

8th INTERNATIONAL BAKEEV CONFERENCE “MACROMOLECULAR NANOOBJECTS AND POLYMER NANOCOMPOSITES” (Bakeev conference-2020)

Organizers

Division of Chemistry and Material Science of Russian Academy of Sciences

The Ministry of Science and Education of Russia

Enikolopov Institute of Synthetic Polymeric Materials of Russian Academy of Sciences (ISPM RAS)

Nesmeyanov Institute of Organoelement Compounds of Russian Academy of Sciences (INEOS RAS)

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Scientific program

- 1) ***Macromolecular nanoobjects.***
- 2) ***Functional polymer nanoobjects and nanocomposites.***
- 3) ***Theory and computer simulations for polymer nanocomposites.***
- 4) ***Modern methods for investigation of nanoparticles and polymer nanocomposites.***
- 5) ***Polymer composite nanomaterials for high-tech applications.***

School-conference Chairs

Aziz Muzafarov (Nesmeyanov Institute of Organoelement Compounds of RAS, Russia)

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Victoria Chekusova – *workshop secretary*

Askold Trul

Alexandra Bystrova

Notification

This year Bakeev conference will be organized in the online form via Zoom-platform. Please visit web-site (https://ispm.ru/bakeev_conf_2020/) for details.

Conference program

Monday, December 21th

	Chair: <i>Aziz Muzafarov</i>
10:45 – 11:00	Conference opening
11:00 – 11:45	I-1. <i>Martin Möller</i> . How Shape Memory Effects Can Contribute to Improved Self-Healing Properties in Polymer Materials
11:45 – 12:30	I-2. <i>Igor Elmanovich</i> . Thermal Decomposition of Polyolefins in Supercritical Carbon Dioxide
12:30 – 13:00	Discussion
13:00 – 14:00	Lunch
	Oral talks 1. Chair: <i>Sergey Chvalun</i>
14:00 – 14:10	O-1. <i>Anton Anisimov</i> . Sequential Hydrothiolation-Hydrosilylation Reactions: An Effective Approach to the Preparation of New Organosilicon Compounds
14:10 – 14:20	O-2. <i>Iliia Averianov</i> . Biological Effect of Nanocrystalline Cellulose Modified with Poly(glutamic acid) in Biodegradable Polyester Materials
14:20 – 14:30	O-3. <i>Artem Bakirov</i> . Clathrate Phase in the Solvent Annealed Polybutylcarbosilane Dendrimers: an Insight on Quasicrystalline Packing of Soft Spheres
14:30 – 14:40	O-4. <i>Daniil Cherechukin</i> . Polymer Complexes with Detonation Nanodiamonds for Biomedical Utilization
14:40 – 14:50	O-5. <i>Natallia Dubashynskaya</i> . Anti-infective Drug Delivery Systems based on Polyelectrolyte Complexes of Colistin and Hyaluronic Acid
14:50 – 15:00	O-6. <i>Dmitry Klimov</i> . Obtaining of Bimetallic Nanoparticles in Polymer Films and Coatings of Interpolyelectrolyte Complexes Using the Radiation-Chemical Method
15:00 – 15:10	O-7. <i>Nikita Kuznetsov</i> . Electrorheological Fluids Filled by Porous Chitosan Particles: Results and Perspectives
15:10 – 16:00	Poster session 1 (P-1 – P-12)
16:00 – 16:30	Discussion
	Chair: <i>Sergey Ponomarenko</i>
16:30 – 17:15	I-3. <i>Sergey Sheyko</i> . Bottlebrush Gels: Thermo-Responsive and Tissue-Mimetic
17:15 – 18:00	I-4. <i>Sergey Nazarenko</i> . Review of Recent Innovations in the Field of Extrudable Multilayer Polymeric Systems
18:00 – 18:30	Discussion

Tuesday, December 22th

	Chair: <i>Alexander Ozerin</i>
10:00 – 10:45	I-5. <i>Elmira Badamshina</i> . Polyurethanes and Polyurethane Materials - Past, Present and Future
10:45 – 11:30	I-6. <i>Svetlana Khashirova</i> . Additive Technologies. Polymers, Composites. When Will We Match up with Molded Products?
11:30 – 12:15	I-7. <i>Olga Arzhakova</i> . Environmental Crazing: from Fundamentals to Applied Aspects
12:15 – 13:00	I-8. <i>Nikita Sedush</i> . Eco- and Biocompatible Polymers from Renewable Resources – a Review of Fifty Years of Progress in the Synthesis and Applications of Poly(lactides)
13:00 – 13:30	Discussion
13:30 – 14:30	Lunch
	Chair: <i>Elena Agina</i>
14:30 – 14:40	O-8. <i>Alexander Kuznetsov</i> . Study of the Mechanism of Arms Growth in the Synthesis of Star-Shaped Oligomers by Polycondensation According to the Scheme by Mathematical Modeling
14:40 – 14:50	O-9. <i>Victor Lomovskoy</i> . Релаксационная Микронеоднородность Сегментальной Подвижности Макромолекул
14:50 – 15:00	O-10. <i>Ekaterina Razuvaeva</i> . Poly(D,L-lactide)-b-poly(ethylene glycol) Nanoparticles as Potential Carriers for Targeted Delivery of Anticancer Agent Docetaxel
15:00 – 15:10	O-11. <i>Aleksei Stupnikov</i> . The Influence of Alkyl Chain Length on the Self-Organization of Tetrabutylammonium 3,4,5-tris(alkyloxy)benzenesulfonates
15:10 – 15:20	O-12. <i>Dmitry Tolmachev</i> . Atomistic Simulation of Polyelectrolytes in Mineral Salt Solutions. Challenges and Solutions
15:20 – 15:30	O-13. <i>Elena Zubova</i> . Nanoscale Kinetics of Phase Transitions in Crystalline Polyethylene
15:30 – 15:45	Discussion
	Chair: <i>Oleg Borshchev</i>
15:45 – 17:20	Poster session 2 (P-13 – P-35)
17:20 – 17:35	Discussion
17:35 – 19:10	Poster session 3 (P-36 – P-58)
19:10 – 19:25	Discussion
	Chair: <i>Aziz Muzafarov</i>
19:25 – 19:40	Conference closing

