

7th International Symposium on Materials, Electrochemistry & Environment (CIMEE 2025)

Daily Briefing

Day 1

Day 2

Day 3



DAILY BRIEFING

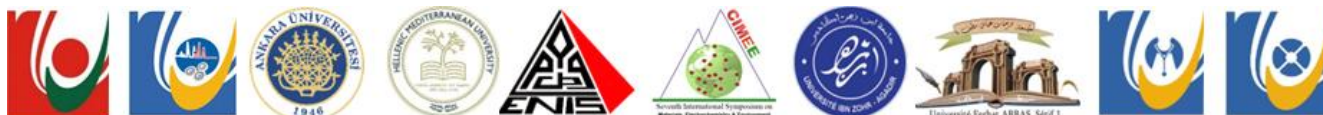
Theme cimee25: Advancing sustainability through Materials, Electrochemistry & Green Energy

7th International Symposium on Materials, Electrochemistry & Environment (CIMEE 2025)

25– 27 September 2025, Lebanon

Jointly Organised by

- Department of analytical Chemistry, Faculty of Pharmacy, Ankara University, Turkey .
- Center of Materials Technology and Photonics, Hellenic Mediterranean University, Heraklion, Crete, Greece
- Laboratory of Applied Chemistry & Environment, ENSA, University of Ibn Zohr, Morocco
- Laboratory of Environmental Engineering & Ecotechnology, ENIS, University of Sfax, Tunisia.
- Laboratory of Electrochemistry, LEIMCR, Faculty of Technology, University of Ferhat Abbas Sétif-1, Algeria



CLOSING SESSION

SEVENTH INTERNATIONAL SYMPOSIUM ON MATERIALS, ELECTROCHEMISTRY & ENVIRONMENT Septième Colloque International sur les Matériaux, l'Electrochimie et l'Environnement, CIMEE25

THE LARGEST GATHERING OF EXPERTS IN MATERIALS, ELECTROCHEMISTRY & ENVIRONMENT

Day 1

Official Opening Ceremony:

INVITATION

The Faculty of Public Health, Lebanese University

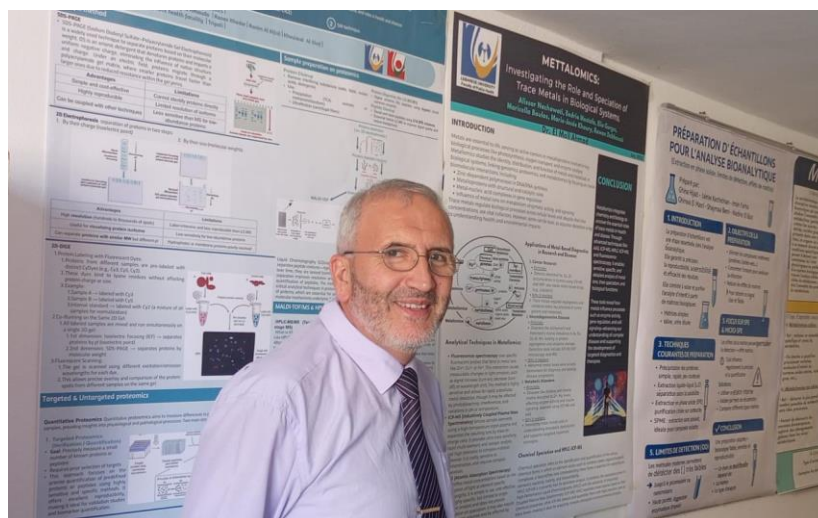
are pleased to invite you to the Opening Ceremony of the
**Seventh International Symposium, CIMEE'25 on
Materials, Electrochemistry & Environment**

cimee-science.org
which will take place online on Thursday September 25 at 9:00 a.m.

