

Afternoon Session

Keynote Session II : Waste management and Circular Economy, Chair/Co-Chairs: K. Plakas, A. El Moll

KL 3: Green transition in wastewater treatment plants - analysis of challenges and opportunities

Pr. Marzena Smol, Head of the Division of Biogenic Raw Materials, Polish Academy of Sciences, Poland,

KL 4: Sustainable passive solar seawater desalination: concepts and system configurations

Pr. Ridha Djellabi, Depart. of Chemistry, Alfaisal University, Al Maather, Al Takhassusi Road, Riyadh, Saudi Arabia,

KL 3: Green transition in wastewater treatment plants - analysis of challenges and opportunities

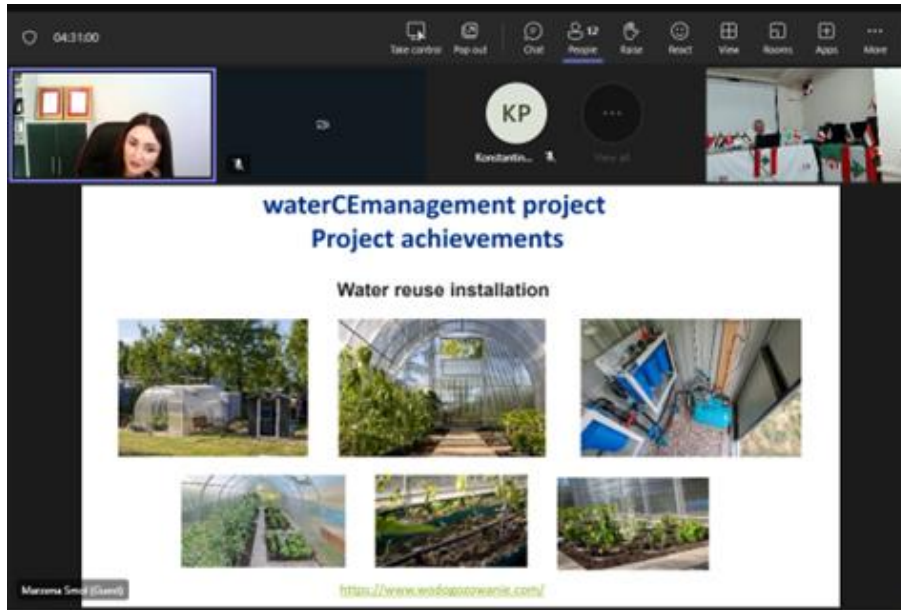
Pr. Marzena Smol, Head of the Division of Biogenic Raw Materials, Polish Academy of Sciences, Poland,

The screenshot shows a Zoom meeting interface with a presentation slide. The slide features the following content:

