

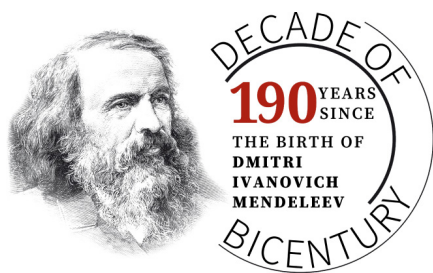


# MENDELEEV 2024

XIII International Conference on Chemistry  
for Young Scientists

# CONFERENCE PROGRAM

## DEDICATED TO



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**Troyana Kissler**

**Liya Arkaniya**

**Elina Alikparova**

**Mark Kaplanskiy**

## PLENARY SPEAKERS



### **Dr. Sci., Prof. Yulia Gorbunova**

*Academician of the Russian Academy of Sciences, N.S. Kurnakov Institute of General and Inorganic Chemistry Russian Academy of Sciences, Moscow, Russia*

**The Molecular Basis of Tetrapyrrole Action as Nanophototheranostic Agents**

### **Dr. Sci., Prof. Alexander Terent'ev**

*Corresponding Member of the Russian Academy of Sciences, N.D. Zelinsky Institute of Organic Chemistry Russian Academy of Sciences, Moscow, Russia*

**The Wonderful World of Organic Peroxides**



### **Dr., Prof. Ping Xu**

*Harbin Institute of Technology, Harbin, China*

**Magnetic Field-Assisted Electrocatalysis**

### **Dr., Prof. Rongxin Su**

*State Key Laboratory of Chemical Engineering and Technology, Tianjin University, Tianjin, China*

**Green Production and Application of Nanocellulose**



### **Dr., Prof. Daniel Pasquini**

*Institute of Chemistry, Federal University of Uberlândia, Uberlândia, Brazil*

**Lignocellulosic Biomass as a Source to Produce Biofuels, Chemicals, and Polymers, in the Context of Biorefinery**



### **Dr. Sci., Prof. Sergei Shtykov**

*Department of Analytical Chemistry and Chemical Ecology, Saratov State University, Saratov, Russia*

**Nanoanalytics – a Reply of Analytical Chemistry to the Era of Nanotechnology**

### **Dr. Sci., Prof. Artem Oganov**

*Professor of the Russian Academy of Sciences, Skolkovo Institute of Science and Technology, Moscow, Russia*

**Structure and Composition of Crystals and Molecules: Novel Phenomena and Their Explanation**



### **Dr. Sci., Prof. Olga Korableva**

*Department of Economics Research and Development, St Petersburg University, St. Petersburg, Russia*

**Science-intensive Economy and Systemic Technological Transformation in the Modern Development of the Chemical Industry**

## **KEYNOTE SPEAKERS**

### **Dr. Sci., Prof. Alexei Volkov**

*Professor of the Russian Academy of Sciences, A.V. Topchiev Institute of Petrochemical Synthesis Russian Academy of Sciences, Moscow, Russia*

**Polymers for Separation on Molecular Level**



### **Dr. Sci., Prof. Pavel Postnikov**

*Research School of Chemistry & Applied Biomedical Sciences, Tomsk Polytechnic University, Tomsk, Russia*

**Plasmon-Assisted Chemistry: From Mechanisms to Application**



### **Dr. Sci., Chief Researcher, Vladimir Apyari**

*Division of Analytical Chemistry, Department of Chemistry,  
Lomonosov Moscow State University, Moscow, Russia*

**Gold and Silver Nanoparticles in  
Spectrophotometric/Colorimetric Analysis:  
Behavior, Peculiarities, Opportunities**

### **Dr. Sci., Prof. Leonid Fershtat**

*N.D. Zelinsky Institute of Organic Chemistry Russian Academy of  
Sciences, Moscow, Russia*

