



THE THIRD INTERNATIONAL CONFERENCE
"MICROPLASTICS IN POLYMER SCIENCE"

October 20-24, 2025,
Samarkand, Uzbekistan

*Samarkand State University named after
Sharof Rashidov 15, University Boulevard*

MINISTRY OF HIGHER EDUCATION, SCIENCE AND INNOVATION OF THE REPUBLIC OF
UZBEKISTAN

ACADEMY OF SCIENCES OF THE REPUBLIC OF UZBEKISTAN

SAMARKAND STATE UNIVERSITY NAMED AFTER SHAROF RASHIDOV, **Uzbekistan**

INSTITUTE OF POLYMER CHEMISTRY AND PHYSICS, **Uzbekistan**

ZHEJIANG SCI-TECH UNIVERSITY, **China**

YAROSLAV THE WISE NOVGOROD STATE UNIVERSITY, **Russia**

RUSSIAN ACADEMY OF SCIENCES
DEPARTMENT OF CHEMISTRY AND MATERIALS SCIENCES, **Russia**

LOMONOSOV MOSCOW STATE UNIVERSITY, **Russia**

THE FEDERAL SERVICE FOR SUPERVISION OF NATURAL
RESOURCES MANAGEMENT, **Russia**

Program

Version 22

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 21, Tuesday

09:50–10:30	Opening Ceremony (Sergey Lyulin)			
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10:30–12:00	Morning Plenary Session 1			
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Chairperson: **Sergey Lyulin**

10:30–11:00	PL-01	Jose Kenny	Terni	UPDATE ON NEW STRATEGIES FOR DEALING WITH MICROPLASTICS AS A POTENTIAL THREAT TO HUMANS AND THE NATURAL ENVIRONMENT
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11:00–11:30	PL-02	Alexei Khokhlov	Moscow	THE PROBLEM OF MICROPLASTICS FROM THE VIEWPOINT OF PHYSICS AND CHEMISTRY
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11:30–12:00	PL-03	Valentin Kudyshkin	Tashkent	RATIONAL USE OF A BY-PRODUCT OF POLYETHYLENE PRODUCTION: MODIFICATION OF LOW MOLECULAR-WEIGHT POLYETHYLENE FOR THE DEVELOPMENT OF COMPATIBILIZERS IN BIODEGRADABLE POLYMER SYSTEMS
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12:00–14:00	Lunch			
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12:00–14:00	Poster Session 1			
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14:00–15:40	Oral Session 1			
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Chairperson: **Francesco Saliu**

14:00–14:20	O-01	Alessandro Becchi	Milan	EXPLORING THE ENVIRONMENTAL IMPACT OF TEXTILE POLYMER PHOTODEGRADATION THROUGH A MULTIANALYTICAL APPROACH
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14:20–14:40	O-02	Mikhail Glagolev	Veliky Novgorod	EFFICIENT CONSTRUCTION OF STABILITY DIAGRAMS OF AGED POLYMER NANOPARTICLES
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14:40–15:00	O-03	Pavel Komarov	Veliky Novgorod	THE FATE OF AGED POLYETHYLENE NANOPARTICLES: TWO-SCALE MODELING
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15:00– 15:20	O- 04	Evgeny Karpulevich	Mosco w	INTELLIGENT ANALYSIS OF MICROPLASTIC SPECTRAL DATA
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15:20– 15:40	O- 05	Elena Filimonova	Mosco w	FROM SURFACE TO SPRING: THE PATHWAY AND FATE OF MICROPLASTICS IN AQUIFERS
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15:40–16:10	Coffee Break			
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16:10–17:50	Oral Session 2			
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Chairperson: **Geeta Somaroo**

16:10– 16:30	O- 06	Ivan Zorin	Saint- Peters burg	MICROPLASTICS FROM COSMETICS AND MEDICAL DEVICES: ISOLATION AND ANALYSIS
16:30– 16:50	O- 07	Roman Gerasimov	Mosco w	FRONTIER LAB SOLUTION FOR MICROPLASTICS PY-GCMS QUALITATIVE AND QUANTITATIVE ANALYSIS

16:50– 17:10	O- 08	Petr Fetin	Saint- Peters burg	HYDROGEL MICROPARTICLES FOR SORPTION OF MODEL POLLUTANTS
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17:10– 17:30	O- 09	Kristina Ordzhonikid ze	Mosco w	COMPARATIVE GENOTOXICITY OF POLYDISPERSE SUBMICRON PARTICLES OF TWO TYPES OF POLYMERS: PLASTIC VS ORGANIC POLYMER
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17:30– 17:50	O- 10	Qodirbek Berdinazaro v	Tashke nt	MULTICOMPONENT PA/PP/CLAY NANOCOMPOSITES
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Poster Presentations of Day 1