Opening Ceremony Program
which will take place online on Thursday September 25 at 9:00 a.m (GMT+3)

- The Lebanese national anthem and the anthem of the Lebanese University
- Speech by Elie Hadchiti, the Dean of Public Health at the Lebanese University, Lebanon
- Speech by Najat Aoun Saliba, member of the Lebanese Parliament & Professor at the AUB, Lebanon
- Speech by Ahmad El Moll, Chairman of CIMEE25 Scientific Committee and Ass. Prof at Lebanese university, Lebanon
- Speech by Rachid Salghi, professor at the National School of Applied Science, Ibn Zohr University, Agadir, Morocco.
- Speech by Konstantinos Plakas, Project Manager for ENI CBC Med Program and senior researcher at CERTH, Greece

Opening plenary session. Advancing sustainability through Materials, Electrochemistry and Green energy
Assoc. Prof. Ahmad El Moll, Lebanese university, Lebanon



PL 1: Plenary Lecture: Treatment & reuse of industrial wastewater with the aid of Advanced Membrane Processes, Dr. Konstantinos Plakas, Senior researcher, Centre for Research & Technology-Hellas, CERTH, Thessaloniki, Greece

Keynote Session I: Waste Biomass, management valorization & Circular Economy Chair/Co-chairs A. El Moll, K. Plakas

KL 1: Hydrothermally Carbonised Biomass: Applications to Water Decontamination

Pr. Najma Memon, National Centre of Excellence in Analytical Chemistry, University of Sindh, Jamshoro, Sindh, Pakistan

KL 6 Future of bioanalytical chemistry: the potential role of miniaturized separation techniques & sustainability

Pr. Marcello Locatelli, Depart. of Science, University "G. d'Annunzio" of Chieti-Pescara, Via dei Vestini 31, Chieti, Italy



Hydrothermally Carbonised Biomass: Applications to Water Decontamination
International Symposium on Materials, Electrochemistry and Environment, CIMEE'25

Najma Memon

National Centre Of Excellence In Analytical Chemistry, University Of Sindh, Jamshoro, Pakistan.

Email: najma.memon@usindh.edu.pk

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Blue laccases for green textile wastewater treatment

International Symposium on Materials, Electrochemistry and Environment, CIMEE'25

Prof. Susana Rodríguez-Couto
Lappeenranta-Lahti University of Technology LUT
Mikkeli Regional Unit
FINLAND
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Anaerobic digestion is a widely used technology for leachate treatment, renewable energy production, and nutrient recovery.

**New Approaches To Wastewater Treatment
By Coupling Biological And Photocatalytic Technologies**

ELLEUCH Lobna

Wastewater and Environment Laboratory, Water Research and Technologies Center CERTE, P.O. Box 273,8020 Soliman, Tunisia



Fig: Consolidated municipal solid waste landfilling system and utilization of leachate and landfill gas for energy generation (Nanda and Berruti 2021).

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25

Future of bioanalytical chemistry: the potential role of miniaturized separation techniques & sustainability, Pr. Marcello Locatelli, Depart. of Science, University "G. d'Annunzio" of Chieti-Pescara, Via dei Vestini 31, Chieti, Italy

Conclusions

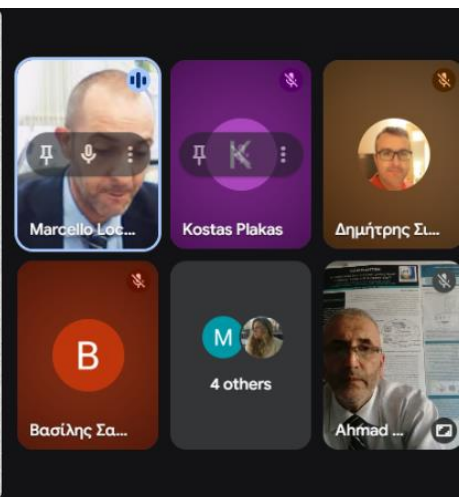
The miniaturization enabled by 3D printing technologies has revolutionized analytical chemistry, supporting the development of compact, portable, and highly efficient devices for diverse applications such as environmental monitoring, biomedical diagnostics, and food safety.

These devices are particularly beneficial in resource-constrained environments due to their low power requirements and ease of deployment.

The integration of 3D printing with advanced technologies—such as nanomaterials and artificial intelligence—holds significant promise for the creation of smart, adaptive analytical systems. These systems could self-optimize performance and respond dynamically to environmental changes.

Furthermore, advancements in miniaturized chromatography and the adoption of additive manufacturing techniques are aligning analytical practices with the principles of GAC. These innovations promote sustainability through reduced consumption of solvents, samples, and energy, while offering personalized and on-demand production of analytical tools.

