



Program of the International Conference EcoBalt 2023 "Chemicals & Environment"

09 – 11 October 2023, Tallinn, Estonia

Nordic Hotel Forum Conference Center (Viru väljak 3, Tallinn)

Monday October 9, 2023

16:00 – 21:00	Badge pickup and registration (Foyer of the Nordic Hotel Forum Conference Center)
18:00 – 21:00	Welcome reception and special lecture by Dr. Priit Zingel, Estonian University of Life Sciences (Foyer of the Conference Center) 18:00 Welcome drinks; 18:30 – 19:15 Special lecture; 19:15 – 21:00 Welcome buffet

Tuesday October 10, 2023

8:45 – 9:00	Welcome speech by Dr. Urmas Nagel, Director of the National Institute of Chemical Physics and Biophysics (NICPB), Estonia (Room: Sirius)	
9:00 – 9:05	Welcome and organizational information, Dr. Monika Mortimer, National Institute of Chemical Physics and Biophysics, Estonia	
9:05 – 9:50	Plenary Lecture I (Room: Sirius) Sampling, detection and uncertainty in environmental analysis – challenges and solutions Dr. Steve Ellison, LGC Limited, United Kingdom (Chair: Prof. Ivo Leito, University of Tartu, Estonia)	
9:50 – 10:10	<i>Coffee break (Foyer of the Nordic Hotel Forum Conference Center)</i>	
Parallel session 1: Data Quality in Environmental Analysis Chair: Prof. Ivo Leito, University of Tartu, Estonia (Room: Sirius)		Parallel session 2: The Effects of Legacy and Emerging Chemicals on Ecosystems and Humans (by the Estonian Society of Toxicology) Chair: Prof. Angela Ivask, University of Tartu, Estonia (Room: Capella)
10:10 – 10:30	Measurement quality in analysis – guidelines and software tools Dr. Bertil Magnusson, Trollboken AB, Sweden Invited speaker	10:10 – 10:30 The effect of environmental pollution in Baltic Sea and North Sea on marine biota and cancer development in fish Dr. Randel Kreitsberg, University of Tartu, Estonia Invited speaker
10:30 – 10:50	Dr. Riin Rebane, University of Tartu and Estonian Environmental Research Centre, Estonia	10:30 – 10:50 The impact of microplastics on soil invertebrates Prof. Anita Jemec Kokalj, University of Ljubljana, Slovenia, Invited speaker
10:50 – 11:55	General discussion on data quality and environmental analysis	10:50 – 11:05 Microplastics and associated microorganisms in the sea sediment of the Sentina Regional Natural Reserve (Central Adriatic Sea, Italy) Prof. Cristina Miceli, University of Camerino, Italy
		11:05 – 11:20 Novel plasticizers are emerging contaminants Dr. Margit Heinlaan, National Institute of Chemical Physics and Biophysics, Estonia

