



UNIVERSITÀ DEGLI STUDI  
DELL'INSUBRIA

# AWaTEC26

## ADVANCES IN WATER TREATMENT FOR EMERGING CONTAMINANTS REMOVAL

**March 11<sup>th</sup>, 2026**

Varese, Italy

9 AM – 6 PM

**Auditorium “Granero-Porati”**

University of Insubria

### CONFERENCE PROGRAMME [draft]



The participation is free  
but registration using the form accessible with QR code or link is required.  
<https://forms.office.com/e/G1wz3Mey9Y>

\* Registration closes March 1st, 2026.



The conference will be held in person.  
Remote attendance is not available.



The address of the conference venue is

Via J.H. Dunant 3, 21100 Varese  
Padiglione G. Lanzavecchia  
<https://maps.app.goo.gl/XbMshAEtAfko1ZDw6>



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Dear participants,

It is our great pleasure to welcome you to AWaTEC26 "Advances in Water Treatment for Emerging Contaminants Removal" here in Varese. This event stems from the growing need to address the new challenges posed by the presence of substances in water systems, such as pharmaceuticals, personal care products, microplastics, and perfluorinated compounds.

The aim of the day is to foster dialogue among academia, research institutions and industry professionals, encouraging the exchange of knowledge, innovative approaches, and technological solutions for a safer and more sustainable management of water resources.

We warmly thank all speakers and participants for accepting our invitation and for actively contributing to a discussion that is crucial for both environmental protection and public health.

*The Organizing Committee*

prof. Elisabetta SIENI

dr. eng. Marco CARNEVALE MIINO



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## Scientific and organizing Committee:

**prof. E. SIENI**

Associate Professor  
University of Insubria, IT

**dr. eng. Marco CARNEVALE MIINO**

Postdoctoral Researcher  
University of Insubria, IT

## Programme overview

### MORNING

8:30 Registration

9:00 Opening

9:30 **SESSION 1: Water treatment applications – part 1**

11:15 Break

11:30 **SESSION 2: Water treatment applications – part 2**

### AFTERNOON

14:30 **SESSION 3: Proteins from Plastics - ProPla project**

15:45 Break

16:10 **SESSION 4: Case Studies from the Companies**

17:10 Final greetings

### POSTER SESSION

09:30-16:00

*Atrium of the conference Aula-Magna  
Exposition area will be opened in parallel to other sessions*



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## Detailed programme

### MORNING

8:30 – 9:00

#### Registration

\* Registrations will remain possible also during the event

9:00 – 9:30

#### Opening

9:30 -11:10

### SESSION 1: Water treatment applications – part 1

*Chair: prof. E. Sieni, University of Insubria*

#### Keynote

#### **Graphitic carbon nitride derivatization for the photocatalytic degradation of organic pollutants with visible light**

Paolo SGARBOSSA

*University of Padova, IT*

#### **Solar light as an environmentally benign disinfection processes: shedding light on the pathways towards bacterial inactivation**

Stefanos GIANNAKIS

*Universidad Politecnica de Madrid, ES*

#### **Cr(VI) removal from waters by advanced oxidation/reduction processes**

Ioannis KATSOYIANNIS

*Aristotle University of Thessaloniki, GR*

#### **Effect of pulsed electric field on sewage water treatment with natural coagulant**

Gowrisree VARADARAJAN

*Anna University, IN*

#### **Developing novel adsorbents from sand for organic dyes and heavy metals: a preliminary study**

Nassima MEFTAH

*University of El-Oued, DZ*



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## **Adsorption isotherms of heavy metals in aqueous solutions with packed columns of alginate beads embedded with magnetic nanoparticles**

Marco BAROZZI  
*University of Insubria, IT*

11:15 – 11.30

**Break**

11:30 – 13:00

## **SESSION 2: Water treatment applications – part 2**

*Chair: dr. M. Carnevale Miino, University of Insubria*

### **Keynote**

## **Digging the ditch deeper: When does ultra-purification of water become an environmental burden?**

Giorgio BERTANZA  
*University of Brescia, IT*

## **PFAS degradation by photoelectrocatalysis: the case study of Veneto groundwater**

Silvia FRANZ  
*Politecnico of Milano, IT*

## **Impact of PFAS-Containing Wastewaters on the Activity of Activated Sludge**

Maria Cristina COLIVIGNARELLI & Stefano BELLAZZI  
*University of Pavia, IT*

## **The Hidden Side of Biodegradable Plastics: Generation of Microplastics, Detection, and Bioaccumulation Across Ecosystems**

