



THE SECOND INTERNATIONAL CONFERENCE

"MICROPLASTICS IN POLYMER SCIENCE"

October 1-5, 2024, Veliky Novgorod, Russia

Program

All times in the program are in Russian 24-hour format

Color Code (according to the program)

1. Modelling in microplastic research

2. Analysis and characterization of microplastics

3. Microplastics in environmental and Earth sciences

4. Microplastics in biology, pharmacology, and medicine

5. Research and industrial strategies for microplastics prevention and reduction

October 1, Tuesday

13:00–17:00	Registration
14:00–16:00	Preparation for the poster session

October 2, Wednesday

9:30–10:00	Opening Ceremony (Sergey Lyulin, Stepan Kalmykov, Yuriy Borovikov, Tatiana Kuznetsova, El'mira Morozova, Maksim Remchukov)	
10:00–11:00	Morning Plenary Session	

Chairperson: **Sergey Lyulin**

10:00–10:30	PL-01	Aleksei Khokhlov	Pollution of the Planet with Macro-, Micro- and Nano-Plastic: Emotions and Scientific Approach
10:30–11:00	PL-02	Jose Kenny	New Approaches to Solving Microplastics Problem as a Potential Threat to Humans and Environment

11:00–12:00 Oral Session 1

Chairperson: **Sergey Lyulin**

11:00–11:20	O-01	Tatiana Kuznetsova	Development of an international legally binding instrument pursuant to the UNEA Resolution № 5/14 “End plastic pollution: Towards an international legally binding instrument”. Current issues and solutions
11:20–11:40	O-02	Ivan Zorin	Primary microplastics: experience in isolation and analysis
11:40–12:00	O-03	Marina Antsiferova	Pollution of the waters of the Lower Volga with microplastics

12:00–12:20 Coffee-break

12:20–14:00 Oral Session 2

Chairperson: **Yulia Frank**

12:20–12:40	O-04	Tatiana Rauen	Plankton's role in the vertical transport of marine microplastics from surface to seafloor
12:40–13:00	O-05	Liliya Fatkhutdinova	Methodological Approaches to Assessing the Health Impacts of Microplastics: Lessons Learned from Nanoparticle Research
13:00–13:20	O-06	Boris Chubarenko	Hydrological-ecological screening monitoring of the mouth of the Pregolya River (South-Eastern Baltic): search for potential retention zones for microplastic particles
13:20–13:40	O-07	Andrey Pedchenko	EXPANSION OF VNIRO RESEARCH ON MICROPLASTICS IN RUSSIAN MARGINAL SEAS
13:40–14:00	O-08	Maksim Remchukov	Key challenges in Microplastics for petrochemical industry
Group Photo			
14:00–15:30		Lunch and Poster Discussion	

15:30–16:30 Afternoon Plenary Session

Chairperson: **Elena Filimonova**

15:30–16:00	PL-03	Elena Bagryanskaya	The microplastics effect on environmental water objects and living organisms
16:00–16:30	PL-04	Svetlana Khashirova	Microplastics monitoring: from the plain to the highlands

16:30–17:10 Oral Session 3

Chairperson: **Elena Filimonova**

16:30–16:50	O-09	Natal'ya Shevchenko	Influence of the shape of polystyrene microplastic particles on sorption properties
16:50–17:10	O-10	Elena Tkachenko	Microplastics investigations for Arctic seas sediments

17:10–17:30 Coffee-break

17:30–18:30 Oral Session 4

Chairperson: **Natal'ya Shevchenko**

17:30–17:50	O-11	Yulia Frank	Uptake and transfer of polystyrene microspheres in fish and invertebrates
17:50–18:10	O-12	Dmitrii Osipov	Enzymatic breakdown of PET-containing microplastics
18:10–18:30	O-13	Elena Trofimchuk	An approach for obtaining model microplastic particles with various potential pollutants

October 3, Thursday

10:00–11:00 Morning Plenary Session

Chairperson: **Andrey Gurtovenko**

10:00–10:30	PL-05	Aristides Tsatsakis	The slippery progress of science and consequences in risks for society - Paradigm microplastics
10:30–11:00	PL-06	Rawil Fakhrullin	Dark-field microscopy for micro- and nanoplastic characterisation in vitro and in vivo