Although challenges such as standardization and material strength remain, current progress underscores the transformative potential of 3D printing in developing eco-friendly, rapid, and intelligent analytical technologies.

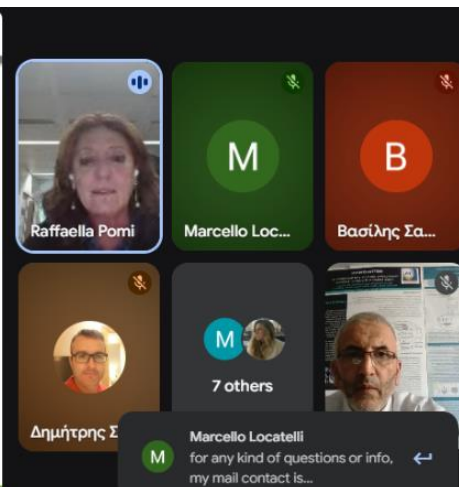
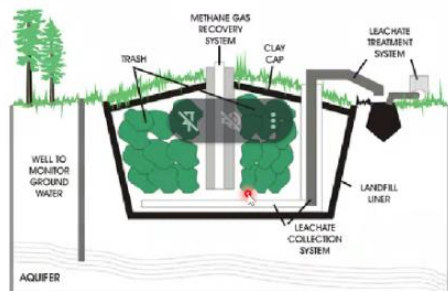


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BioH2 production from biodegradable waste: opportunities and challenges, Pr. Raffaella Pomi, Depart Civil engineering, University of Roma "La Sapienza", Rome, Italy

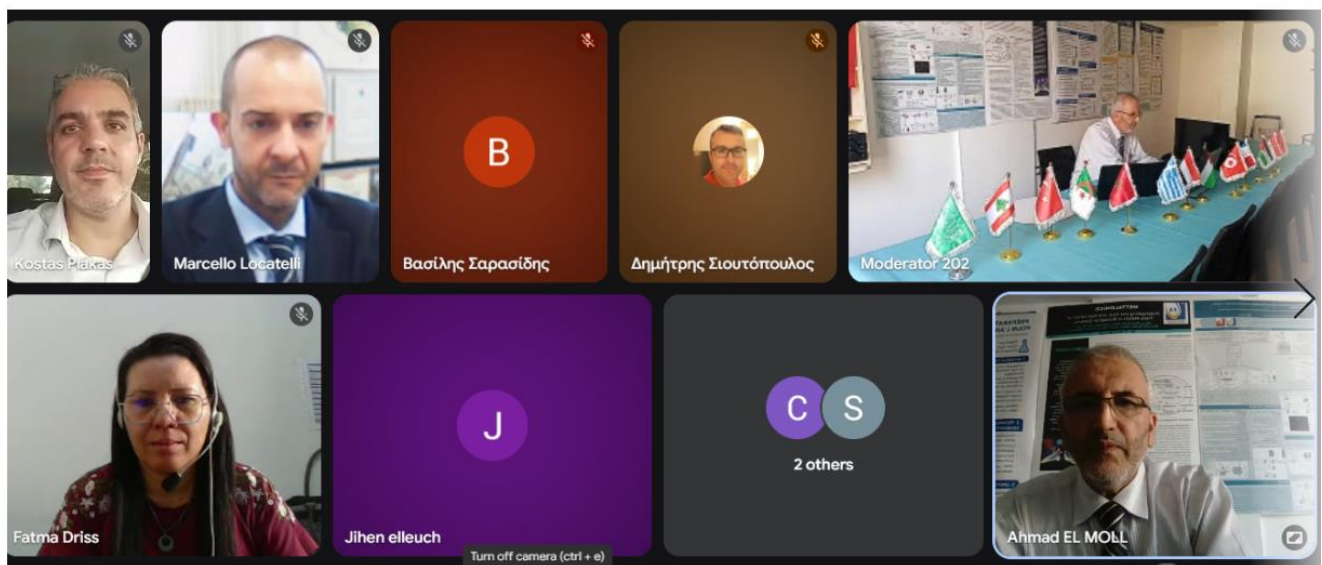
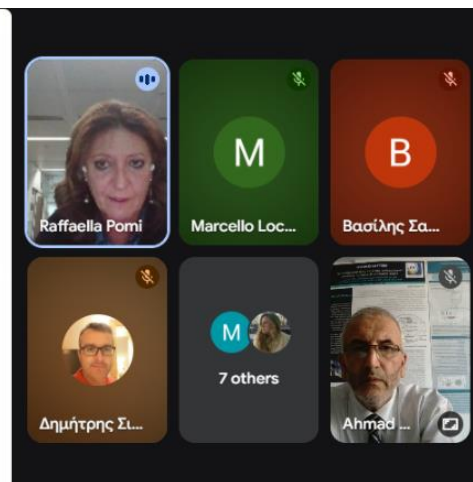
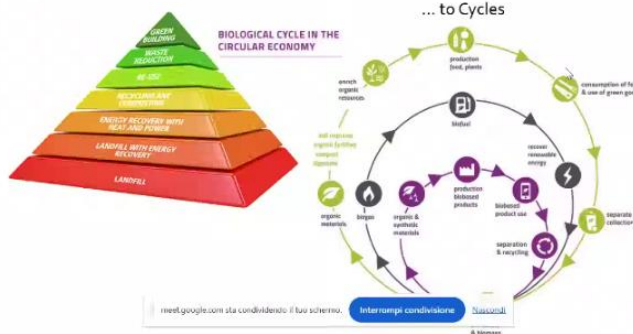
WHY BIO-WASTE ARE AN IMPORTANT ISSUE?