		11:20 – 11:35	Droplet-based technology for studying phenotypic effect of microplastic on antimicrobial resistance Dr. Simona Bartkova, Tallinn University of Technology, Estonia
		11:35 – 11:55	Endocrine disrupting activity of mixtures composed of pharmaceuticals and nanoplastics Prof. Ivana Vinković Vrček, Institute for Medical Research and Occupational Health, Croatia, Invited speaker
12:00 – 13:00	<i>Lunch (Restaurant “Nomel” at Nordic Hotel Forum, ground floor)</i>		
Parallel session 3: Analytical Method Development for Environmental Pollutants (Room: Sirius) Chair: Prof. Polonca Trebse, University of Ljubljana, Slovenia		Parallel session 4: The Narva River, from Lake Peipsi to the Baltic Sea: Challenges and Opportunities (Room: Capella) Chair: Yaroslav Kobets, Tallinn University of Technology, Estonia	
13:00 – 13:20	Chasing pollutants concerning public health: from food to smoke Prof. Mojca Bavcon Kralj, University of Ljubljana, Slovenia Invited speaker	13:00 – 13:20	Development of the harmonised methodology for the Narva River water discharge estimation Yaroslav Kobets, Tallinn University of Technology, Estonia
13:20 – 13:40	Identification of emerging contaminants in Estonian aquatic environment Mailis Laht, Estonian Environmental Research Centre, Estonia	13:20 – 13:40	Assessing biological effects of contaminants in the Gulf of Finland, north-eastern Baltic Sea, using sediment biotests with amphipods and biomarker responses in clams Dr. Ivan Kuprijanov, Tallinn University of Technology, Estonia
13:40 – 13:55	Detection of mycotoxins and pyrrolizidine alkaloids in a wide variety of nutritional supplements using the multianalyte HPLC-MS/MS method Zane Berzina, University of Latvia, Latvia	13:40 – 13:55	Estimation of the share of the total nutrient load from the territory of Estonia, coming along the Narva River to the Baltic Sea Dr. Alvin Reihan, Tallinn University of Technology, Estonia
13:55 – 14:10	Current approaches to the derivatization of Chemical Weapons Convention-related alcohols for on-site gas chromatographic analysis Dr. Tomas Rozsypal, University of Defence, Czech Republic	13:55 – 14:10	Water quality index (WQI) as a tool to assess waterbodies status. Joint WQI model development for River Narva and the rivers of the lake Peipsi basin Kati Roosalu, Tallinn University of Technology, Estonia
14:10 – 14:25	Cost-effective and compact measurement of Arsenic in water (ARMINE project-MITY) Jay Pee Oña, University of Oulu, Finland	14:10 – 14:25	Non-formal ecological education: tested innovative methods in Lake Peipsi region Margit Säre, Peipsi Center for Transboundary Cooperation
14:25 – 14:45	From organometallic chemistry to multifunctional nanoparticle-based devices for gas detection and degradation of air pollutants Dr. Myrtil L. Kahn, CNRS UPR 8241, University of Toulouse, France	14:25 – 14:45	International business, academic and RDI cooperation as drivers and accelerators of sustainable economic growth in biotechnology and the circular economy - Results of the BBC1 -project Saija Helena Tillgren, Mikkeli Development Miksei Ltd., Finland
14:45 – 15:00	<i>Coffee break (Foyer of the Nordic Hotel Forum Conference Center)</i>		

Session 5: Chemicals and Environment I (Room: Sirius); Chair: Prof. Vera Slaveykova, University of Geneva, Switzerland	
15:00 – 15:20	Role of plant volatiles in atmospheric processes under current and future climates Prof. Ülo Niinemets, Estonian University of Life Sciences, Estonia, Invited speaker
15:20 – 15:40	The use of biomarkers in monitoring and assessment of chemical contamination in the Baltic Sea Dr. Kari Lehtonen, Finnish Environment Institute, Finland, Invited speaker
15:40 – 16:00	A Chimie Douce route to layered double hydroxides Prof. Aivaras Kareiva, Vilnius University, Lithuania, Invited speaker
16:00 – 16:20	The environmental safety aspects of technologically powerful materials are often overlooked Dr. Anne Kahru, National Institute of Chemical Physics and Biophysics, Estonia, Invited speaker
16:20 – 17:30	Poster session (Room: Vega) and Expo (Foyer of the Nordic Hotel Forum Conference Center)
19:00 – 23:00	Conference dinner and museum visit at the Seaplane Harbour (Vesilennuki 6, Tallinn) 19:00 Museum visit; 19:30 Welcome drinks; 19:45 Buffet dinner; 21:00-21:30 Musical performance