Poster session 1

Monday, December 21th, 15:10

Андреева, Мария	P1	Компьютерное Моделирование Влияния Скорости Охлаждения на Растворимость Газов в Полиимиде P-ОДФО
Antipova, Christina	P2	Installation for Electrospinning of Micro- and Nanofiber Nonwovens on Dielectric Surfaces
Антонов, Илья	P3	Электроизолирующий Радиационно-Полимеризованный Композит Изодецилметакрилат/Бензилметакрилата/W/Bi ₂ O ₃ с Управляемой Плотностью
Ardabevskaia, Sofia	P4	Synthesis of Carbosilane Functional Dendrimers as Potential Blocks for the Construction of Core-Shell Tecto-Dendrimers
Artamonova, Nina	P5	Synthesis of Polystyrene Suspensions in the Presence of Oligosiloxanes with Terminal 3-aminopropyl Groups
Баленко, Николай	P6	Полимер-Диспергированные Холестерические Жидкие Кристаллы: Механически-Индукцированное Смещение Пика Селективного Отражения Света
Belova, Anastasia	P7	Synthesis of Compounds with Monomer-Excimer Fluorescence Based on Siloxane Matrices and Organic Fluorophores
Bezlepkina, Ksenia	P8	Acid-Catalyzed Rearrangement of Azidopropyl-Siloxane Monomers for the Synthesis of Azidopropyl-PDMS
Безруков, Николай	P9	Исследование Влияния Условий Обработки и Термопласта на Распределение Дисперсного Наполнителя в Эпоксидном Связующем для Получения Полимерных Нанокompозитов
Blokhin, Aleksei	P10	Synthesis and Characterization of Novel Star-Shaped Poly(2-alkyl-2-oxazoline)s with Calix[8]arene Core
Borisov, Kirill	P11	Self-Healed Organosilicon Coatings
Borisova, Diana	P12	Emulsion Polymerization of Methyl Methacrylate in the Presence of Methylsilsesquioxane

Poster session 2

Tuesday, December 22th, 15:45

Борздун, Наталья	P13	Компьютерное Моделирование Смесей Политиофены/ Асфальтены для Органических Солнечных Фотоэлементов
Бойчук, Артем	P14	Влияние Хиральности, Длины Спейсера и Концевой Хиральной Группы на Процессы Фотоориентации в Полиметакрилатах с Азобензольными Хромофорами с Латеральными Метильными Заместителями
Братасюк, Никита	P15	Термические Свойства Эпоксиуретановых Композиций, Наполненных Модифицированным Нитридом Бора
Брюзгина, Екатерина	P16	Модификация Поверхности Пленочных и Губчатых Хитозановых Материалов Сополимера Глицидилметакрилата и (Фтор)алкилметакрилатов
Dyadishchev, Ivan	P17	Luminescent Oligo(phenylene-thiophene)s with Various Types of Solubilizing Groups: Synthesis and Properties
Ershova, Tatyana	P18	The Study of Polycondensation of All-cis-tetraphenylcyclotetrasiloxane in Ammonia - an Effective Method for Obtaining High-Molecular Ladder Polyphenylsilsesquioxane

