



Waste-Energy-Water Nexus: Materials & Processes 2025

Italy
China
South Africa
2025

15 July 2025

10:00 - 17:30 (CET)

**Campus di Rimini / Aula 8 - Piazzetta Teatini 13,
47921 Rimini, Italy**

<https://maps.app.goo.gl/SktpgJt4yobWfBa99>

10:00 - Registration

10:30 - Authorities

- Francesca Soavi and Daniele Fabbri - UNIBO
Scientific coordinators of WEW 2025
- Alessandra Guidi, Scientific Expert from the Italian
Embassy in China
- Catia Arbizzani, Delegate for International
Relationships, Department of Chemistry "G.
Ciamician" - UNIBO
- Massimiliano De Agostinis, Director of CIRI MAM -
UNIBO
- Anna Montini, Delegate for the Municipality of
Rimini
- Katia Ferrari, Cluster Manager at Clust-ER
Greentech

11:00 - Scientific session I - Chaired by Daniele Fabbri

11:10 - Key Note - Shurong Wang, Zhejiang University
"Valorizing biomass waste into multifunctional
aerogels for solar energy harvesting and water
remediation"

11:40-12:10 - Coffe break

12:10 - Invited lecture - Osvalda Senneca, CNR-
STEMS "Thermochemical reactions of iron and
biomass within the H₂, energy, water nexus"

12:30 - Invited lecture - Paola Giudicianni, CNR-
STEMS "Influence of heating rate and residence time
on biochar properties across pyrolysis"

12:50 - Regular oral - Luca Bottoni, University of
Camerino "A sustainable anode for Na-ion batteries
based on holm oak waste-derived hard carbon and
lignin binder"

13:05 - Regular oral - Davide Gramigni, University of
Bologna "Understanding pH effects on nickel-
graphene catalysts to optimize the oxygen evolution"

13:20-15:00 - Lunch buffet

15:00 - Scientific session II - Chaired by Shurong Wang

15:00 - Key Note - Haiping Yang, Huazhong
University of Science and Technology "Renewable
energy driven biomass conversion for H₂ and
biochar"

15:30 - Regular oral - Corinna Maria Grottola, CNR -
STEMS "Influence of temperature and atmospheric
conditions on heavy metal behaviour during biomass
pyrolysis"

15:45 - Regular oral - Davide Amato, CNR-STEMS
"Insights on the effects of Pb speciation and
contamination type on lignocellulosic biomass
pyrolysis"

16:00 - Regular oral - Edoardo Tito, Politecnico di
Torino "Hydrothermal liquefaction as a valorization
pathway for biomass and plastic wastes"

16:15 - Regular oral - Serena Monaco, Sapienza
University of Rome "Hydrothermal liquefaction of
mixed plastic waste: Conversion and resource
recovery"

16:30 - Regular oral - Erica Ribechini, Sapienza
University of Rome "Pyrolysis of polyolefins: Kinetic
and experimental study"

16:45 - Regular oral - Mirko Magni, University of
Milan "Electrochemistry as a polyvalent tool in the
design of an industrially relevant process for
recycling of spent lithium-ion batteries"

17:00-17:30 - Closing tea

Organizing secretariat: wew.ics25@unibo.it



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16 July 2025

9:30 - 17:30 (CET)

**Centro di Ricerca Ambiente Energia, Ambiente e Mare
Viale Ciro Menotti, 48 - 48122 Marina di Ravenna**

<https://maps.app.goo.gl/S7ETRjg3HueHkqw39>

09:30 Registration & poster show up

10:00 Welcome coffee

10:30 Authorities

- Francesca Soavi and Daniele Fabbri - UNIBO
Scientific coordinators of WEW 2025
- Alessandro Martinini, Municipality of Ravenna
- Maria Letizia Focarete, Director of the
Department of Chemistry "G. Ciamician" -
UNIBO
- Francesco Basile, Director of CIRI-FRAME -
UNIBO
- Luca Tiano, Scientific Attaché Italian Embassy
in Pretoria
- Luca Cipriani, Direct of Ravenna campus -
UNIBO
- Andrea Contin, FIP-WE@UNIBO

**11:25 - Scientific session I - Chaired by
Francesca Soavi**

11:15 - Key Note - Ncholu Manyala, University of
Pretoria "*Chemical and electrochemical extraction
of transition metals from LiB leachates for MOF-
based Supercapacitor Electrodes*"

11:45 - Invited lecture - Camilla Zanoni, University
of Pavia "*How long-term research is supporting
battery recycling: the Horizon Europe REMOVATE
project*"

12:05 - Invited lecture - Antonio Conversano,
Polytechnic of Milan "*Integrated valorization of
meat residues for biomethane and hydrochar
production*"

**12:30-13:30 - Visit of EnerCUBE Lab & FIP-
WE@UNIBO Lab**

13:30-15:00 - Lunch buffet

14:00-15:00 - Poster session

**11:45 - Scientific session II - Chaired by
Ncholu Manyala**

15:00 - Regular oral - Cléo Pires, University of
Bologna "*Quasi-solid electrolytes/membranes based
on zeolite A for safer batteries*"

15:15 - Regular oral - Leonardo Sparascio, University
of Bologna "*Selective recovery and valorization of
permanent magnet content from end-of-life electric
motors*"

15:30 - Regular oral - Luca Vignali, University of
Bologna "*Improve renewable energy integration
through pumped hydro storage: STORE2HYDRO
Project*"

15:45 - Regular oral - Federica Mancini, CNR-ISSMC,
"*From waste to bioimaging: Fluorescent carbon dots
derived from food industry residues*"

16:00 - Regular oral - Anna Liguori, University of
Bologna "*Bio-based molecules and dynamic covalent
bonds for the development of recyclable and self-
healing thermosets and coatings*"

16:15 - Regular oral - Jun Li, Huazhong University Of
Science And Technology "*Molten salt assisted algae
pyrolysis for H₂ and capacitive carbon production*"

16:30 - Regular oral - Cristian Torri, University of
Bologna - TBA

**16:45-17:30 - Closing remarks, awards
assignment & final toast**

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