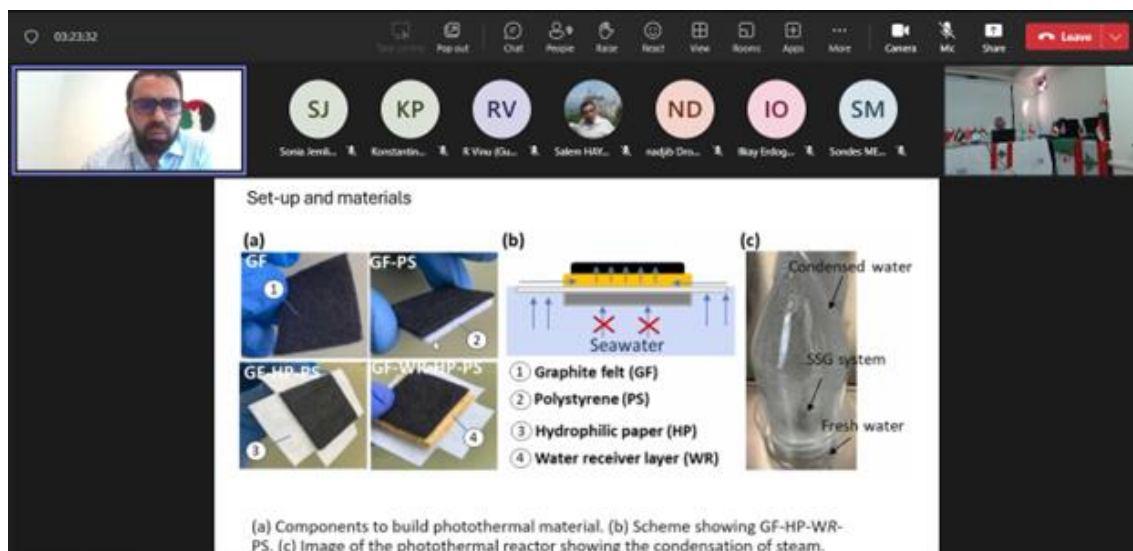
- Logos for Interreg Baltic Sea Region, the European Union, and ReNutriWater.
- Text: "Co-funded by the European Union", "6th International Symposium on Materials, Electrochemistry and Environment (IMEE 2024)", "Keynote Session II : Waste management and Circular Economy".
- Title: "Green transition in wastewater treatment plants - analysis of challenges and opportunities".
- Speaker: "Prof. Marzena Smol, Division of Biogenic Raw Materials".
- Logos for PAN (Polish Academy of Sciences) and the Mineral and Energy Economy Research Institute.
- Date: "online | 23 October 2024".
- URL: "interreg.baltic.eu/project/renutriwater".
- A circular logo on the right that says "WATER-SMART SOCIETIES".

The screenshot shows a Zoom meeting interface with a presentation slide titled "Conceptual framework for CE wastewater treatment plant (WWTP)". The slide includes:

- Logos for Interreg Baltic Sea Region, the European Union, and ReNutriWater.
- Text: "CE implementation in the WWTPs includes: water pathway, energy pathway, materials pathway.".
- Text: "Conceptual framework for 'Wastewater Treatment Plant of the Future' focuses on a new look at the municipal wastewater stream as a source of water, energy and secondary raw materials, while maintaining the basic requirements of the WWTP, such as ensuring sanitary safety and optimising the operating costs of the treatment plant.".
- A flowchart diagram showing the integration of water, energy, and materials pathways. The water pathway includes "Water treatment", "Water distribution", and "Water users". The energy pathway includes "Water lab pathway" and "Energy pathway". The materials pathway includes "Wastewater collection", "Wastewater treatment", "Sludge disposal", "Sludge drying", and "Sludge incineration".



KL 4: Sustainable passive solar seawater desalination: concepts and system configurations
Pr. Ridha Djellabi, Depart. of Chemistry, Alfaisal University, Al Maather, Al Takhassusi Road, Riyadh, Saudi Arabia,



Keynote Session III A: Natural Product Chemistry, Toxicity Assessment and potential applications, Chair/Co-Chairs: K. Plakas, A. El Moll	
KL 7: Evaluation of the neurobiological effect of natural phenolics from in vitro, in silico, and in vivo perspectives	Pr. Ilkay Erdogan Orhan , Dean at Lokman Hekim University, Faculty of Pharmacy, Ankara, Turkey
Keynote Session III B: Structural, analytical & physical chemistry Chair/Co-Chairs: K. Plakas, A. ElMoll	
KL 8 Exploration of metallic iron in dust from ventilation system using Mössbauer spectrometry, synchrotron radiation and magnetic methods	Pr. Tadeusz Szumiata , Casimir Pulaski Radom University, Poland