SOME TIPS



DRIVING FORCES FOR BIOREFINERIES IMPLEMENTATION

From Pyramids...



Special session: Insights from CORNERSTONE EU project: [chair/Co-Chairs: K. Plakas, A. El Moll](#)

Combined technologies for water, energy and solute recovery from industrial process streams



CORNER STONE

Combined technologies for water, energy and solute recovery from industrial process streams

Funded by the European Union

Are you talking? Your mic is off. Click the mic to turn it on.

Kostas Plakas

Cejna Quist-Jen...

Dimitris Sloutop...

bousrih imen

11 others

Ahmad EL ...



CONTENTS

- Introduction to Bipolar Electrodialysis process
- Scope of the present work and methodology
- Experimental set up and procedure
- Experimental results and discussion
- Conclusions

Kostas Plakas

Panagiota P...

Mauricio Pane

Dimitris Siou...

14 others

Ahmad ...

Someone wants to join this call

CIMEE'25 Lebanon, September 25-27, 2025

Sotiris Patsios

Kostas Plakas

bousrih imen

Marcello Locatelli

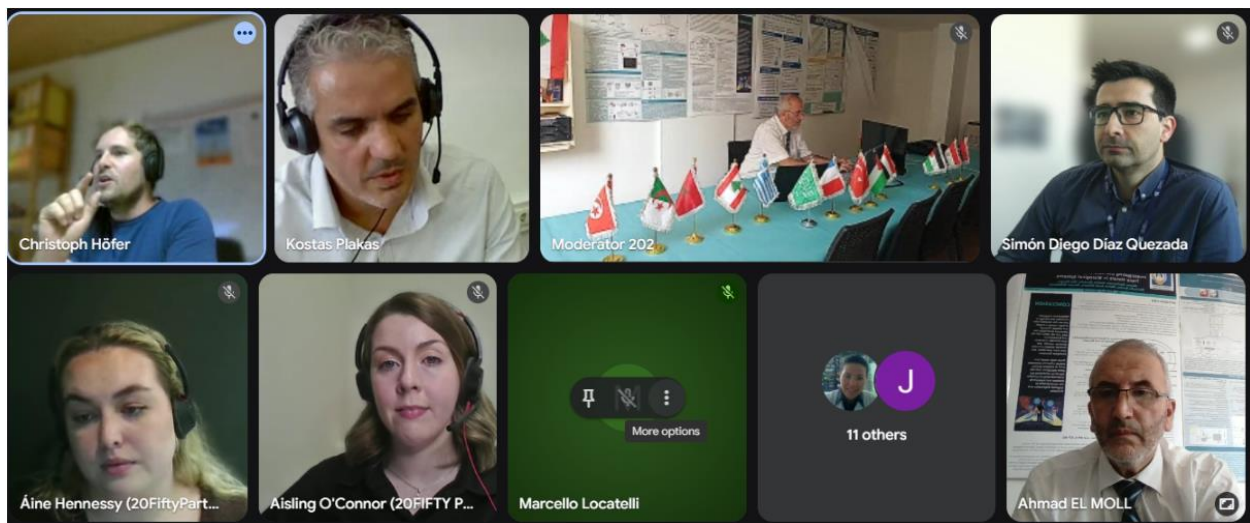
Moderator 202

Simón Diego Díaz Quezada

Christoph Höfer

12 others

Ahmad EL MOLL



CIMEE

International Symposium on Materials, Electrochemistry and Environment, CIMEE'25