Gasilova, Ekaterina	P19	The Influence of Acidic Hydrolysis on the Branched Architecture of Fucoidans Characterized by Dynamic and Static Light Scattering
Глова, Артем	P20	Моделирование Структуры Привитых Цепей Олигогидроксibuтиратов и Олиголактидов Методом Молекулярной Динамики
Grigoreva, Alexandra	P21	Aggregation Behaviour of Fluorocontaining Amphiphilic Block-Copolymers at the Air/Water Interface
Ilinova, Ksenia	P22	Investigation of the Curing of Filled Epoxy Composites by Differential Scanning Calorimetry
Ivanova, Anna	P23	Unfolding of an Amphiphilic Molecular Brush: a Sequence of Intramolecular Conformational Transitions
Jablanovic, Anastasija	P24	Nanocomposites Based on Functionalized Polymers and Different Types of Nanoparticles
Кадина, Юлия	P25	Влияние Молекулярного Строения Поли(лактид-блок-этиленгликоля) на Характеристики Наночастиц для Адресной Доставки Оксалиплатина
Kalinichenko, Nadezhda	P26	Synthesis and properties study of oligomers based on conjugated thiophenes end-capped with electron-withdrawing methylidicyanovinyl and ethyl cyanoacetate groups
Katarzhnova, Elena	P27	The Synthesis of Polymethylsiloxane Dendrimers with Sparse Structure
Хайруллина, Инна	P28	Латентный Катализатор для Отверждения Силилированных Полиуретановых Олигомеров
Khmelnitskaya, Alina	P29	Polydimethylsiloxane Dielectric Elastomer Composites with Carbon-Based Fillers
Kim, Eleonora	P30	Cross-Linked Polymer Networks Based on Polysiloxane and Nickel β -diketonates
Kolesnikov, Timofey	P31	Development of New Thermosetting Oligoimides for Use as a Matrix for Polymer Composites
Kovaleva, Natalia	P32	Kinetics of Transformation Between B- and A-forms in the Drew-Dickerson Dodecamer
Kozina Nina	P33	Novel Star-Shaped Poly(2-ethyl-2-oxazoline) with Calix[4]arene Core Synthesized by "Grafting onto" Approach
Крижановский, Илья	P34	Механохимия – Новый Подход к Прямому Синтезу Алкоксисиланов
Кудрявцева, Анастасия	P35	Синтез и Исследование Термических Свойств Полиэдрических Карборансилсесквиоксанов Различного Строения

Poster session 3

Tuesday, December 22th, 17:35

Laktionov, Mikhail	P36	Interactions of Nanocolloid Particle with Non-Charged Planar Polymer Brush. A Self-Consistent Field Approach
Леонтьева, Мария	P37	Характеристики Взаимодействия Композитов на Основе Жидких Кристаллов и Квантовых Точек с Поверхностью Подложек
Logunov, Mikhail	P38	Molecular Dynamics Analysis of Entanglements Topology in Polymer Nanocomposites with Carbon Nanoparticles

Majorov, Valeriy	P39	Azidopropyl-PDMS and Their Triazole-Containing Derivatives with Carboxylic Functionality
Маланичева, Ольга	P40	Биофункционализация Высокопористых Тканеинженерных Каркасов на Основе Полилактида/Поликапролактона
Mikhailov, Ivan	P41	Chains Stiffness Effect on the Phase Segregation of Mixed Polymer Brushes in Selective Solvent
Minyaylo, Ekaterina	P42	Boron-Substituted Carborane-Carbosilane Dendrimers: Synthesis and Properties
Nesmelov, Alexander	P43	Poly(chloro-p-xylylene) Protective Coatings Prepared by Deposition in a Nitrogen Flow
Останин, Степан	P44	Молекулярная Подвижность Полиуретанов Исследованная Методом 2D WISE ЯМР Спектроскопии
Polotsky, Alexey	P45	Switchable Mixed Polymer Brushes with Polymers of Different Stiffnesses
Порфирьева, Наталья	P46	Мукоадгезивные и Мукус-Проникающие Наночастицы на Основе Интерполиэлектrolитных Комплексов: Получение, Характеристика и Применение для Интраназальной Доставки Лекарственных Средств
Пучков, Александр	P47	Звездобразные Амфифильные Блок-Сополимеры на Основе L-лактида для Адресной Доставки Лекарств
Shikhovtseva, Irina	P48	Synthesis of Methacrylate-Containing Methylsilsesquioxane
Shirokova, Evgenia	P49	Effect of Formulation Parameters on Physicochemical Properties of Biodegradable PLGA Nanoparticles Stabilized by Poly(D,L-lactide)-b-poly(ethylene glycol) for Targeted Drug Delivery
Talalaeva, Evgeniya	P50	Synthesis of Asymmetrical Methylcyclosiloxanes
Tsegelskaya, Anna	P51	One-Pot Synthesis of Star-Shaped Polymers with Hyperbranched Polyimide Core
Vorobiov, Vitaly	P52	Mechanical Properties of Composite Hydrogels Based on Polymerizable Deep Eutectic Solvents and Bacterial Cellulose
Vysochinskaya, Yulia	P53	Synthesis of New Polyfunctional Cyclosiloxanes
Ядыкова, Анастасия	P54	Получение Макромолекулярных Нанообъектов на Основе Целлюлозы и Реология их Дисперсий
Yastremsky, Evgeny	P55	Microstructure of Recombinant Spidroin and Spidroin Scaffolds for Tissue Engineering
Zaborin, Evgeniy	P56	Synthesis of Novel Polyarylenevinylsilanes Containing PPO-Donor Fragments
Zavorin, Alexey	P57	Development of Composites Based on Polymer Matrices, Modified with Multiwalled Carbon Nanotubes
Зими́на, Марина	P58	Надмолекулярно Организованные Среды на Основе Замещенных Каликс[4]резорцинов и Лиотрипных Мезофаз