

SCIENTIFIC PROGRAM

Monday, November 10, 2025

08:30–9:30 Registration

9:30–10:00 **Awards and Medals – Piero Pino Medal**
Martino Di Serio – University of Naples Federico II
The Industrial Chemistry for Research, Didactic, Industry

10:00–11:00 **Photoconversion processes**
Scientific Session I 5 orals, 12 minutes ([O1-O5](#))

O1: Giacomo Luzzati – University of Bologna
Chemometric optimisation of the solution combustion synthesis experimental parameters of TiO₂ photocatalysts

O2: Giusy Dativo – University of Catania
MXene–Silica–CeO₂ Catalysts for the Photothermo CO₂ Utilization

O3: Stefano Savino – CNR - ICCOM Bari
Enhanced Photo-Fenton reaction for water remediation thanks to Blast Furnace slag geopolymer: an ESCAPE approach

O4: Giulia Forghieri – University Ca' Foscari Venice
An operando AP-NEXAFS study on CO₂ photoreduction with Cu-NPs supported by photoactive materials

O5: Melissa Greta Galloni – University of Milan
Let it float, let it clean: upcycled biochar as floating platform for solar-driven BiOBr photocatalysis

11:00–11:30 **Coffee Break & Poster Session**

11:30–13:20 **Waste management and smart exploitation**
Scientific Session II 9 orals, 12 minutes ([O6-O14](#))

O6: Andrea Iebole – University of Genoa
Salt Removal from Olive Mill Wastewater using Anion Exchange Resin

O7: Daniele Martella – University of Florence
Selective recovery of gold from industrial wastewater with acrylic acid-based adsorbents

O8: Giorgia Ferraro – University Ca' Foscari Venice
Chemical recovery of spent iron-molybdate industrial catalyst

○9: **Lucia D'Accolti** – University of Bari
Valorization of cellulosic waste for the production of chemicals, polymers and new materials

○10: **Stefania Volante** – University of Pisa
Valorization of hazelnut shells waste into activated carbons for energy storage applications

○11: **Alice Cappitti** – University of Florence
Conversion of lignocellulosic waste into bio-based materials

○12: **Domenico Zannini** – CNR-SCITEC Genoa and University Federico II of Naples
Enzymatic degradation of PBAT: A Sustainable Route for Polyesters Recycling

○13: **Davide Baldassin** – University Ca' Foscari Venice
Upcycling Biomass Waste into Carbon Supports for Sustainable Hydrogenation Catalysts

○14: **Andrea Pastorino** – University of Genoa
Lab-scale Catalytic Pyrolysis of Commercial Polymeric Waste

13:20–14:30 **Light Lunch**

14:30–15:00 **PL1: Federico Bella** – Polytechnic of Turin
Electrons, Molecules and Data: Redesigning the Chemical Industry for a Sustainable Europe

15:00–16:40 **Sustainable processes and materials Part I**
Scientific Session III 6 orals, 12 minutes (○15-○20) and 3 flash orals, 8 minutes (F1-F3)

○15: **Oreste Piccolo** – Scientific Consultancy Pratics, Siena
Chemo- and bio-catalysis as Key Technologies for the Development and Implementation of Cost-Competitive and Sustainable Production of Fine Chemical

○16: **Federico Zappaterra** – University of Ferrara
Biocatalysis for High-Solubility Prodrugs: Building a Scalable Enzyme-Based Platform for Industrial Bioeconomy Integration

○17: **Carlotta Pontremoli** – University of Turin
Enhanced Lytic Polysaccharide Monoxygenases stability and recovery through immobilization onto nanostructured supports

○18: **Filippo Sacchelli** – University of Parma
Regioselective Divergent Carbonylative Cyclization of ortho-Alkynylphenols via Palladium Catalysis

○19: **Maria Pagliara** – University of Bologna
Dimethyl adipate from bio-based cyclopentanone and dimethyl carbonate: a heterogeneously-catalyzed alternative approach

○20: **Giulia Tuci** – CNR-ICCOM Florence
Surface Chemical Functionalization of MoS₂ Derivatives with Strong Acids: Fostering Hydrogen Evolution Reaction under Alkaline Conditions

F1: Luca Lietti – Polytechnic of Milan
Dual Function Materials (DFMs) for cyclic CO₂ capture and methanation

F2: Luca Consentino – CNR-ISMN Palermo and University of Palermo
Exploring the Effect of Ceria in Fe/ZrO₂ Catalysts for CO₂ Hydrogenation to Light Olefins

