

MICROPLASTICdays

Shaping the future of microplastic research

25-27.3.2025


Faculty of Chemistry and Chemical Technology
Ljubljana, Slovenia



Program

MICROPLASTICdays aims to unite experts, stakeholders, and public to foster the exchange of knowledge and strengthen collaboration in microplastic research. From interactive seminars and workshops to engaging presentations and debates, every session provides valuable perspectives on the challenges and opportunities in the field of microplastics.

Be part of this dynamic event where microplastic enthusiasts come together to discuss innovative approaches and promote joint efforts. MICROPLASTICdays is not just a conference – it is a collective endeavor to drive meaningful change and address the growing issue of microplastic pollution.




What? MICROPLASTIC*days* are days dedicated to advancing knowledge and expertise in microplastic research organized by various projects, institutions, and researchers.

When? 25-27.3.2025

Where? Hybrid event: Online or in person at the Faculty of Chemistry and Chemical Technology, University of Ljubljana, Večna pot 113, Ljubljana, Slovenia.

Who Should Attend? Researchers, professionals, microplastic enthusiasts, and anyone interested in the field of microplastic research and analysis.



Day 1: 25.3.2025

Current and future metrology and chemometrics in microplastics research

In person & online, organized by the COST Action [PRIORITY](#)



8:30 – 9:00	Welcome & coffee
9:00 – 9:30	Microplastic research: viewpoint of producers Camila Carteny Plastics Europe, Belgium
9:30 – 10:00	Small micro- and nanoplastic test and reference materials for research: Current status, ongoing efforts and future needs Andy Booth SINTEF, Norway
10:00 – 10:30	Small micro- and nanoplastic reference materials supporting harmonization and standardization Korinna Altmann BAM, Germany
10:30 – 11:00	Coffee break
11:00 – 11:30	Standardization and harmonization effort on microplastics analysis by spectroscopic methods Andrea Giovannozzi INRim, Italy
11:30 – 12:00	Progress towards standardized microplastic test materials in Europe Luke Parker Dutch Organization for Applied Scientific Research (TNO), Netherlands

Practical workshop for young researchers

Only in person for selected young researchers, organized by the COST Action [PRIORITY](#)



Moderators: Thomas Meisel, Montanuniversität Leoben, Austria; Stefania Federici, University of Brescia, Italy; Aleksandra Tubić, University of Novi Sad, Serbia

13:30 – 15:15 Introductory lecture on chemometrics

Lecturer: Enmanuel Cruz Muñoz, University of Milano-Bicocca, Italy

15:15 – 15:30 Coffee break

15:30 – 17:30 Practical exercise and discussion

Lecturer: Benedikt Hufnagl, Hufnagl Chemometrics, Austria

17:30 – 20:00 City tour & networking

Day 2: 26.3.2025

Advances in microplastics research

In person & online, organized by [UL FKKT](#) and researchers from the [PLANTerastics](#) team.



	9:30 - 10:00	Welcome & coffee
Preparation & Characterization	10:00 – 10:20	Comparison of fragmentation techniques for the production of test microplastics and their effects on physicochemical characteristics Stefania Federici, University of Brescia, Italy
	10:20 – 10:40	Linking microplastic size with material properties and applying this to reference material production Luke Parker, Dutch Organization for Applied Scientific Research (TNO), Netherlands
	10:40 – 11:00	On data analysis of μ(FT)IR imaging data using different spectrometers, filter types and measurement geometries - a chemometric perspective on the problem of creating data-agnostic software for microplastics analysis Benedikt Hufnagl, Hufnagl Chemometrics, Austria
	11:00 – 11:20	Coffee break
Impacts	11:20 – 11:40	Chemical additives in plastic materials and their role in plastic degradation processes Andy Booth, SINTEF, Norway
	11:40 – 12:00	Microplastic health risk assessment framework in allergic immune disorders Tanja Ćirković Veličković, University of Belgrade, Republic of Serbia
	12:00 – 12:20	The implication of biofilm development on interaction of microplastics with their surroundings Ula Putar, University of Ljubljana, Slovenia
	12:20 – 13:20	Refreshment
Analytics	13:20 – 13:40	Monitoring of microplastics in water samples: standardization, legislation and field experiences in the Danube-region Gabor Bordós, Eurofins, Hungary
	13:40 – 14:00	Combined laser induced breakdown spectroscopy (LIBS) and laser ablation inductively coupled plasma mass spectrometry (LA-ICP-MS) in microplastic analysis Lukas Brunnbauer, TU Wien, Austria
	14:00 – 14:20	Detection of microplastics in fish by X-ray computed tomography Tomas Zikmund, Central European Institute of Technology, Czech Republic
	14:20 – 14:40	Coffee break
Solutions	14:40 – 15:00	Harmonized protocols for surveying and monitoring litter, plastics and microplastics - UPSTREAM project approach Aleksandra Tubić, University of Novi Sad, Republic of Serbia
	15:00 – 15:20	Prevention and solutions: social science perspectives on microplastics Nina Vaupotič, University of Vienna, Austria
	15:20 – 15:40	The role of formal education in raising awareness and action regarding microplastics and other environmental issues Iztok Tomažič, University of Ljubljana, Slovenia
Young minds	15:40 – 17:00	Innovations and insights: Perspectives of early-career scientists 3 min pitch of early-career scientists to introduce their research
	17:00	Closing & Social event at FKKT

