

# ChIR Symposium 2026

## "Safe and Sustainable by Design: Innovation Beyond REACH"

Parc Científic de Barcelona, Barcelona, Spain, June 29 and 30, 2026

### Monday, 29 June

08:45 Registrations

09:00 **Opening session**

Session 1 — Chemical Regulation, Product Information and Pharmaceutical Quality  
Chairperson: Emilio Tagliavini

09:30	<b>Keynote 1</b>	Anna Białk-Bielińska Department of Environmental Analysis - University of Gdansk	Principles of Environmental Risk Assessment of Chemicals
10:10	<b>TP1</b>	Swapnil Bavane	Data, Traceability, and Transformation: The EU Digital Product Passport in the Chemical Industry
10:20	<b>TP2</b>	Giorgio Clarizia	The European Pharmacopoeia and the Quality of Medicines: Historical Perspective, Scientific Advancements, and Regulatory Milestones
10:30	<b>TP3</b>	Lame B. Selema	The International Pharmacopoeia: History, Functions and Role in Pharmaceutical Regulation
10:40	<b>TP4</b>	Ikenna Calvin Ugwoke	Diet-Gut Microbiome-CVD Axis: Molecular Dynamics-Guided Targeting of the CutC Choline Lyase Dimer Interface for Inhibition
10:50	<i>Discussion      Session speakers</i>		

11:10 **Coffee break**

*Poster Session*

Session 2 — Microplastics, Micropollutants and Sustainable Water Treatment  
Chairperson: Isabel Cavaco

11:40	<b>TP5</b>	Adaeze Phoebe Njoku	Microplastic Removal from Waters by Coagulation-Flocculation-Sedimentation: Conventional and Natural Coagulants Compared
11:50	<b>TP6</b>	Ishita Sarkar	Multi-Scale Degradation of Polystyrene Micro- and Nanoplastics under O <sub>3</sub> /UV Treatment
12:00	<b>TP7</b>	Ahmad Aakash	H <sub>2</sub> O <sub>2</sub> /UVC Advanced Oxidation Coupled with Nanofiltration for Micropollutant Removal from Secondary Wastewater Effluent: Dose Optimisation, Membrane Performance, and Treatment Configuration
12:10	<b>TP8</b>	Daniele Versura Jimenez	Process Integration for Enhanced Micropollutant Removal and Wastewater Reuse
12:20	<i>Discussion      Session speakers</i>		
12:40	<b>TP9</b>	Abriha Mengstu Leyu	Hexahydroxytriptycene-Based Metal-Organic Frameworks for Catalytic and Gas Sensing Applications
12:50	<b>TP10</b>	George Chidiebere Ezenwamadu	ZIF-8 and Truxene Thin Films for Gas Sensing Applications
13:00	<b>TP11</b>	M. Mustak Ahmed	Luminescent Gold(I) Complexes for Molecular Recognition of Environmental Contaminants
13:10	<b>TP12</b>	Md Abid Hasan	Hybrid Anisotropic Magneto-Optical Nano-Objects for Water Remediation Applications
13:20	<i>Discussion      Session speakers</i>		

13:30 **Lunch**

*Poster Session*

Session 3 — Sustainable Materials, Nanomaterials and Biomedical Chemical Innovation  
Chairperson: Alessandra Tolomelli

15:30	<b>Keynote 2</b>	Elisabetta Petri Department of Chemistry "Giacomo Ciamician", University of Bologna	Redesigning the Energy Storage Value Chain Through Sustainability
16:10	<b>TP13</b>	Francis Adjei	Sustainable Synthesis and Structural Evaluation of Alkali-Lanthanide Nanostructured Materials for Energy Storage Applications
16:20	<b>TP14</b>	Asim Mahmood	Colloidal Synthesis and Optoelectronic Characterization of Ternary Ag <sub>3</sub> Sb <sub>2</sub> Chalcogenide Nanocrystals for Energy Applications
16:30	<b>TP15</b>	Nadia Eka Wijaya	Synthesis and Characterization of Ternary Chalcogenide CuAuS Nanoparticles for Photothermal Cancer Therapy
16:40	<b>TP16</b>	Md. Saad Hossain	In Vitro Evaluation of Novel Metallo-drugs as Cytotoxic Agents for Triple Negative Breast Cancer
16:50	<i>Discussion      Session speakers</i>		