F3: Eleonora La Greca – CNR-ISMN Palermo and University of Catania
Influence of Ru Addition on Ni-Based LaMnO₃-Supported Catalysts for H₂ Production via CH₄ Chemical Looping Reforming

16:40-17:10 **Coffee Break & Poster Session**

17:10-18:30 **Sustainable processes and materials Part II**
Scientific Session IV (4 orals, 12 minutes ([O21-O24](#)) and 3 flash orals, 8 minutes ([F4-F6](#)))

O21: Francesco Taddeo – University of Naples Federico II
3D-printed CSTR for the ketalization of ethyl levulinate with glycerol

O22: Ilaria Rizzardi – University of Genoa and INSTM Consortium
Investigation of catalysts for the Partial Oxidation of Methane (POM) as part of the development of a membrane reactor for simultaneous water splitting and POM

O23: Chiara Nannuzzi – University of Bologna
Dimethyl Ether production via methanol synthesis

O24: Chiara Bruschetta – University of Turin
Comparative study of Novel and Commercial metal Catalysts in the MW-assisted Reductive Amination of Biomass-Derived Furfural

F4: Ilenia Rossetti – University of Milan and INSTM Consortium
Development of a pilot plant for CH₄ and CO₂ capture from cattle barns: from experimental tests to process design

F5: Tommaso Tabanelli – University of Bologna
Promoting zirconia with carbon: enhanced hybrid ZrO₂/C ketalization catalyst for the valorization of diluted acetic acid aqueous solutions

F6: Sara Fulignati – University of Pisa
Synthesis of long-chain alkyl levulinates from furfuryl alcohol: the perspective of sulfonated hydrochar as renewable catalyst

18:30 **Division Members' Meeting**

Tuesday, November 11, 2025

08:30–9:00 Registration

- 09:00–09:30 **Awards and Medals – Paolo Chini Memorial Lecture**
Paolo Fornasiero – University of Trieste
The criticality of metal particle size speciation in sustainable catalysis
- 09:30–11:00 **Novel catalytic materials and approaches**
 Scientific Session V (4 orals, 12 minutes ([O25-O28](#)) and 5 flash orals, 8 minutes ([F7-F111](#)))
- O25: Claudio Evangelisti** – ICCOM-CNR Pisa
DPU-derived Ni-Mo on Mg-Al Mixed Oxide: a coke-resistant catalyst for the methane dry reforming reaction
- O26: Andrea Felli** – University of Udine
Eco-Friendly and Industrially Scalable Synthesis of Ni-BaZrO₃ Catalysts for H₂ production from NH₃ Decomposition
- O27: Lorenzo Bonaldi** – University of Pisa
Transfer Hydrogenation of Furfural with Ethanol: Rediscovering the Role of Homogeneous Zr- and Al-Based Catalysts
- O28: Matteo Percivale** – University of Genoa
Effect of La in Ni/Al₂O₃ catalysts: performances and kinetics in CO₂ methanation
- F7: Elena Ghedini** – University of Bari
Steel slag as Catalyst: unlocking industrial waste for “circular” industrial applications
- F8: Domenico Licursi** – University of Pisa
Catalytic conversion of crude carboxylic acid-rich feedstocks into n-hexyl esters
- F9: Luca Calantropo** – University of Catania
Enhancing solar-assisted thermocatalytic CO₂ methanation over Ni-Zn-Al LDH-derived catalysts: effect of phyllosilicates incorporation
- F10: Andrea Fasolini** – University of Bologna
Pt-activated asymmetric dense ceramic membranes for hydrogen purification at high temperatures
- F11: Luca Gianoglio** – University of Turin
Single-step in situ synthesis of gold nanoparticles on carbon submicron fibers derived from maltodextrin-based electrospun mats
- 11:00–11:30 **Coffee Break & Sessione Poster**
- 11:30–13:00 **ROUND TABLE: Perspectives and challenges of Industrial Chemistry**
- Invited Speakers:**
 Antonio Cecchi (ARCHA S.r.l.)
 Giacomo Cipriani (Polynt Group)
 Mariangela Cozzolino (Cassa Depositi e Prestiti)
 Chiara Galletti (University of Pisa)
 Paolo Pollesel (ENI S.p.A.)
 Michele Sisani (Prolabin & Tefaram S.r.l.)
 Paolo Vacca (SAES Group)
 Nicola Vecchini (Versalis)

