 Rocco Cancelliere ENEA, Italy	**Engineering Biochar as a Dual-Function Carbon Platform for Sodium/Lithium Storage and Electrochemical Sensing**
C106 Carmelo Lo Vecchio CNR-ITAE, Italy	**Low-Cost Ti-Doped Hematite and $Cu_2Cr_2O_5$ Photoelectrodes for Tandem Photoelectrochemical Hydrogen Production**
C110 Benedetta Brancato CNR-ITAE, Italy	**Synthesis and Characterization of NaSiCON-Based Electrolytes Doped with Transition Metals**
C112 Georgios Siakavelas 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 Nikolaos Charisiou 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 Omid Hosseinaei RISE Research Institutes of Sweden, Sweden	**Sustainable Production of Bio-Based Graphite for Lithium-Ion Batteries**
C119 Angeliki Latsiou 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**
C141 Mariya E. Ivanova Trakia University, Bulgaria	**H2START: Driving Green Hydrogen Innovation and Regional Energy Transformation**
C142 Omar Perego 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 Ernestino Lufrano CNR-ITAE, Italy	**Sulfonated Polysulfone and Nanocomposite Polymer Electrolyte Membranes for Advanced Power Devices**
C148 Giuseppe De Lorenzo CNR-ITAE, Italy	**Thermo-Fluid Dynamic Analysis of the Air Pre-Heather for a SOFC System Fed by Ammonia**
C156 Andrea Pacino CNR-ITAE, Italy	**Pressurisation Strategies for Solid Oxide Electrolysis Cells: A Comparative Overview**
C158 Angela Mercedes Ronsisvalle European Research Institute of Catalysis (ERIC a.i.s.b.l.), Belgium	**Electrochemical Water Oxidation for In-Orbit H_2O_2 Production: TRL-4 Validation in a Flow-Cell Reactor**
C159 Yohannes Shuka Jara University of Messina, Italy	**Electrochemical Water Oxidation for In-Orbit H_2O_2 Production: Insights on Mechanism from RRDE Analysis**
C162 Surbhi Agarwal Ústav jaderné fyziky AV ČR, v. v. i., Czech Republic	**Multifunctional GeTeSe Chalcogenide as a Promising Electrode Material for Advanced Lithium-Ion Batteries**
C170 Chiara Maffei University of Salerno, Italy	**Multiphysics Finite Element Modeling of Electrified Structured Catalysts for Sustainable Hydrogen Production**
C172 Michele Pellegrino University of Salerno, Italy	**Enhanced Photocatalytic Hydrogen Production from Glycerol over g-C_3N_4 Prepared by Supercritical CO_2 Micronization Route**
C173 Orazio Di Blasi CNR-ITAE, Italy	**Sustainable Bio-MOF-Derived Carbon Nanofibrous Electrocatalysts for Vanadium Redox Flow Batteries**

C177 Stefano Trocino CNR-ITAE, Italy	**Harmonized Test Protocols and Training Programs for Green Hydrogen Production, Storage/Conversion and Fuel Cell Technologies**
C181 Patrizia Frontera Università Mediterranea di Reggio Calabria, Italy	**Ionic Liquid-Modified Hybrid Polymeric Materials for Thermal Energy Storage Applications**
C188 Chiara Aliotta CNR-ISMN, Italy	**An Integrated Experimental and Molecular Dynamics Approach to Correlate Oxide-Ion Framework and Functional Properties in Doped SrFeO3 Electrocatalysts**
C189 Francesco Zimbardi ENEA, Italy	**Green Hydrogen Generation and Biomass Degradation via a Phosphomolybdic Acid-Mediated Electrochemical Approach**
C195 Catia Cannilla CNR-ITAE, Italy	**Catalytic Supercritical Water Gasification of Wet Agro-Industrial Residues: Tailoring Renewable Gas Production through Ni-Based Catalysts**
C205 Ramiro Ruiz-Rosas University of Málaga, Spain	**RePUComp: combined polyurethane recycling and sewage sludge valorization through thermochemical valorization**
C207 Olga Sumińska-Ebersoldt KIT, Germany	**Join Europe's Largest Energy Storage Research Network**
C208 Giovanni Santilli ENEA, Italy	**A Five-Level Validation Methodology for Biomass Gasification to Hydrogen**

MONDAY August 31st	TUESDAY September 1st	WEDNESDAY September 2nd	THURSDAY September 3rd	Friday September 4th
Registration & Welcome Cocktail 18:00-20.00	Opening Remarks 09:00 - 09:15 PLENARY I 09:15 - 10:05 PLENARY II 10:05 - 10:55 Coffee Break 10:55 - 11:25 PLENARY III 11:25 - 12:15 PLENARY IV 12:15 - 13:05 Special Award Presentation 13:05 – 13:25 Closing remarks 13:25 – 13:35 Free Lunch 13:35 – 15:30 ❑ Side event: IAGE-Italy Round Table ❑ Advanced battery materials and cell design 15:30 – 18:00 Sicilian Summer Break 18:00 – 20:00	❑ Hydrogen production by water electrolysis ❑ Special Session (1) RdS, PTR 25-27 - *Energy storage technologies: Key enablers of sustainability and energy security* ❑ Side Event (Session 1): GRIPHUS Project 09:00 – 11:00 Coffee Break 11:00 – 11:30 ❑ Hydrogen production by water electrolysis ❑ Special Session (2): RdS, PTR 25-27 - *Energy storage technologies: Key enablers of sustainability and energy security* ❑ Side Event (Session 2): GRIPHUS Project 11:30 – 13:10 Lunch 13:10 – 14:30 ❑ Thermochemical and catalytic routes to hydrogen and syngas ❑ Sustainability assessment and research integrity ❑ Hydrogen valleys and energy system scenarios 14:30 – 17:10 Poster Session and Wine Tasting “Botanic Garden” 18:30 - 21:00	❑ Hydrogen production by water electrolysis ❑ Membrane and electrified reactors for process intensification ❑ Side Event (Session 1): RISEnergy 09:00 – 11:00 Coffee Break 11:00 - 11:30 ❑ Thermal energy storage and heat management ❑ Membrane and electrified reactors for process intensification ❑ Side Event (Session 2): RISEnergy 11:30 – 13:10 Lunch 13:10 – 14:30 ❑ Special Session (1): RdS 25-27, *Ammonia as a Hydrogen Carrier in the Energy Transition* ❑ CO_2 and waste conversion to e-fuels and chemicals ❑ Fuel cells and energy system applications 14:30 – 16:30 Coffee Break 16:30 – 17:00 ❑ Special Session (2): RdS 25-27, *Ammonia as a Hydrogen Carrier in the Energy Transition* ❑ CO_2 and waste conversion to e-fuels and chemicals ❑ Supercapacitors and advanced electrode materials 17:00 – 18:40 Gala Dinner “Francavilla Palace” 20:30	❑ CO_2 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 Coffee Break 12:00 - 12:30 Best Student Awards 12:30 - 12:45 Closing Ceremony 12:45 - 13:00