Valentina GROSSULE  
*University of Padova, IT*

## **Sustainable Paracetamol Removal Using Macadamia Nut-Derived Activated Carbon**

Rachid ZEGAIT  
*Kasdi Merbah University, DZ*

**AFTERNOON**





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**14.30 – 16:00**

**SESSION 3: Proteins from Plastics - ProPla project**

*Chair: prof. L. Pollegioni, University of Insubria*

**Microfiber Emissions from Laundry: Challenges and Opportunities for Sustainable Upcycling**

Silvia GALAFASSI

*Water Research Institute, IT*

**When waste becomes worth: from PET bottles to amino acids**

Elena ROSINI

*University of Insubria, IT*

**The exploitation of insects and their microbiota for the bioconversion of polyethylene terephthalate**

Davis ROMA

*University of Milan, IT*

**Environmental impacts of microplastics recovery and biological valorization into amino acids**

Marco CARNEVALE MIINO

*University of Insubria, IT*

**Socioeconomic analysis: Innovation, markets and sustainability**

Andrea VEZZULLI & Elena MAGGI

*University of Insubria, IT*

**16:00**

**Break**

**16:10 – 17:10**

**SESSION 4: Case Studies from the Companies**

*Chair: dr. Marco Barozzi, University of Insubria*

**Prevention and treatment of microplastics in WWTPs: the UPSTREAM project of Gruppo CAP**

Tomaso AMATI & Federico PERSICO

*Gruppo CAP, IT*



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## **Quaternary ozone treatment in Sant'Antonino Ticino: perspectives towards the new directive**

Daniele CECCONET  
ALFA, IT

## **Available technologies for Emerging Contaminants removal in urban wastewater treatment plants: two case studies**

Giovanni BELLOTTI  
VEOLIA, IT

17:10 – 17:30

**Final greetings**

## **POSTER SESSION**

09:30-16:00

*Atrium of the conference Aula-Magna*

*Exposition area will be opened in parallel to other sessions*

Slot 1

## **Need for Water Contaminants Removal: Addressing Microplastic Pollution from Dentistry**

**Nanthitha UMAPATHY<sup>1</sup>**, R. Anil KUMAR<sup>1</sup>

<sup>1</sup> Department of Conservative Dentistry and Endodontics, Ragas Dental College & Hospital Chennai, Tamil Nadu Dr M.G.R. Medical University 69, Anna Salai, Little Mount, Guindy, Chennai, Tamil Nadu, 600032, India

Slot 2

## **Enhanced Cr(VI) adsorption by high-MW polyethylenimine-silica hybrid material**

**Maria XANTHOPOULOU<sup>1</sup>**, Giorgos IOANNOU<sup>1</sup>, Dimitrios GKILIOPOULOS<sup>1</sup>, Konstantinos S. TRIANTAFYLLIDIS<sup>1</sup>, Margaritis KOSTOGLIOU<sup>1</sup>, A. FOTOPOULOS<sup>1</sup>, Ioannis A. KATSOYIANNIS<sup>1</sup>

<sup>1</sup>Aristotle University of Thessaloniki, Department of Chemistry, 54124 Thessaloniki, Greece

Slot 3

## **Educating For a Greener Plastic World**



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Anca DRAGHICI<sup>1</sup>, Špela DERMOL<sup>2</sup>, Dana PERNIU<sup>3</sup>, Anja BUBIK<sup>4</sup>, Santiago FERRANDIZ BOU<sup>5</sup>,  
**Elena CRISTINA RADA<sup>6</sup>**

<sup>1</sup> Department of Management, Faculty of Management in Production and Transportation, Politehnica University of Timisoara, 14 Remus str., Timisoara, 300191, Romania

<sup>2</sup> Dermol svetovanje d.o.o., Šmartno pri Litiji, Slovenia

<sup>3</sup> Faculty of Product Design and Environment, Transylvania University of Brasov, Romania

<sup>4</sup> Faculty of Environmental Protection, Trg mladosti 7, SI-3320 Velenje, Slovenia

<sup>5</sup> Departamento de Ingeniería Mecánica y de Materiales, Instituto de Tecnología de Materiales, Universitat Politècnica de València, Plaza Ferrándiz y Carbonell s/n, 03801 Alcoi, Spain

<sup>6</sup> Department of Theoretical and Applied Sciences, University of Insubria, via O. Rossi 9, 21100 Varese, Italy

Slot 4

### **Removal of Caffeine and Hexavalent Chromium by Adsorption onto Granular Activated Carbon and In Situ Regeneration via Heterogeneous Fenton-Type Reactions**

**Andromachi CHARIZANI<sup>1</sup>**, Konstantinos PLAKAS<sup>2</sup>, Ioannis A. KATSOYIANNIS<sup>1</sup>

<sup>1</sup> Department of Chemistry, Aristotle University of Thessaloniki (AUTH), 54124 Thessaloniki, Greece

