



3th ENERCHEM SCHOOL

The third Italian school on renewable energies organized by the Tematic Group on the Chemistry of Renewable Energies (ENERCHEM) of the Italian Chemical Society

Centro Studi CISL, via della Piazzuola 71, Firenze

Scientific Program

MONDAY, 9 FEBRUARY 2026

12:00-13:45 REGISTRATION

14:00-14:15 OPENING

Chairperson: Maria Assunta Navarra

14:15-15:45 L1 – **Vladimiro Dal Santo**

“Energy sources and vectors: a focus on hydrogen”

15:45-16:15 COFFEE BREAK

16:15-17:45 L2 – **Sonia Dsoke**

“Sodium Inventory in Na-Ion Batteries: Pre-Sodiation Strategies and Anode-Free Cell Concepts”

Chairperson: Norberto Manfredi

17:45-19:15 O1 – **Angelica Bisceglie**

“Laser writing: bio-derived carbon electrodes for sustainable supercapacitors”

O2 – **Luca M. Cavinato**

“Design and Performance Rationalization of Blue-Emitting Copper(I) Complexes Bearing Pyridyl-Pyrazole Ligands for Light-Emitting Electrochemical Cells”

O3 – **Hiba Ali**

“Influence of synthesis conditions on the structure and electrochemical performance of Prussian White KMnHCF for ZIBs”

O4 – **Luca Maistrello**

“Innovative photoelectrocatalytic filter for recirculating aquaculture systems”

O5 – **Matteo Tommasi**

“How low can biomethane prices go? Assessment of future scenario through Monte Carlo TEA of direct biogas methanation”

O6 – **Claudia Longo**

“Graphene derivatives as fillers for nanocomposite hole transporting layers in Perovskite solar cells”

19:15-20:15 POSTER SESSION

20:15-21:15 DINNER

21:30 CONCERT

TUESDAY, 10 FEBRUARY 2026

Chairperson: Alessandra Sanson

09:00-10:30 L3 – **Stefania Cacovich**

“Halide Perovskite Solar Cells: Operating Stability and Luminescence Imaging Characterisation”

10:30-11:00 COFFEE BREAK

11:00-12:30 L4 – **Antoni Llobet**

“Molecular Redox Catalysts on Surfaces for Energy Applications”

12:30-13:45 LUNCH

Chairperson: Matteo Bonomo

13:45-15:15 L5 – **Sergio Brutti**
"Fundamentals and Challenges of Sodium-Ion Batteries: Towards a Sustainable Energy Future"

15:15-16:00 T1 – **Matteo Fiaschi**
"Greener Electrode, Greener Hydrogen"

16:00-16:30 COFFEE BREAK

16:30-17:15 T2 – **Candida Milone**
"Engineering the Next Generation of Thermochemical Energy Storage Materials and Components"

Chairperson: Mariangela Di Donato

17:15-18:30 O7 – **Irene Motta**
"Eu³⁺-doped PMMA: Advanced Optical Windows for Sustainable Building Integration"

O8 – **Stefania Palermo**
"Role of biobased additive and membrane preparations conditions on polymer electrolyte membranes"

O9 – **Pietro Zaccagnini**
"K₂CO₃ as Pre-Potassiation Agent for K-ion Capacitors, Potential for Sustainable Scalability"

O10 – **Nicholas Carboni**
"Composite Anion Exchange Membranes Added with Quaternized Graphene Oxide for Water Electrolyzer Applications"

O11 – **Alice Gramegna**
"Direct CH₄ and CO₂ capture from cattle barns: a laboratory-to-pilot scale assessment"

20:00 SOCIAL DINNER

WEDNESDAY, 11 FEBRUARY 2026

Chairperson: Alessandro Minguzzi

09:00-10:30 L6 – **Neil Robertson**
"Asymmetric Supercapacitors using Hybrid Bi and Ni-based Materials"
"Dye-Sensitised Solar Cells Design, Function & Application"

10:30-11:00 COFFEE BREAK

11:00-12:30 L7 – **Stefano Caramori**
"Application of Time Resolved Techniques in Photoelectrochemistry"

12:30-13:45 LUNCH

Chairperson: Ilenia Rossetti

13:45-14:30 T3 – **David Moser**

"Photovoltaic Growth Towards the Terawatt Era: Exponential Scaling, bottlenecks, and the Role of AI and Robotics"

14:30-15:15 J1 – **Samuele Giannini**
"Understanding Light-to-Charge Conversion in Organic Semiconductors Through Computational Modelling"

15:15-16:00 J2 – **Francesco Pellegrino**
"From Continuous to Structured Light: Advancing Hydrogen production through Pulsed Illumination"

16:00-16:30 COFFEE BREAK

16:30-17:15 J3 – **Arianna Massaro**
"From atoms to batteries: modelling tools for energy storage materials"

17:15-18:00 J4 – **Giacomo Melani**
"First-Principles Simulations for Energy-Conversion Materials: An Industrial View"

18:00-19:00 POSTER SESSION

19:30-20:30 DINNER

Chairpersons: Daniele Franchi and Alessio Dessì

20:30-22:30 **ENERSHORT - Alessio Dessì**
"NOT JUST A MATTER OF SCIENCE! Tips and clues to improve your communication skills"
Enershort presentations, 3 min each

THURSDAY, 12 FEBRUARY 2026

Chairperson: Andrea Pucci

09:00-10:30 L8 – **Claudia Barolo**
"Beyond efficiency: the role of Dye-Sensitized Solar Cells in future photovoltaic ecosystems "

10:30-11:00 COFFEE BREAK

11:00-12:30 L9 – **Matthias Beller**
"How to develop a sustainable economy? Examples from the Chemical Industry and Energy Technologies"

12:30-13:45 LUNCH

14:00-19:00 Florence city center
Galileo Galilei Museum Guided tour (<https://museogalileo.it/en/>)
16:00 Tour in Italian (60 min) - meeting point in Piazza San Marco, tram stop line T2, at 3:15 p.m. or in front of the Galileo Museum at 3:50 p.m.
16:30 Tour in English (60 min) - meeting point in Piazza San Marco, tram stop line T2 at 3:45 p.m. or in front of the Galileo Museum at 4:20 p.m.

19:30-21:00 APERITIF

FRIDAY, 13 FEBRUARY 2026

Chairperson: Lorenzo Mino

09:00-10:30 L10 – **Alessandro Lavacchi**

"Low-Temperature Electrolysis for Green Hydrogen Production"

10:30-11:00 COFFEE BREAK

11:00-11:05 JUNIOR ENERCHEM AWARD ANNOUNCEMENT

11:05-12:35 L11 – **Carlo Perego**

"Biofuels or e-Fuels: Which Are Better as SAF (Sustainable Aviation Fuels)?"

12:35-13:00 CLOSING

L= Lecture; J= Junior Lecture; T= Tutorial lecture; O= Oral communication