P-01	5	Violetta Abdurakhmanova	Tashkent	SYNTHESIS AND PROPERTIES OF BIODEGRADABLE POLYMERIC MATERIALS BASED ON POLYVINYL ALCOHOL AND POLYSACCHARIDES
P-02	2	Davide Riseri	Milan	CHARACTERIZATION OF LUBRICANT WASTE FROM STEEL WIRING INDUSTRY AND ITS POTENTIAL INCLUSION IN A POLYMERIC MATRIX, WITHIN A CIRCULAR ECONOMY APPROACH
P-03	5	Sherzod Yuldoshov	Tashkent	DRINKING WATER PURIFICATION FROM MICROPLASTICS

P-04	1	Il'nar Nurgaliev	Tashkent	COMPUTATIONAL INSIGHTS INTO PROTEIN–MICROPLASTIC INTERACTIONS USING MOLECULAR DOCKING AND SHORT MD SIMULATIONS
P-05	4	Liubov Abramova	Moscow	METABOLOMICS FOR ASSESSING THE CONDITION OF WHITEFISH FRY UNDER THE INFLUENCE OF MICROPLASTICS
P-06	1	Anastasiia Badikova	Moscow	CELLULOSE PARTICLES AS A MODEL FOR BIODEGRADABLE MICROPLASTICS: COMPLEXES WITH POLYCATIONS AND THEIR CYTOTOXICITY
P-07	3	Ivan Kushnov	Veliky Novgorod	INFLUENCE OF MICROPLASTIC ADDITION ON SOIL HYDROPHYSICAL PROPERTIES
P-08	2	Irina Medvedeva	Yekaterinburg	MAGNETIC EXTRACTION OF POLYETHYLENE TEREPHTHALATE MICROPARTICLES FROM WATER BY USING COMPOSITE MAGNETITE NANOPARTICLES WITH SILICON DIOXIDE, CHITOSAN AND GELATINE COATINGS
P-09	1	Anastasiia Mikhel	Veliky Novgorod	EVALUATION OF POLYSTYRENE MICROPARTICLES EFFECTS ON RABBITS (ORYCTOLAGUS CUNICULUS): A PILOT STUDY
P-10	2	Alexandra Nikolaeva	Saint-Petersburg	AGING OF MODEL POLYSTYRENE MICROPLASTICS UNDER UV LIGHT
P-11	3	Timur Nizamutdinov	Veliky Novgorod	THE EFFECT OF DIFFERENT DOSES OF MICROPLASTICS ON THE RESULTS OF STANDARD AGROCHEMICAL METHODS FOR MONITORING SOIL QUALITY
P-12	4	Aleksandra Osechkova	Novosibirsk	SAMPLE PREPARATION OF RAT HEART SAMPLES TO DETECT MICROPLASTICS
P-13	2	Natalia Shevchenko	Veliky Novgorod	ANALYSIS OF THE SORPTION CAPACITY OF MODEL MICROPLASTIC PARTICLES WITH NATURAL MICROPARTICLES
P-14	2	Elizaveta Shtro	Veliky Novgorod	STUDY ON THE ADSORPTION OF METAL IONS ONTO MODEL POLYSTYRENE PARTICLES
P-15	2	Kirill Yuzhanin	Moscow	NANOMETER-SIZED PARTICLES OF HYDROGEL AS MODEL MICROPLASTICS: INTERACTION WITH POLYCATION IN SOLUTION AND PRECIPITATE
P-16	2	Igor Zhdanov	Moscow	MICROPLASTIC FATE IN ARCTIC COASTAL WATERS: ACCUMULATION HOTSPOTS AND ROLE OF RIVERS IN SVALBARD

October 22, Wednesday

10:30–12:30	Morning Plenary Session 2			
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Chairperson: **Alexei Khokhlov**

10:30–11:00	PL-04	Tatiana Kuznetsova	Moscow	DEVELOPMENT OF AN INTERNATIONAL PLASTIC TREATY: KEY MESSAGES
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11:00–11:30	PL-05	Alfonso Maffezzoli	Lecce	DEVELOPMENT OF MODEL MICRO AND NANOPLASTICS AND THEIR INTERACTIONS WITH LIVING ORGANISMS
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11:30–12:00	PL-06	Geeta Somaroo	Mauritius	MICROPLASTICS AND THE ISLAND WATCH PROGRAM
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12:00–14:00	Lunch			
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12:00–14:00	Poster Session 2			
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14:00–15:40	Oral Session 3			
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Chairperson: **Petr Fetin**