17:10 **Closing of day 1**

## Tuesday, 30 June

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### Session 4 — Safe and Sustainable by Design, Bio-Based Products and Circular Food Systems Chairperson: Daniel Sainz

09:00	<b>Keynote 3</b>	<p><b>Mar Gonzalez</b> OECD - Nanomaterials and Advanced Materials Programme</p> <p><b>SSIA and SSbD</b></p>
09:40	<b>TP17</b>	<p>Deborah Chinwendu Ofoegbu</p> <p>Formulation and Characterisation of a Fava Bean and Microalgae-Based Plant Yogurt</p>
09:50	<b>TP18</b>	<p>Deimantė Stankūnaitė</p> <p>Life Cycle Assessment of an Integrated Multi-Trophic Aquaculture (IMTA) System: Fish and Algae Cultivation in Portugal</p>
10:00	<b>TP19</b>	<p>Catherine Angeli San Jose</p> <p>Evaluation of Nitrates in Beetroot Juice and the Nutritional Characterization of Brewer's Spent Grain and Wine Lees</p>
10:10	<b>TP20</b>	<p>Sarah T. A. Zaza</p> <p>Formulation and Rheological Characterization of Caseinate-Xanthan Gum Oleogels for Solid Fat Replacement</p>
10:20	<i>Discussion</i> <i>Session speakers</i> <i>Discussion</i>	

### Session 5 — Energy Optimisation, Hydrogen Production and Sustainable Energy Materials Chairperson: Santiago Esplugas

10:40	<b>TP21</b>	<p>Abdallah Essam Elbassiouny</p> <p>Energy Optimization and Process Integration Strategies for Industrial Operations: A Case Study in a Company</p>
10:50	<b>TP22</b>	<p>Peter Obaloluwa Agboola</p> <p>Hybrid Magneto-Semiconductor Nano-Objects for H<sub>2</sub> Production through Water Photocatalysis: Synthesis, Characterization, and TiO<sub>2</sub>-Shell Engineering over Ni-Core Nanostructures</p>
11:00	<b>TP23</b>	<p>Sabrina Cervantes Vizcaino</p> <p>TiO<sub>2</sub>/(Ba,Sr)TiO<sub>3</sub>/MXene Tertiary Heterojunction Photocatalyst for Hydrogen Generation</p>
11:10	<b>TP24</b>	<p>Mohammad Hamza</p> <p>From Renewable H<sub>2</sub> to Grid-Compatible CH<sub>4</sub>: Pilot-Scale Ex-Situ Bio-Methanation and Scale-Up Potential</p>
11:20	<i>Discussion</i> <i>Session speakers</i> <i>Discussion</i>	

### 11:40 **Coffee break**

#### *Poster Session*

### Session 6 — Designing Sustainable Futures: Energy, Materials and Biomedical Innovation Chairperson: Carme Gonzalez

12:10	<b>Keynote 4</b>	<p><b>Jordi Falguera Garcia</b> WATTEGA (ARCbcn &amp; ERF)</p> <p>Designing the Future of Local Energy Communities: Asynchronous Peer-to-Peer Trading in Multi-Energy Networks</p>
12:40	<b>TP25</b>	<p>Andela Popović</p> <p>Enhancing Anaerobic Biodegradation of Polylactic Acid (PLA) through Low-Intensity Chemical and Thermal Pretreatments</p>
12:50	<b>TP26</b>	<p>Nevil Jose</p> <p>Metal Crosslinking of Peptide Hydrogels: Structural and Mechanical Effects</p>
13:00	<b>TP27</b>	<p>Ihsanti Fairuz Anatasya</p> <p>Leptin Analogues Design, Synthesis, and Characterization for Alzheimer's Disease</p>
13:10	<i>Discussion</i> <i>Session speakers</i>	

### 13:30 **Lunch**

#### *Poster Session*

### Session 7 — SSbD, Innovation Beyond REACH and the ChIRS Programme Chairperson: Paola Galletti

15:30	<b>Round Table</b>	<p>All the speakers</p> <p>SSbD: Innovation Beyond REACH</p>
16:00	<b>Keynote 5</b>	<p><b>Isabel Cavaco</b> ChIR Programme Coordinator</p> <p>Chemical Innovation and Regulation for Sustainability: Responding to the Emerging Needs of SSbD</p>

### 16:30 **Awards Session**

### 17:00 **Closing session**

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