11:00–12:00 Oral Session 5

Chairperson: **Andrey Gurtovenko**

11:00–11:20	O-14	Pavel Komarov	Challenges in Modeling Aging Microplastic Nanoparticles
11:20–11:40	O-15	Dmitry Polovyanenko	Application of pyrolytic gas chromatography with mass detection for the analysis of microplastics as a pollutant in environmental objects and living organisms
11:40–12:00	O-16	Igor Zhdanov	Distribution of surface microplastics in the Pacific Ocean, Sea of Okhotsk and Sea of Japan

12:00–12:20 Coffee-break

12:20–14:00 Round Table: Microplastics in Agriculture

14:00–15:30 Lunch and Poster Discussion

15:30–17:00**Afternoon Plenary Session**Chairperson: **Irina Chubarenko**

15:30–16:00	PL-07	Francesco Saliu	Microplastics from Textiles: Current Analytical Challenges and Possible Solutions
16:00–16:30	PL-08	Aleksandr Mel'tser	Actual issues of the impact of microplastics on public health
16:30–17:00	PL-09	Ahmad Manbohi	The latest findings on microplastics in the Iranian coastal regions

17:00–17:20**Coffee-break****17:20–18:20****Oral Session 6**Chairperson: **Elena Bagryanskaya**

17:20–17:40	O-29	Igor Volgin	Exploring Arctic marine microplastics: IR spectral database analysis using machine learning methods
17:40–18:00	O-18	Sergey Shishlyannikov	Microbiological synthesis of polyhydroxyalkanoates, a promising biodegradable polymer
18:00–18:20	O-19	Anatolii Khripun	Instrumental Solutions for the Detection, Identification and Characterization of Microplastics in Environmental Samples
19:00–22:00		Conference Dinner	

October 4, Friday

10:00–11:00 Morning Plenary Session

Chairperson: **Mikhail Proskurnin**

10:00–10:30	PL-10	Abdumutolib Atakhanov	Experience and plans in solving the problem of plastic waste in Uzbekistan
10:30–11:00	PL-11	Aleksei Polotsky	The self-consistent field method as a promising approach for studying microplastics

11:00–12:00 Oral Session 7

Chairperson: **Mikhail Proskurnin**

11:00–11:20	O-20	Shamil' Pozdnyakov	Methods for studying microplastics in Lake Ladoga
11:20–11:40	O-28	Yuri Yurasov	Analysis of the distribution of microplastics in bottom sediments from the Don River to the Sea of Azov
11:40–12:00	O-33	Mikhail Ermolin	Water-oil systems for continuous-flow separation and preconcentration of microplastics from natural waters

12:00–12:20 Coffee-break

12:20–14:00 Oral Session 8

Chairperson: **Shamil Pozdnyakov**

12:20–12:40	O-23	Denis Kraskevich	Overview of microplastics entry routes and potential risks to human health
12:40–13:00	O-24	Vitalii Vorob'ev	Nanocellulose among microplastic: bacterial cellulose as a model object
13:00–13:20	O-25	Irina Chubarenko	Processes of (micro)plastics sorting in the wave run-up zone
13:20–13:40	O-26	Svetlana Tuzova	Preventing the Loss of Intellectual Property in the Development and Market Launch of Innovative Polymer Products
13:40–14:00	O-27	Aleksandra Ershova	A look at the problem of pollution of the Gulf of Finland and the south-eastern part of the Baltic Sea with plastic and paraffins

14:00–15:30

Lunch and Poster Discussion

15:30–17:30

Oral Session 9

Chairperson: **Ivan Zorin**

15:30–15:50	O-21	Mikhail Tolstunov	Sample preparation for pyrolysis-gas chromatography with mass-spectrometric detection
15:50–16:10	O-32	Elena Proskurnina	Effects of nanoplastics on cell survival and genes of key signaling pathways in human cells
16:10–16:30	O-30	Tatiana Gusel'nikova	Determination of the impurity composition of polyethylene terephthalate, expanded polystyrene, and polypropylene by atomic-emission spectrometry
16:30–16:50	O-31	Aleksandr Khaustov	Genetic identification of microplastics in urban dust
16:50–17:10	O-34	Vladislav Forer	Study of Microplastics Originated from Slow-released Fertilisers