14:00–14:20	O-11	Yulia Frank	Tomsk	QUANTITATIVE ASSESSMENT OF THE NUMBER AND MASS OF POLYETHYLENE TEREPHTHALATE MICROFIBERS RELEASED INTO THE SEWAGE DURING THE WASHING OF POLYESTER SPORTSWEAR
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14:20–14:40	O-12	Victor Nazarychev	Veliky Novgorod	ALL-ATOM MOLECULAR DYNAMICS SIMULATION OF ANTIBIOTIC ADSORPTION ON MICROPLASTICS SURFACES
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14:40–15:00	O-13	Maria Krivosheina	Novosibirsk	SPECIFICITY OF ENVIRONMENTAL SAMPLES PRETREATMENT FOR THE ANALYSIS OF MICROPLASTIC CONTAMINATION
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15:00–15:20	O-14	Vladimir Toshchevikov	Veliky Novgorod	MODELLING OF MICROPLASTICS PARTICLES FORMATION AND ADSORPTION OF MACROMOLECULAR POLLUTANTS
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15:20–16:10	Coffee Break			
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16:10–18:10

Oral Session 4

Chairperson: Xiaomin Zhu

16:10– 16:30	O- 15	Anastasiia Vladimirova	Mosco w	PERFORMANCE PARAMETERS OF FLUORESCENT MICROSCOPIC QUANTIFICATION OF MICROPLASTICS IN NATURAL WATERS
16:30– 16:50	O- 16	Igor Zhdanov	Veliky Novgor od	MICROPLASTIC PARTICLES IN THE ARCTIC MARINE ENVIRONMENT: MICROSCAN DATABASE OF IR SPECTRA AND ITS VERIFICATION BY MACHINE LEARNING METHODS
16:50– 17:10	O- 17	Svetlana Klushina	Mosco w	THE SIGNIFICANCE OF SOIL IN THE FATE OF MICROPLASTICS
17:10– 17:30	O- 18	Maria Pogojeva	Mosco w	FIELD STUDIES OF PLASTIC FRAGMENTS FROM DIFFERENT GEOGRAPHICAL REGIONS
17:30– 17:50	O- 19	Tatyana Rauen	Sevast opol	STRATEGIES OF MICROPLASTIC CONSUMPTION BY ORGANISMS WITH DIFFERENT TROPHIC SPECIALIZATIONS (OXYRRHIS MARINA AND ARCTODIAPTOMUS SALINUS) AND ITS IMPACT ON THEIR FUNCTIONAL CHARACTERISTICS
17:50– 18:10	O- 20	Evgeniy Kiselev	Krasno yarsk	POLYHYDROXYALKANOATES (BIOPOLYMERS) WERE SYNTHESIZED FROM FATTY WASTE FROM FISH PROCESSING

Poster Presentations of Day 2

P-17	3	Laura Ismukhanova	Almaty	ASSESSMENT OF MICROPLASTIC POLLUTION IN THE AQUATIC ECOSYSTEM OF THE HIGH- ALTITUDE LAKE MARKAKOL (EAST KAZAKHSTAN)
P-18	3	Dmitry Kalinov	Minsk	INVESTIGATION OF MICROPLASTIC CONTENT IN THE NEMAN RIVER AND PATHWAYS OF ITS ENTRY INTO THE RIVER SYSTEM (CASE STUDY OF THE MIDDLE REACH)

P-19	3	Azamat Madibekov	Almaty	ASSESSMENT OF MICROPLASTIC POLLUTION IN THE AQUATIC ECOSYSTEM OF THE HIGH-ALTITUDE LAKE MARKAKOL (EAST KAZAKHSTAN)
P-20	1	Alexey Dobrovskiy	Veliky Novgorod	MOLECULAR DYNAMICS SIMULATIONS OF BISPHENOL A RELEASE FROM POLYVINYL CHLORIDE MICROPLASTICS
P-21	1	Anna Ivanova	Veliky Novgorod	THEORETICAL STUDY OF HOMOPOLYMER ADSORPTION ONTO MODEL MICROPLASTIC PARTICLES
P-22	2	Olga Kuznetsova	Moscow	SECTOR-FIELD INDUCTIVELY COUPLED PLASMA MASS SPECTROMETRY (SF-ICP-MS) METHOD FOR ANALYZING OF THE TOXIC METALS IN MICROPLASTICS FROM SEAWATER AND BEACH SEDIMENTS FROM THE CASPIAN SEA
P-23	4	Anton Lyakh	Sevastopol	IMPACT OF MICROPLASTICS ON DINOFLAGELLATE MOTILITY
P-24	3	Daria Repnikova	Moscow	MICROPLASTICS IN CRIMEAN GROUNDWATER: OCCURRENCE, IDENTIFICATION, AND TRANSPORT PATHWAYS
P-25	5	Elnara Zhiganshina	Nizhny Novgorod	SYNTHESIS OF HYBRID COPOLYMERS OF LACTIDE AND METHYL METHACRYLATE BY RADICAL PHOTOPOLYMERIZATION
P-26	5	Sergey Chesnokov	Nizhny Novgorod	LACTIDE POLYMERIZATION ON GROUP II METAL ALKOXIDES
P-27	5	Yuliya Kuznetsova	Nizhny Novgorod	NEW APPROACH TO BIODERADABLE BLOCK PLA-PMMA COPOLYMERS
P-28	1	Vladislav Forer	Veliky Novgorod	THE CRITICAL ROLE OF PARTICLE SIZE IN MICROPLASTIC-POLLUTANT STABILITY: INSIGHTS FROM ATOMISTIC SIMULATIONS