13:00–14:00 **Light Lunch**

14:00–14:30 **PL2: Fabio Castiglioni** – Mapei S.p.A.
Chemistry for Sustainable Concrete – How Chemical Admixtures Help in Reducing the Environmental Impact of the Construction Industry

14:30–16:15 **Smart materials**
Scientific Session VI (5 orals, 12 minutes ([O29-O33](#)) and 6 flash orals, 8 minutes ([F11-F17](#)))

O29: Benedetta Bertoncini – University of Pisa
Tuning Mechanochromism in Recycled Polypropylene via Pyrene Telechelic Functionalization

O30: Nicolò Lisena – Polytechnic of Milan
Assessment of the performances of a Deep-Injection Floating Catalyst Chemical Vapor Deposition reactor for Carbon Nanotubes production through reactive CFD

O31: Matilde Arese – University of Turin
Post-industrial and post-consumer recycled polypropylene for the automotive sector: investigation of mechanical and thermal properties after ageing

O32: Teresa Paduano – University of Naples Federico II
pH-Responsive Biopolymer Microspheres for active molecules release

O33: Angelo Nicosia – University of Catania
Metalloporphyrin-Based Copolymers as Solid-State Sensors for Optical Detection of Volatile Organic Compounds

F12: Rachele Braido – University Ca' Foscari Venice
Biochar derived from lignocellulosic biomass and its application as anode material

F13: Paola Lova – University of Genoa
Nanostructured Polymer and Hybrid Films for Enhanced Photocatalytic Degradation of Emerging Water Pollutants

F14: Federica Menegazzo – University Ca' Foscari Venice
Formulation of an antimicrobial coating for building applications

F15: Marco Carlotti – University of Pisa
Sustainable Luminescent Solar Concentrators from chemically recycled PMMA

F16: Elena Buratti – University of Ferrara
Synthesis of Poly(N-Isopropylacrylamide) and Waste Derived Keratin Hybrid Microgels for Biomedical Applications

F17: Matteo Righetti – University of Turin
Development and characterization of novel packaging solution through a bionanocomposites approach combining thermoplasticized starch and nanoclay

POSTER

- P1** **Sam Thomas** – University of Bologna
Reductive Catalytic Fractionation of low-input agricultural residues with a magnetic catalyst
- P2** **Lorenzo Isidoro** – University of Florence and ICCOM-CNR Florence
A Nitrogen-Rich Covalent Organic Framework as a Metal-Free Tool for the Batch to Flow Catalytic Reduction of Nitro-Aryls to Anilines using Hydrazine
- P3** **Annamaria Acquaviva** – University of Bari
A flow-chemistry approach to Inulin Depolymerization promoted by H_3PO_4
- P4** **Luca Lietti** – Polytechnic of Milan
Direct CO_2 hydrogenation to liquid fuels on a Fe-Zn-Cu-K catalyst
- P5** **Giuliano Giambastiani** – University of Florence and ICCOM-CNR Florence
Directing CO_2 RR Performance on Iron Single-Atom Catalysts, Inducing High-Spin Metal Atom States
- P6** **Nicola Calderaro** – University Ca' Foscari Venice
Enhancing TiO_2 photocatalytic performances in CO_2 photoreduction for sustainable fuel production
- P7** **Gianguido Ramis** – University of Genoa
High-Pressure CO_2 Photoreduction to formic acid over Z-Scheme catalysts
- P8** **Luca Capaldo** – University of Parma
A Telescoped Strategy for the Preparation of Five Membered Hetero- and Carbocycles via Hydrogen Atom Transfer Photocatalysis in Flow
- P9** **Marica Chianese** – University of Naples Federico II
Catalytic Conversion of Succinic Acid to Value-Added Chemicals: Toward Greener Industrial Processes
- P10** **Emanuele Bosetti** – University of Bologna
Synthesis and characterization of carbon-supported Vanadium species as new electrolytes for Vanadium Redox Flow Batteries
- P11** **Francesco Taddeo** – University of Naples Federico II
Transesterification of Ethyl Levulinate with Methanol Catalyzed by Zr-Based MOFs
- P12** **Ramzi Nasser Ahmed Saif** – University of Pisa
Selective Hydrogenation of 5-Hydroxymethylfurfural to 5-hydroxymethyltetrahydrofuran: Study of the reaction with commercial Pd-based catalysts
- P13** **Francesco Di Renzo** – ICGM University of Montpellier-CNRS-ENSCM
Hierarchical Zeolite Catalysts for the Valorisation of Fatty Esters