**Nitrogen-Oxygen Heterocyclic Systems: Novel  
Synthetic Approaches and Emerging Trends**



### **Dr. Sci., Prof. Irina Goryacheva**

*Head of the Department of General and Inorganic Chemistry,  
Director of the Institute of Chemistry, Saratov State University,  
Saratov, Russia*

**Semiconductor Quantum Dots for Bioanalysis**

### **Dr. Sci., Prof. Konstantin Lyssenko**

*Professor of the Russian Academy of Sciences, Lomonosov Moscow  
State University, Moscow, Russia*

**Experimental Charge Density Studies of Crystalline  
Solids as the Inexhaustible Source of Data on  
Interatomic Interactions**



### **Dr. Evgeniya Zhalskaya**

*Head of the Analytics Department, Solopharm, Russia*

**Organization of the Process of Import Substitution  
in the Pharmaceutical Market of Russia**

## Dr., Prof. Lei Wang

*Harbin Institute of Technology, Harbin, China*

Construction of Artificial-Cell-Based Micromotors and the Investigation of Their Life-Like Behaviors



## INVITED SPEAKERS



## Dr., Prof. Jianmin Sun

*Harbin Institute of Technology, Harbin, China*

Design of Lewis Acid-Base Bifunctional Catalyst for Chemical Conversion of CO<sub>2</sub> to Cyclic Carbonate

## Dr., Prof. Jefferson L. Ferrari

*Institute of Chemistry, Federal University of Uberlândia, Uberlândia, Brazil*

The Conversion of Energy into Inorganic Materials Containing Rare Earths for Possible Use in Photodynamic Therapy



## Dr. Sci., Prof. Dmitry Perekalin

*A.N. Nesmeyanov Institute of Organoelement Compounds of Russian Academy of Sciences, Moscow, Russia*

Synthesis of Chiral Boranes by Asymmetric Insertion of Diazoacetates into B-H Bonds

## Assoc. Prof. Alexander Bunev

*Head of the Medicinal Chemistry Centre, Togliatti State University, Togliatti, Russia*

FEP-Based Design of Cereblon Ligands in Bifunctional Degradation Development





## **Dr., Prof. Denis Sabirov**

*Institute of Petrochemistry and Catalysis – Subdivision of the Ufa Federal Research Centre of the Russian Academy of Sciences, Ufa, Russia*

**Information Entropy in Theoretical Chemistry**

## **Dr. Kirill Grzhegorzhevskii**

*Head of Laboratory of Nanocluster Polyoxometalates Functional Design, Institute of Natural Sciences and Mathematics, Ural Federal University named after the First President of Russia B.N. Yeltsin, Yekaterinburg, Russia*

**Hybrid Nanocluster-Embedded Hydrogels For The Controlled Drug Release and Bioink Application**



## **Dr. Sci., Assoc. Prof. Andrey Mereshchenko**

*St Petersburg University, St. Petersburg, Russia*

**Luminescent Heterometallic Rare Earth Based Terephthalate MOFs**

## **Dr. Andrey Kulsha**

*Belarusian State University, Minsk, Belarus*

**Strong Bases Design: Key Techniques and Stability Issues**



## **Dr. Tatiana Plisko**

*St Petersburg University, St. Petersburg, Russia*

**Influence of Molecular Weight and Concentration of Poly(Diallyldimethylammonium Chloride) Added to Coagulant on the Structure and Performance of Thin Film Composite Membranes for Nanofiltration**





## **Dr., Prof. Andrey Shishov**

*St Petersburg University, St. Petersburg, Russia*

**Deep Eutectic Solvents in Microextraction Methods of Analysis**

## **Dr., Assoc. Prof., Olga Osmolovskaya**

*St Petersburg University, St. Petersburg, Russia*

**Inorganic Nanosorbents for Solid-Phase Microextraction: Preparation, Most Important Parameters and Examples of Application**