October 23, Thursday

10:40–12:30 Morning Plenary Session 3

Chairperson: **Sergey Lyulin**

10:40–11:00	PL-07	Kirill Medvedev Khuraman Geydarova	Moscow	MICROPLASTICS: KEY CHALLENGES FOR THE INDUSTRY AND MITIGATION STRATEGIES IN PRODUCTION
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11:00–11:30	PL-08	Francesco Saliu	Milan	TACKLING PLASTIC MICROFIBER EMISSIONS IN TEXTILES – FROM SCIENTIFIC UNDERSTANDING TO INDUSTRIAL INNOVATION
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11:30–12:00	PL-09	Xiaomin Zhu	Hangzhou	MICROPLASTICS IN THE TEXTILE INDUSTRY: SOURCES, IMPACTS, AND SUSTAINABLE SOLUTIONS
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12:00–12:30	PL-10	Todd Gouin	Sharnbrook	MICROPLASTIC PARTICLES AS VECTORS OF TRANSPORT FOR HYDROPHOBIC ORGANIC CHEMICALS
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12:30–14:00 Lunch

14:00–17:40 Oral Session 5

Chairperson: **Ivan Zorin**

14:00–14:20	O-21	Igor Volgin	Veliky Novgorod	STRUCTURAL STABILITY OF NANOSIZED POLYETHYLENE PARTICLES IN AQUEOUS ENVIRONMENT: ALL-ATOM COMPUTER SIMULATIONS
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14:20–14:40	O-22	Anastasiia Vladimirova	Moscow	PERFORMANCE PARAMETERS OF FLUORESCENT MICROSCOPIC QUANTIFICATION OF MICROPLASTICS IN CHICKEN EGGS
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14:40–15:00	O-23	Vyacheslav Molchanov	Moscow	3D-PRINTABLE ALGINATE NANOCOMPOSITE GELS
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15:00– 15:20	O- 24	Alexey Sazonov	Moscow	ASSESSMENT OF MICROPLASTIC CONTENT IN RIVERS IN THE EUROPEAN PART OF RUSSIA: RESULTS OF EXPEDITION STUDIES
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15:20– 15:40	O- 25	Anastasia Vainberg	Veliky Novgorod	MICROPLASTIC CONTAMINATION IN NORTHERN FUR SEALS (CALLORHINUS URSINUS): DETECTION AND QUANTIFICATION
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15:40–16:10	Coffee Break			
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16:10–17:50	Oral Session 6			
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Chairperson: **Elena Filimonova**

16:10– 16:30	O- 26	Yuriy Yurasov	Rostov -on- Don	DISTRIBUTION OF MICROPLASTICS IN BOTTOM SEDIMENTS OF THE COAST OF THE SPIT CURVE OF THE SEA OF AZOV
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16:30– 16:50	O- 27	Vladislav Forer	Veliky Novgorod	MOLECULAR MECHANISMS OF PESTICIDE ADSORPTION ON MICROPLASTICS: RESULTS OF MICROSECOND SIMULATION
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16:50– 17:10	O- 28	Anna Shitikova	Ryazan	STUDYING MICROPLASTIC TOXICITY USING IN VITRO MODELS: FROM PBMC VIABILITY TO LYSOSOMAL DYSFUNCTION
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17:10– 17:30	O- 29	Michael Tolstunov	Rostov -on- Don	STUDY OF THE FRASS OF ULOMOIDES DERMESTOIDES (COLEOPTERA, TENEBRIONIDAE) LARVAE DURING BIOCONVERSION OF POLYSTYRENE-BASED PLASTIC
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17:30– 17:50	O- 30	Badma Mankaev	Moscow	SYNTHESIS AND PROPERTIES OF BIODEGRADABLE POLYMERS BASED ON L- LACTIDE, ϵ -CAPROLACTONE AND ALIPHATIC POLYCARBONATES
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17:50–18:20	Keynote speaker			
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17:50– 18:20	Yusuke Saraya	Osaka	TACTICS OF BUSINESS FOR MICROPLASTICS SOLUTIONS	
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19:00	Conference Dinner			
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October 24, Friday

10:00–12:00

Round Table: New Approaches in Microplastics Research – From AI to Industrial Solutions

Moderators – Prof. S.S. Karlov, Prof. A.I. Avetisyan

12:00–14:00

Closing Ceremony