Industrial wastewater treatment with hollow fiber nanofiltration for water reuse

Sarasidis Vasilis
Plakas Konstantinos, Petsi Panagiota, Sioutopoulos Dimitris, Patsios Sotiris

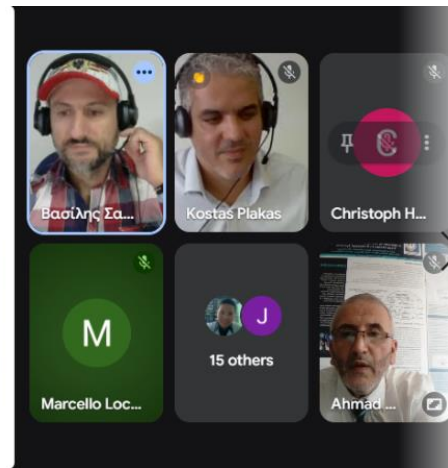
NRRE
Natural Resources and Renewable Energies Laboratory (NRRE),
Chemical Process and Energy Resources Institute (CPERI),
Centre for Research and Technology Hellas (CERTH), Greece

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Thank you for your attention



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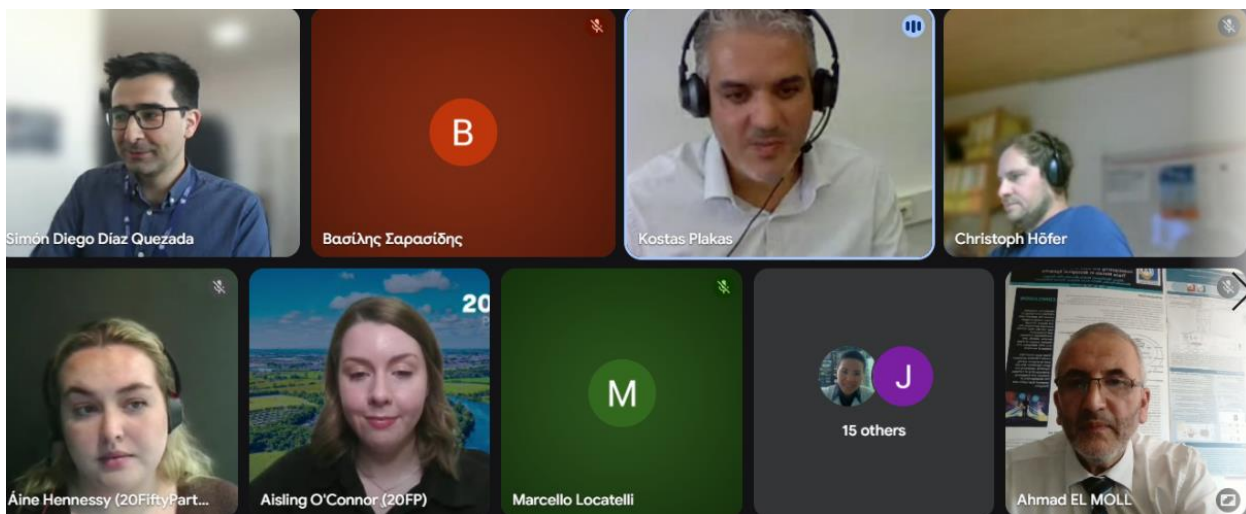


Conclusions

- Thermodynamic analysis gives support for determining the type of precipitate expected and the recovery point where crystallization should occur.
- High water recovery performance: The combined use of MD pre-concentration and MCr operation enabled a global water recovery of 96.5%.
- Fractional precipitation of salts is feasible: In this wastewater scenario, it was possible to first recover CaCO_3 and subsequently CaSO_4 , about 44% Ca Recovery.
- Industrial and circular economy relevance: By coupling high water recovery with selective solute precipitation, MCr offers a realistic pathway for resource recovery and water reuse.



