

# 3<sup>rd</sup> Bilateral Workshop Portugal – Slovenia

## (Bio) Materials and Processes for Circular Economy

September 4-5, 2025

### SCIENTIFIC PROGRAMME

#### Co-chairs:

Filipa A. Vicente      Mara G. Freire

#### Organizing Committee:

Filipa A. Vicente  
João A. P. Coutinho  
Jorge F. B. Pereira  
Mara G. Freire  
Márcia Neves

#### Acknowledgements:



## Scientific Program

September 4<sup>th</sup>

9:00	Registration	
9:30	Morning session	
9:30	<b>Mara G. Freire (University of Aveiro)</b>	<i>Institutional overview – Path, CICECO, University of Aveiro</i>
9:40	<b>Filipa A. Vicente (National Institute of Chemistry)</b>	<i>Institutional overview – Department of Catalysis and Chemical Reaction Engineering, National Institute of Chemistry</i>
9:50	<b>Santiago Aparicio Martinez (University of Burgos)</b>	<i>Plenary session – Nature's Solution to Forever Chemicals: Natural Deep Eutectic Solvents for Circular PFAS Remediation</i>
10:50	Coffee break	
11:30	<b>Maja Gabrič (National Institute of Chemistry)</b>	<i>High-Pressure Stirred Reactor System for Biomass Valorization</i>
11:50	<b>Germán Pérez-Sánchez (University of Aveiro)</b>	<i>In-silico analysis to unveil the structure of water around fluorescence proteins</i>
12:10	<b>Žan Lavrič (National Institute of Chemistry)</b>	<i>Kinetic Modelling of Polyethylene Terephthalate Glycolysis</i>
12:30	<b>Anej Blažič (University of Aveiro)</b>	<i>Electrified methanation: using magnetic heating for efficient, on-demand in-situ fuel production</i>
12:50	Lunch break	
14:10	Afternoon session	
14:10	<b>Carla Vilela (University of Aveiro)</b>	<i>Keynote session – Cellulose Beads as Sustainable Tools for Water Remediation</i>
14:40	<b>Vojtěch Škopek (National Institute of Chemistry)</b>	<i>Application of chitosan-admixed hydrogels as electrode coatings</i>
15:00	<b>Ana P. M. Tavares (University of Aveiro)</b>	<i>Design, Engineering, and Applications of Enzymes for Sustainable Biocatalytic processes</i>
15:20	<b>Assya Bellaadem (National Institute of Chemistry)</b>	<i>From plant to paper: sustainable curcuminoid extraction for paper-based applications</i>
15:40	Coffee break	
16:10	<b>Emanuel V. Capela (University of Aveiro)</b>	<i>Innovative processes for protein extraction and recovery from insects</i>
16:30	<b>Catarina Esteves (University of Lisbon)</b>	<i>Eco-Friendly Extraction of Insect Oils from the Portuguese Bioindustry</i>
16:50	<b>Jorge F. B. Pereira (University of Coimbra)</b>	<i>Keynote session – Aqueous Two-Phase Systems: Advanced Tools for Integration of Circular Processes</i>
17:20	Closing session	

## September 5<sup>th</sup>

9:30	Morning session	
9:30	<b>Matej Huš (National Institute of Chemistry)</b>	<i>Keynote session – First-principles models in bio materials description: do we need them at all?</i>
10:00	<b>Dinis O. Abranches (University of Aveiro)</b>	<i>Accelerating Sustainable Materials Discovery with Artificial Intelligence</i>
10:20	<b>Leon Žagar (National Institute of Chemistry)</b>	<i>Permeation Modeling of Porous Membrane in a Direct Contact Membrane Distillation Module</i>
10:40	Coffee break	
11:10	<b>Andraž Pavličič (National Institute of Chemistry)</b>	<i>CFD in Real-World Engineering</i>
11:30	<b>Francisca A. e Silva (University of Aveiro)</b>	<i>Reshaping Sample Pretreatment for Clinical Bioanalysis</i>
11:50	<b>Augusto Q. Pedro (University of Aveiro)</b>	<i>Manufacturing, preservation, and delivery of biopharmaceuticals@PATH</i>
12h10	<b>Vitor Sencadas (University of Aveiro)</b>	<i>Keynote session – Optimization of Aqueous Eutectic Solvent Extraction of Antibacterial Compounds from Brazilian Green Propolis for Aerosol-Based Skin Disinfection Applications</i>
12:40	Lunch break	
14:00	Afternoon session	
14:30	<b>Michał Niemczak (Poznan University of Technology)</b>	<i>Keynote session – In harmony with nature: unlocking the sustainable potential of glycine betaine in agrochemistry and surfactants</i>
15:00	<b>Sónia Santos (University of Aveiro)</b>	<i>Strategies for the exploitation of natural compounds: from extraction to valuable applications</i>
15:20	<b>João Pinto (University of Aveiro)</b>	<i>Solvent design for hydrometallurgy – application to lithium-ion battery recycling</i>
15:40	<b>Luis Branco (University of Lisbon)</b>	<i>Ionic and Eutectic Systems as versatile (bio)materials for energy, water purification and therapeutic applications</i>
16:00	Closing session	
16:05	Lab Tour	