October 5, Saturday

10:00–12:30	New approaches to solving the problem of microplastics as a potential threat to humans and the environment (including visiting the facilities of the Laboratory of Polymer Modeling at Novgorod State University)
12:30–14:00	Lunch time
14:10–15:00	Declaration on current approaches to plastics and plastic-containing materials, considering all stages of their life cycle (open discussion)
15:00–15:15	Closing of the Conference

POSTER PROGRAM

October 2, Wednesday, 14:00–15:30

P.1-01	Anastasiia Badikova	Cellulose particles as a model of biodegradable microplastics
P.1-02	Aleksandra Blazhenko	Prospects of using the species <i>Oryctolagus cuniculus</i> as a biological model for assessing the impact of microplastics on animal reproduction
P.1-03	Victor Nazarychev	An inquiry on the interactions between microplastics and antibiotics: all-atom molecular dynamics simulation
P.1-04	Vladimir Toshchevnikov	Self-consistent field modeling of microplastics particle formation
P.1-05	Kirill Yuzhanin	MIGRATION OF CATIONIC POLYMER BETWEEN MODEL MICROPLASTIC PARTICLES
P.1-06	Vladislav Forer	Interaction of Pollutants with Microplastics in Water: Atomistic Molecular Dynamics Simulations
P.2-01	Mavluda Abduvalieva	The study of microplastics in the reservoirs of the Ferghana Valley
P.2-02	Anna Apenkina	Adsorption behavior of antibiotics on latex nanoparticles
P.2-04	Vladislav Khabibullin	Analysis of thermal and optical properties of aqueous dispersions of polystyrene nanoparticles by thermal lens spectrometry

October 3, Thursday, 14:00–15:30

P.3-01	Anna Arzamasova	Development of an information-analytical system on microplastics in natural environments on the territory of the Russian Federation
P.3-02	Natalia Bereznikova	Biodegradation of polyethylene particles by <i>Zophobas morio</i> larvae
P.3-03	Irina Bocherikova	Comparisone of microplastics (0.5-2 mm) content in different marine environments.
P.3-04	Danil Vorobiev	Microplastics in the Tom River: Monitoring results
P.3-05	Nikol Davydova	Assessment of microplastic contamination in fractured karst aquifer (Zvenigorod, Russia)
P.3-06	Alexandra Ershova	Microplastics in Antarctica: first results
P.3-07	Polina Krivosshlyk	Temporal variability of microplastics in the wave run-up zone on the Vistula Spit
P.3-08	Olga Lobchuk	Assessment of microplastic contamination of the Pregolya river mouth area (south-eastern Baltic)
P.3-09	Natalia Malygina	Атмосферное поступление микропластика на Алтае
P.3-10	Timur Nizamutdinov	Potential sources of microplastics inputs to terrestrial and aquatic ecosystems of Antarctica

October 4, Friday, 14:00–15:30

P.3-11	Irina Panova	BIOCIDAL PROPERTIES OF COMPLEXES FROM MODEL MICROPLASTIC PARTICLES AND POLYCATION
P.3-12	Maria Pogojeva	Microplastics in the Black Sea sediments
P.3-13	Mariya Podzorova	Functional materials with the addition of secondary polymer raw materials: structure and properties
P.3-14	Yulia Sotnikova	Investigation of microplastics and organic pollutants in the water and bottom sediments of the Ob River
P.3-15	Petr Fetin	Microplastics to improve properties of dirt roads
P.4-01	Anastasia Vainberg	Microplastic Bioaccumulation in Pinnipeds (Pinnipedia): A Literature Review

P.4-02	Gleb Maltsev	Migration of microplastic particles in a porous medium
P.4-03	Liubov Ozeretskaya	Experimental study of the effect of nanoplastics on the gastrointestinal tract
P.4-04	Aleksandra Osechkova	Investigating the accumulation and effects of microplastics on health and rate of aging: a pilot study
P.5-01	Ekaterina Kachalova	Polysaccharides as an alternative to synthetic polymers in packaging materials
P.5-02	Arseny Bekishev	Hansen solubility parameters in chemical recycling of polystyrene plastics
P.5-03	Marina Filinkova	Magnetic sedimentation of polyethylene microparticles from aqueous solutions