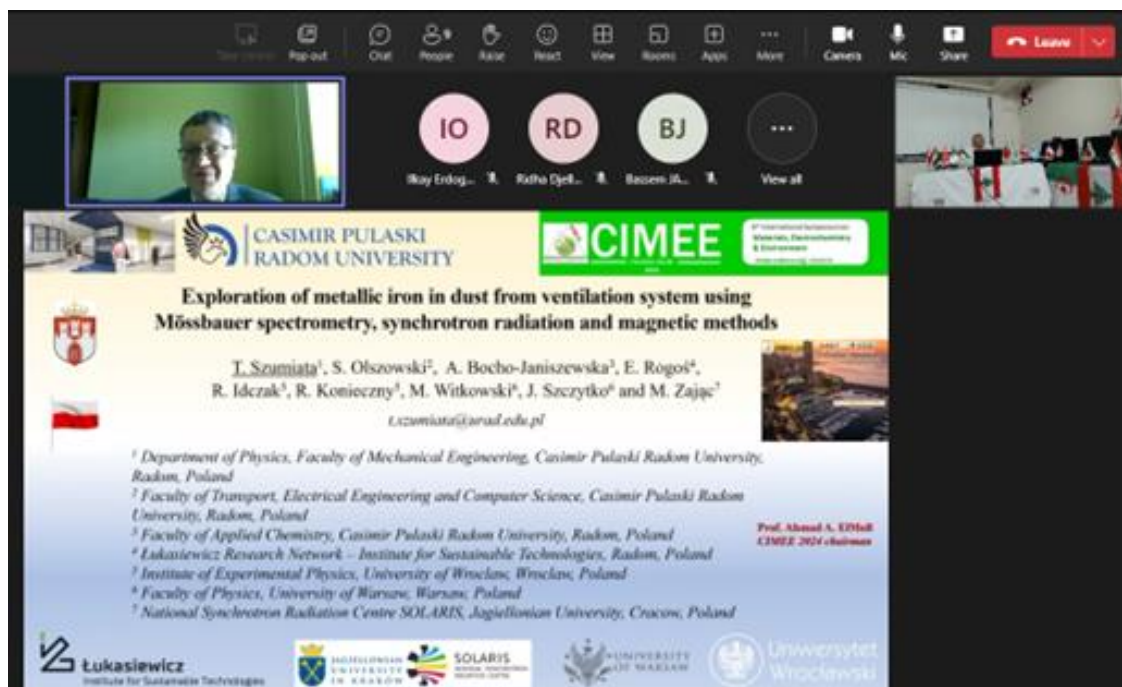
KL 7: Evaluation of the neurobiological effect of natural phenolics from in vitro, in silico, and in vivo perspectives

Pr. Ilkay Erdogan Orhan, Dean at Lokman Hekim University, Faculty of Pharmacy, Ankara, Turkey



KL 8 Exploration of metallic iron in dust from ventilation system using Mössbauer spectrometry, synchrotron radiation and magnetic methods

Pr. Tadeusz Szumiata, Casimir Pulaski Radom University, Poland



Keynote Session IV : Structural, analytical & physical chemistry Chair/Co-Chairs, K. Plakas, A. El Moll

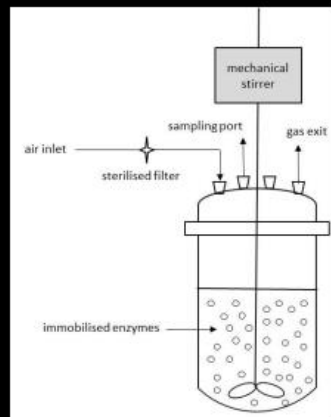
KL 10: Enzyme immobilisation for the removal of xenobiotic compounds from wastewater: a laccase-focused study
Pr. Susana Rodriguez-Couto, Dept. of Separation Science, Lappeenranta-Lahti University of Technology, LUT, Finland

KL 11: Harnessing microalgal capacities for bioremediation of contaminated waters: Insights from ex-situ phycoremediation