<sup>2</sup> Chemical Processes and Energy Resources Institute (CPERI), Centre of Research and Technology – Hellas (CERTH), 6th km Charilaou-Thermi Road, Thermi, 57001, Thessaloniki, Greece

Slot 5

### **Surface Purification Impacts on Populus Nigra seed fiber Physicochemistry**

**Şeyhmus KABAK<sup>1</sup>**, Mahmutcan ÇİFÇİ<sup>2</sup>, Berkay ARSLANALI<sup>3</sup>, Mustafa KÜÇÜKBAYRAK<sup>4</sup>, Selçuk VAROL<sup>4</sup>, Umur GÜRDAL<sup>5</sup>, Serdar KÖRPE<sup>6</sup>, Emine BAŞTÜRK<sup>7</sup>, Alper ALVER<sup>7</sup>, Ebru BOZACI<sup>8</sup>, Aylin ALTINIŞIK TAGAÇ<sup>9</sup>

<sup>1</sup> Aksaray University, Faculty of Engineering, Department of Environmental Engineering, Aksaray, Turkey

<sup>2</sup> Aksaray University, Science Institute, Department of Chemistry, Aksaray, Turkey

<sup>3</sup> Dokuz Eylül University, Natural and Applied Sciences, Department of Chemistry, İzmir, Turkey

<sup>4</sup> Kocaeli Water and Sewerage Administration General Directorate, Kocaeli, Turkey

<sup>5</sup> İzmit Waste and Residues Treatment Inc., Kocaeli, Turkey

<sup>6</sup> Knauf Insulation, Department of Process and Quality, Eskişehir, Turkey

<sup>7</sup> Aksaray University, Technical Sciences Vocational School, Department of Environmental Protection and Technologies, Aksaray, Turkey

<sup>8</sup> Ege University, Faculty of Engineering, Department of Textile Engineering, İzmir, Turkey

<sup>9</sup> Dokuz Eylül University, Faculty of Science, Department of Chemistry, İzmir, Turkey

Slot 6

### **Treatment of Reactive Red 120 and Congo Red via Nanobubble-Enhanced Hydrodynamic Cavitation**





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**Giorgos IOANNOU<sup>1</sup>**, Saman MOFTAKHARI ANASORI MOVAHED<sup>2</sup>, Loris CALGARO<sup>2</sup>, Ioannis A. KATSOYIANNIS<sup>1</sup>, Antonio MARCOMINI<sup>2</sup>

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<sup>2</sup> Department of Environmental Sciences, Informatics, and Statistics, University Ca' Foscari of Venice

Slot 7

### **Design of cationic fluorinated polyphosphazenes for efficient anionic pollutant removal from wastewater**

**Francesco LANERO<sup>1</sup>**, Marina RAMOS-MARTÍN<sup>2</sup>, Keti VEZZÙ<sup>1</sup>, Vito DI NOTO<sup>1</sup>, Alessandro SCARSO<sup>3</sup>, Joaquín GARCÍA-ÁLVAREZ<sup>2</sup>, Alejandro PRESA SOTO<sup>2</sup>, Paolo SGARBOSSA<sup>1</sup>

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<sup>2</sup> Department of Organic and Inorganic Chemistry (IUQOEM), University of Oviedo, Av. Julián Clavería 8, Oviedo, 33006 Spain

<sup>3</sup> Department of Molecular Science and Nanosystems, Ca' Foscari University of Venice, Via Torino 155, Mestre, Venezia, 30172 Italy

Slot 8

### **Enhanced Performance and regeneration of Layer-by-Layer Functionalized Ultrafiltration Membranes for Chromium(VI) Removal**

**Natalia MALOUCHI<sup>1</sup>**, Veroniki BAKOLA<sup>2</sup>, Olympia KOTROTSIOU<sup>2</sup>, Konstantinos V. PLAKAS<sup>2</sup>, Ioannis A. KATSOYIANNIS<sup>1</sup>

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<sup>2</sup> Chemical Process and Energy Resources Institute, Centre for Research and Technology-Hellas, Thessaloniki, Greece

Slot 9

### **Sustainable groundwater remediation of chromium and arsenic via rice husk-iron oxide composite coupled with advanced oxidation processes**

**Stella CHATZIMICHAILIDOU<sup>1</sup>**, Maria XANTHOPOULOU<sup>1</sup>, I. KAZARA<sup>1</sup>, A. LASKARIDIS<sup>1</sup>, V. SAMANIDOU<sup>1</sup>, Ioannis A. KATSOYIANNIS<sup>1</sup>

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