Wednesday October 11, 2023

9:00 – 9:05	Organizational information, Dr. Monika Mortimer, National Institute of Chemical Physics and Biophysics (Room: Sirius)
9:05 – 9:50	Plenary Lecture II (Room: Sirius) Nanoplastic-biomolecular interactions Prof. Pu-Chun Ke, Great Bay Area National Institute for Nanotechnology Innovation, China, and Monash University, Australia Chair: Dr. Monika Mortimer, National Institute of Chemical Physics and Biophysics, Estonia
9:50 – 10:10	<i>Coffee break (Foyer of the Nordic Hotel Forum Conference Center)</i>
Session 6: Chemicals and Environment II (Room: Sirius) Chair: Dr. Anne Kahru, National Institute of Chemical Physics and Biophysics, Estonia	
10:10 – 10:30	Wood chemistry perspectives at TalTech Dr. Tiit Lukk, Tallinn University of Technology, Estonia, Invited speaker
10:30 – 10:50	Compounds from personal care products as emerging contaminants in swimming pool waters Prof. Polonca Trebse, University of Ljubljana, Slovenia, Invited speaker
10:50 – 11:05	Formation and bioaccumulation of methylmercury along vertical and spatial gradients in Baltic Sea waters Prof. Erik Björn, Umeå University, Sweden, Invited speaker
11:05 – 11:20	Nanocomposite metal oxide/hydroxide adsorbents for advanced wastewater treatment and toxicological risk assessment for the aquatic environment Dr. Asya Drenkova-Tuhtan, National Institute of Chemical Physics and Biophysics, Estonia
11:20 – 11:35	Silver-chitosan nanocomposites for biomedical application: design, synthesis and antimicrobial efficiency Dr. Kaja Kasemets, National Institute of Chemical Physics and Biophysics, Estonia
11:35 – 11:55	What phytoplankton species can tell us about the implications of engineered nanoparticles in the aquatic environment Prof. Vera Slaveykova, University of Geneva, Switzerland, Invited speaker

12:00 – 13:00	<i>Lunch (Restaurant “Nomel” at Nordic Hotel Forum, ground floor)</i>		
Parallel session 7: Photocatalytic Materials (Room: Sirius) Chair: Prof. Pu-Chun Ke, Great Bay Area National Institute for Nanotechnology Innovation, China		Parallel session 8: Green Materials (Room: Capella) Chair: Prof. Aivaras Kareiva, Vilnius University, Lithuania	
13:00 – 13:20	Activity of nanomaterials in photocatalysis Prof. Marina Kritsevskaja, Tallinn University of Technology, Estonia Invited speaker	13:00 – 13:20	A brief journey on the world of heteracyclo[n]phanes, synthesis and CO₂ adsorption Prof. Jean-Manuel Raimundo, Aix Marseille University, France, Invited speaker
13:20 – 13:40	Innovative nanocomposites made of polymers and semiconductor photocatalysts for wastewater treatment Dr. Giuliana Impellizzeri, National Research Council Institute for Microelectronics and Microsystems, CNR-IMM Catania, Italy	13:20 – 13:40	Electrodeposited Cu nanofoam structures for electrochemical CO₂ reduction Prof. Rimantas Ramanauskas, Center for Physical Science and Technology, Lithuania Invited speaker
13:40 – 13:55	Polymeric hydrogels for the removal of emerging contaminants from water (ANTIBIO) Dr. Sabrina Carola Carroccio, National Research Council Institute of Polymers, Composites and Biomaterials, CNR-IPCB Catania, Italy	13:40 – 13:55	Nitrogen-doped reduced graphene oxide for electrochemical sensing applications Dr. Justina Gaidukevič, Vilnius University, Lithuania Invited speaker
13:55 – 14:10	Evaluation of environmental hazard of nanocomposites for wastewater treatment (ANTIBIO) Dr. Villem Aruoja, National Institute of Chemical Physics and Biophysics, Estonia	13:55 – 14:10	Spray-pyrolysis synthesised TiO₂ thin films for photocatalytic air treatment from VOCs Dr. Jekaterina Sydorenko, Tallinn University of Technology, Estonia
14:10 – 14:25	Plasma electrolytic oxidation synthesis of heterostructured TiO₂ for photoanode applications Dr. Ramūnas Levinas, Center for Physical Sciences and Technology, Lithuania	14:10 – 14:25	Designing of sustainable building material made of non-fired clay with various biopolymers Yahor Trambitski, Vilnius Gediminas Technical University, Lithuania
14:25 – 14:45	Pulsed corona discharge plasma combined with photocatalytic oxidation technology for the degradation of volatile organic compounds in air Dr. Juri Bolobajev, Tallinn University of Technology, Estonia, Invited speaker	14:25 – 14:45	Hemicucurbituril-porphyrin supramolecular systems for pollutants sensing and remediation Prof. Riina Aav, Tallinn University of Technology, Estonia Invited speaker
14:45 – 15:00	<i>Coffee break (Foyer of the Nordic Hotel Forum Conference Center)</i>		