Young minds – Innovations and insights: Perspectives of early-career scientists

1	Microplastics and poultry Krištof Kepic, Biotechnical faculty, University of Ljubljana, Slovenia
2	Microplastic and microfiber pollution in the Classical Karst Region. Springs and caves preliminary assessment Valentina Balestra, Department of Environment, Land and Infrastructure Engineering, Italy
3	Advancing microplastic analysis in biological systems with LA-ICP-MS Jan Biskupic, Department of Chemical Drugs, Masaryk University in Brno, Czech Republic
4	Evaluation of toxicity of model-micro- and nanoplastics in human umbilical vein endothelial cells Sara Bozzer, Institute for Maternal and Child Health, IRCCS Burlo Garofolo, Italy
5	Why do polyolefin microplastics sink? Vaibhav Budhiraja, Department of Polymer Chemistry and Technology, National Institute of Chemistry, Slovenia
6	Research approach to study the occurrence and transport of microplastics in groundwater Elvira Colmenarejo Calero, Geological Survey of Slovenia, Slovenia
7	Detection and analysis of microplastics by LIBS Aida Fazlić, Central European Institute of Technology, Czech Republic
8	PET microplastics in concrete reused as natural aggregate replacement to reduce environmental impact Ela Friedl, Faculty of Chemistry and Chemical Technology, University of Ljubljana, Slovenia
9	Detection of microplastics in sea salt by SWIR-HSI: pollution control in the Mediterranean Sea as a case study Ana M. Jiménez-Carvelo, Department of Analytical Chemistry, University of Granada, Spain
10	Reuse of PVC plastic waste to reduce microplastics occurrence in the environment Leonie Jurkschat, Faculty of chemistry and mineralogy, University of Leipzig, Germany
11	The use of magnetically modified microplastics in environmental studies Maša Kambič, Faculty of Chemistry and Chemical Technology, University of Ljubljana, Slovenia
12	Effects of BP-3 additive on the formation of biofilm on polyethylene microplastics in a freshwater system Barbara Klun, Faculty of Chemistry and Chemical Technology, University of Ljubljana, Slovenia
13	A SAXS and MD Study of Fluorinated Alcohols Inspired by Environmental Concerns Regarding PFAS Jure Kovač, Faculty of Chemistry and Chemical Technology, University of Ljubljana, Slovenia
14	Using TED-GC/MS for the analysis of microplastics and tyre wear particles in environmental matrices Laura Kröpfl, Environment Agency Austria, Austria
15	The influence of polystyrene nanoplastics on the uptake and distribution of elements in tomato plants Pia Leban, Jožef Stefan Institute, Department of Environmental Sciences, Slovenia
16	Selective Labeling of Small Microplastics with SERS-Tags and Application in Environmental Samples Lucio Litti, Department of Chemical Sciences, University of Padova, Italy
17	Enhancing microplastic detection: the role of iron-activated peroxymonosulfate in organic removal from complex leachate Raju Meganathan, Department of Civil Engineering, National Institute of Technology, India
18	Assessing the toxic effects of polypropylene and pyrene on mussels at environmentally relevant concentrations: a multi-biomarker approach Tatjana Mijošek Pavin, Ruđer Bošković Institute, Croatia
19	Spatiotemporal dynamics and trophic transfer of microplastics in some endemic fish species of Lake Victoria Timothy Omara, Institute of Chemistry of Renewable Resources, Department of Natural Sciences and Sustainable Resources, BOKU University, Austria.
20	Advancing microplastic detection: non-destructive 3D imaging of microplastics in zebrafish using micro X-ray computed tomography Viktória Parobková, Central European Institute of Technology, Czech Republic
21	Impact of sampling techniques on microplastic concentration: a comparative study of manta trawl and grab sampling in the north-east Atlantic Ocean Ndiforgu Ateh Sur Nkwekeu, Department of Civil, Environmental and Architectural Engineering, University of Padova, Italy
22	Detection of natural and synthetic fibers in the core of giant hailstones, using eSEM-EDS and Raman spectroscopy Tina Radošević, Jožef Stefan Institute, Slovenia
23	Fragmentation techniques and their impact on the biotic aging of microplastics Mark Starin, Faculty of Chemistry and Chemical Technology, University of Ljubljana, Slovenia
24	Application of respirometry to monitor the biodegradation of polymer materials Ana Škrobar, University of Maribor, Faculty of Mechanical Engineering, Slovenia

Day 3: 27.3.2025

Open laboratory at UL FKKT

Only in person, organized by [UL FKKT](#) and researchers from the [PLANTerastics](#) team.



9:00 – 11:00 A demonstration of microplastic analysis by various techniques

***PLASTsensing* consortium meeting**

Only in person for [PLASTsensing](#) consortium members



11:00 – 13:00 Annual consortium meeting



We look forward to meeting you in Ljubljana!