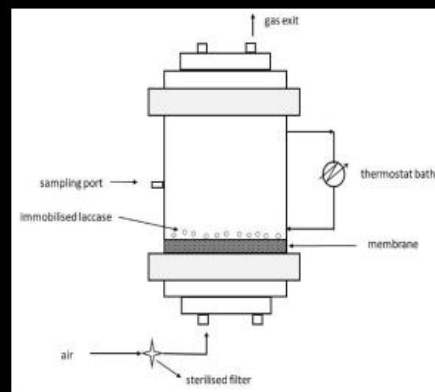
Dr. Jihen Elleuch, Lab. de Génie Enzymatique et Microbiologie, Ecole Nationale d'Ingénieurs de Sfax, ENIS, Université de Sfax, Sfax, Tunisia

KL 10: Enzyme immobilisation for the removal of xenobiotic compounds from wastewater: a laccase-focused study
Pr. Susana Rodriguez-Couto, Dept. of Separation Science, Lappeenranta-Lahti University of Technology, LUT, Finland

Bioreactors used with immobilised enzymes

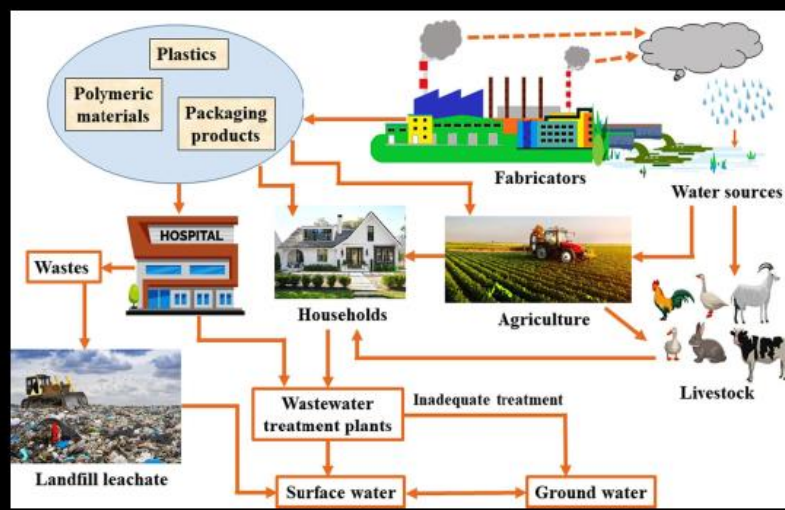


Stirred tank



Membrane

Potential sources of BPA contamination



KL 11: Harnessing microalgal capacities for bioremediation of contaminated waters: Insights from ex-situ phycoremediation

Dr. Jihen Elleuch, Lab. de Génie Enzymatique et Microbiologie, Ecole Nationale d'Ingénieurs de Sfax, ENIS, Université de Sfax, Sfax, Tunisia

The screenshot shows a Zoom meeting interface. At the top, the time is 07:53:04. The meeting controls bar includes icons for Pop out, Chat, People, Raise, React, View, Rooms, Apps, and More. The main window displays a presentation slide. The slide features a network diagram of orange and red nodes at the top. Below it, the title "Harnessing microalgal capacities for bioremediation of contaminated waters: Insights from ex-situ phycoremediation" is centered. The presenter's name, "Dr. JIHEN ELLEUCH", and her affiliation, "Associate professor, University of Sfax, Tunisia", are listed. Logos for the University of Sfax and ENIS are also present. The slide includes contact information for the Department of Biotechnological Engineering and the Laboratory of Enzymatic Engineering and Microbiology.

The screenshot shows a Zoom meeting interface. At the top, the time is 07:54:17. The meeting controls bar includes icons for Pop out, Chat, People, Raise, React, View, Rooms, Apps, and More. The main window displays a presentation slide titled "Industrial wastewater". The slide features a 3D illustration of an industrial factory with smokestacks. Overlaid on the illustration are three boxes: "Chemical carcinogenic" with a radiation symbol, "Radioactive waste" with a radiation symbol, and "Poison Heavy metal ions" with a biohazard symbol. A red banner across the factory reads "Toxic industrial waste".