



UNIVERSITÀ DEGLI STUDI
DELL'INSUBRIA

AWaTEC26

ADVANCES IN WATER TREATMENT FOR EMERGING CONTAMINANTS REMOVAL

March 11th, 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(IV) 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 UMAPATHY¹, R. Anil KUMAR¹

¹ 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 XANTHOPOULOU¹, Giorgos IOANNOU¹, Dimitrios GKILIOPOULOS¹, Konstantinos S. TRIANTAFYLLIDIS¹, Margaritis KOSTOGLOU¹, A. FOTOPOULOS¹, Ioannis A. KATSOYIANNIS¹

¹Aristotle University of Thessaloniki, Department of Chemistry, 54124 Thessaloniki, Greece

Slot 3

Educating For a Greener Plastic World



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Anca DRAGHICI¹, Špela DERMOL², Dana PERNIU³, Anja BUBIK⁴, Santiago FERRANDIZ BOU⁵,
Elena CRISTINA RADA⁶

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

² Dermol svetovanje d.o.o., Šmartno pri Litiji, Slovenia

³ Faculty of Product Design and Environment, Transylvania University of Brasov, Romania

⁴ Faculty of Environmental Protection, Trg mladosti 7, SI-3320 Velenje, Slovenia

⁵ 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

⁶ 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 CHARIZANI¹, Konstantinos PLAKAS², Ioannis A. KATSOYIANNIS¹

¹ Department of Chemistry, Aristotle University of Thessaloniki (AUTH), 54124 Thessaloniki, Greece

² 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 KABAK¹, Mahmutcan ÇİFÇİ², Berkay ARSLANALI³, Mustafa KÜÇÜKBAYRAK⁴, Selçuk VAROL⁴, Umur GÜRDAL⁵, Serdar KÖRPE⁶, Emine BAŞTÜRK⁷, Alper ALVER⁷, Ebru BOZACI⁸, Aylin ALTINIŞIK TAGAÇ⁹

¹ Aksaray University, Faculty of Engineering, Department of Environmental Engineering, Aksaray, Turkey

² Aksaray University, Science Institute, Department of Chemistry, Aksaray, Turkey

³ Dokuz Eylül University, Natural and Applied Sciences, Department of Chemistry, İzmir, Turkey

⁴ Kocaeli Water and Sewerage Administration General Directorate, Kocaeli, Turkey

⁵ İzmit Waste and Residues Treatment Inc., Kocaeli, Turkey

⁶ Knauf Insulation, Department of Process and Quality, Eskişehir, Turkey

⁷ Aksaray University, Technical Sciences Vocational School, Department of Environmental Protection and Technologies, Aksaray, Turkey

⁸ Ege University, Faculty of Engineering, Department of Textile Engineering, İzmir, Turkey

⁹ 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



Giorgos IOANNOU¹, Saman MOFTAKHARI ANASORI MOVAHED², Loris CALGARO², Ioannis A. KATSOYIANNIS¹, Antonio MARCOMINI²

¹ Department of Chemistry, Aristotle University of Thessaloniki (AUTH), 54124 Thessaloniki, Greece

² 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 LANERO¹, Marina RAMOS-MARTÍN², Ketí VEZZÙ¹, Vito DI NOTO¹, Alessandro SCARSO³, Joaquín GARCÍA-ÁLVAREZ², Alejandro PRESA SOTO², Paolo SGARBOSSA¹

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

³ 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 MALOUCHE¹, Veroniki BAKOLA², Olympia KOTROTSIOU², Konstantinos V. PLAKAS², Ioannis A. KATSOYIANNIS¹

¹ Laboratory of Chemical and Environmental Technology, Department of Chemistry, Aristotle University of Thessaloniki, Thessaloniki, Greece

² 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 CHATZIMICHAELIDOU¹, Maria XANTHOPOULOU¹, I. KAZARA¹, A. LASKARIDIS¹, V. SAMANIDOU¹, Ioannis A. KATSOYIANNIS¹

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