Funded by the European Union. Horizon Europe Grant Agreement No. 101019018. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or CIMEE. Neither the European Union nor the granting authority can be held responsible for them.



Introduction to presenters



Aisling O'Connor

Senior Researcher

20FIFTY
PARTNERS



Áine Hennessy

Researcher

20FIFTY
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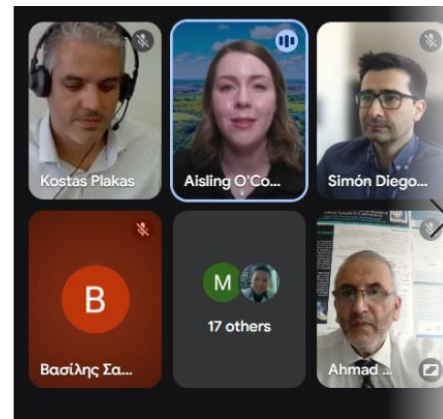
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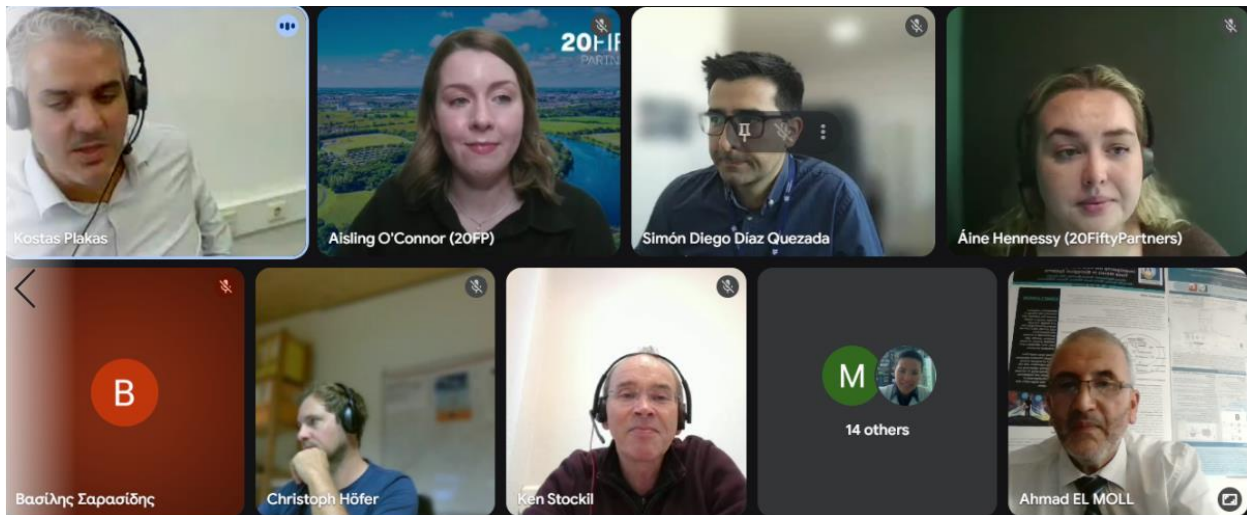
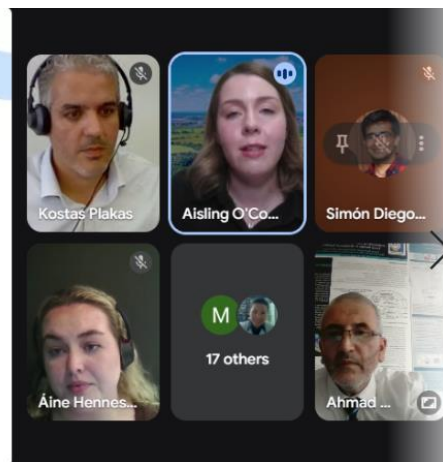
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CORNERSTONE Industrial Water Use
Assessment Report





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SEPTEMBER 25 – 27, 2025,
LEBANON, online event