- P14** **Nicola Della Ca'** – University of Parma
High-TRL Technologies for Advanced CO₂ Transformation and Integration (ACTI)
- P15** **Matteo Corradini** – University of Bologna
Ru/Pd catalytic system for the reductive amination of furfural
- P16** **Vincenzo Russo** – University of Naples Federico II
Process intensification applied to overcome thermodynamic equilibrium conversions for reversible reactions: levulinic acid esterification
- P17** **Francesca Barsotti** – INSTM Consortium and University of Pisa
*Sustainable exploitation of defatted *Cynara cardunculus* in an integrated biorefinery approach*
- P18** **Emilia Paone** – Mediterranean University of Reggio Calabria
Transforming spent LiCoO₂ batteries into sustainable heterogeneous catalysts for biomass valorization
- P19** **Elisabetta Finocchio** – University of Genoa
Ceria-based electrolyte membranes for solid oxide cells
- P20** **Luciano Atzori** – University of Cagliari
Synthesis and characterization of La_{0.6-x}Ba_xSr_{0.4}Co_yFe_{1-y}O_{3-δ} based electrodes for Solid Oxide Electrolyzer Cells (SOECs)
- P21** **Antonella Salvini** – University of Florence
Saccharide derivatives for new and sustainable polymer formulations
- P22** **Simone Galliano** – University of Turin
Conductive coordination polymers as versatile materials for emerging energy-harvesting applications
- P23** **Placido Mineo** – University of Catania and IPCF-CNR Messina
A Thermoplastic Nanocomposite for UVC Optical Detection
- P24** **Flavia Cano** – University of Turin
Mechanical Recycling of Multi Coupled Material Body Seals Based on Thermoplastic Elastomers in the Automotive Industry
- P25** **Camilla Parmeggiani** – University of Florence and LENS
Shaping smart materials: 4D printing of fast-responsive Liquid Crystalline Elastomers
- P26** **Luca Soldati** – University of Pisa
Visualizing Mechanical Damage in Plastics via Diarylacetonitrile Probes
- P27** **Rosa Turco** – University of Naples Federico II
Toward Circularity in Plastics: One-Pot Chemical Recycling of Expanded Polystyrene Waste
- P28** **Claudia Antonetti** – University of Pisa
Valorization of Marble Wastes through Innovative Green Technologies for a Circular Economy Future
- P29** **Ruggero Rossi** – University of Florence

Photo-Responsive Polymers: Reversible Adhesives and Light-Triggered Micellar Nanocarriers

- P30** **Marcello Pagliero** – University of Genoa and INSTM Consortium
Preparation, characterization and testing of PVDF membranes for brine treatment by membrane distillation
- P31** **Rosanna Paparo** – University of West Ontario
Competitive adsorption of pharmaceutical compounds onto activated carbon: kinetic and thermodynamic aspects
- P32** **Ilenia Rossetti** – University of Milan and INSTM Consortium
Techno-economic analysis of direct biogas methanation: assessment of Minimum Selling Price under different process configurations and depreciation schemes
- P33** **Margherita Di Pede** – Laviosa S.p.A.
Life Cycle Assessment in Geosynthetic Clay Liners production
- P34** **Leonardo Carmassi** – University of Pisa
Enzymatic hydrolysis of bovine hair wastes to keratin-based added bio-products
- P35** **Mariasole Gobbo** – University of Florence
Integrated Hydrothermal and Microalgal Valorization of Brewery Spent Grains
- P36** **Benedetta Bertini** – University of Pisa
Microwave extraction of polyphenols from the waste biomass coffee silverskin and its valorization as a source of antioxidants
- P37** **Beatrice Cavallo** – University of Turin
Recyclability Enhancement of Siliconized Release Liners
- P38** **Rosa Vitiello** – University of Naples Federico II
Synthesis and Formulation of Fatty Acid Esters for Bio Based Lubricant Applications
- P39** **Anna Maria Raspolli Galletti** – University of Pisa
Synthesis of novel adsorbent materials from sewage sludge and their application for wastewater treatment within a circular economy perspective
- P40** **Elio Sarotto** – University of Turin
Thermocatalytic Pyrolysis of Polypropylene using Modified Zeolite Y: an innovative upcycling opportunity of plastic waste
- P41** **Gabriele Centi** – University of Messina
Efficient and stable non-oxidative methane coupling at ambient conditions in a DBD reactor
- P42** **Siglinda Perathoner** – University of Messina
Is the Faradaic selectivity associated only with the presence of specific surface sites in the electrocatalyst?