Parallel session 9: Novel Approaches for Pollution Management (Room: Sirius) Chair: Prof. Ivana Vinković Vrček, Institute for Medical Research and Occupational Health, Croatia,		Parallel session 10: Sustainable Chemistry (Room: Capella) Chair: Prof. Marina Kritsevskaja, Tallinn University of Technology, Estonia	
15:00 – 15:20	Anthropogenic activities and microbial populations: war, peace or adaptation? Prof. Eglė Lastauskienė, Vilnius University, Lithuania Invited speaker	15:00 – 15:20	Use of neoteric solvents in biomass treatment Dr. Mihkel Koel, Tallinn University of Technology, Estonia Invited speaker
15:20 – 15:35	Metal-phenolic network-coated nanoparticles for reducing the toxicity of metal nanomaterials Dr. Monika Mortimer, National Institute of Chemical Physics and Biophysics, Estonia	15:20 – 15:35	Production and characterization of polysaccharides from <i>Rhodotorula toruloides</i> Henrique Sepulveda Del Rio Hamacek, Tallinn University of Technology, Estonia
15:35 – 15:50	Machine learning tools can pinpoint high-risk water pollutants Helen Sepman, Stockholm University, Sweden	15:35 – 15:50	Elemental composition, and isotope ratio in pine needles: the impact of arginine phosphate-containing fertilizer Maris Bertins, University of Latvia, Latvia
15:50 – 16:05	Microplastics in influents and effluents of Estonian wastewater treatment plants Ayankoya Yemi Ayankunle, Tallinn University of Technology, Estonia	15:50 – 16:05	Antioxidative and anti-Borrelia effects of Plantago species Pille-Riin Laanet, Tallinn University of Technology, Estonia
16:05 – 16:20	The water flea as a “canary in the coal mine” – Using phenotypic and molecular endpoints to understand pollution Prof. Konstantinos Grintzalis, Dublin City University, Republic of Ireland	16:05 – 16:20	The study of the uptake of chromium, zinc, cadmium and lead from spiked nutrient solution in tomato plants Dr. Katarina Marković, Jožef Stefan Institute, Slovenia
16:20 – 16:35	Use of the midge <i>Chironomus riparius</i> larvae in plastic’s eco-toxicity studies and peculiarities of their responses Dr. Alla Khosrovyan, National Institute of Chemical Physics and Biophysics, Estonia	16:20 – 16:35	Overlooked residue of Li-ion battery recycling waste as high-value bifunctional oxygen electrocatalyst for Zn-air batteries Dr. Kerli Liivand, National Institute of Chemical Physics and Biophysics, Estonia
16:35 – 16:55	Importance of viruses in carbon and nitrogen cycles in aquatic ecosystems Dr. Sigitas Šulčius, Nature Research Centre, Lithuania Invited speaker	16:35 – 16:55	Sustainable chemistry through catalysis and process intensification Prof. Henrik Grénman, Åbo Akademi University, Finland Invited speaker
17:00 – 17:15	Announcement of the Best ECR Presentation and the Best ECR Poster Awards and closing of the conference (Room: Sirius)		