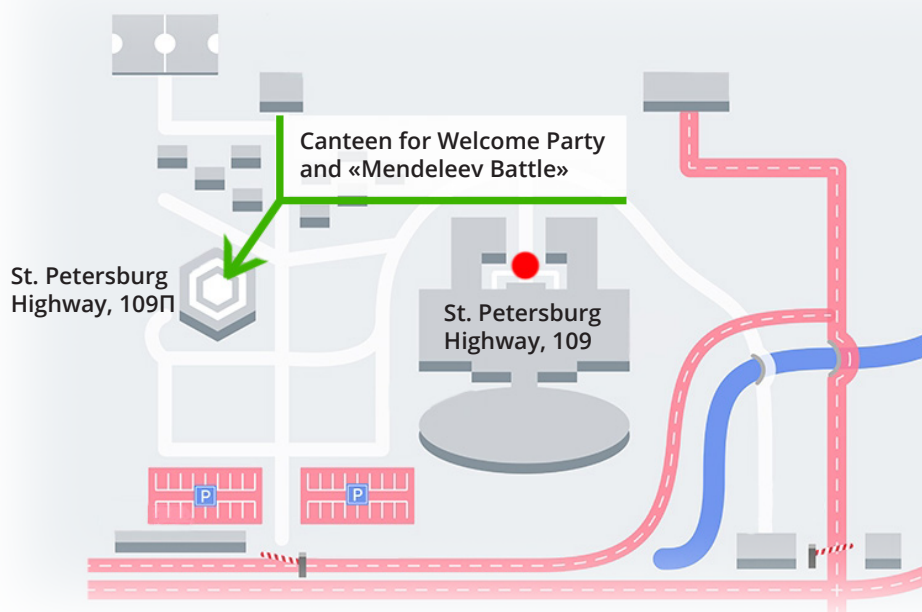
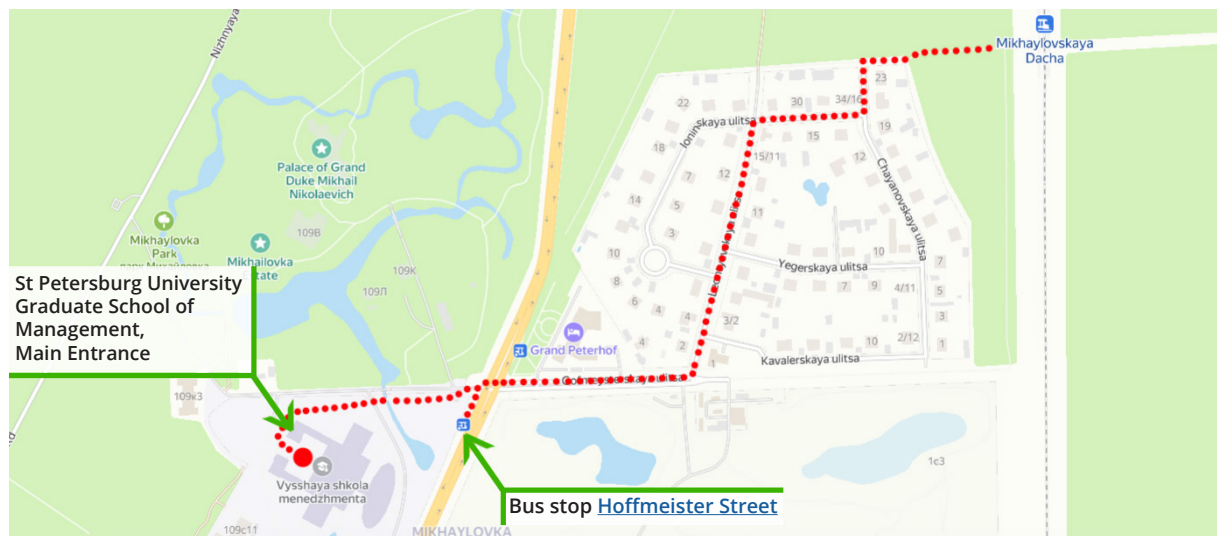
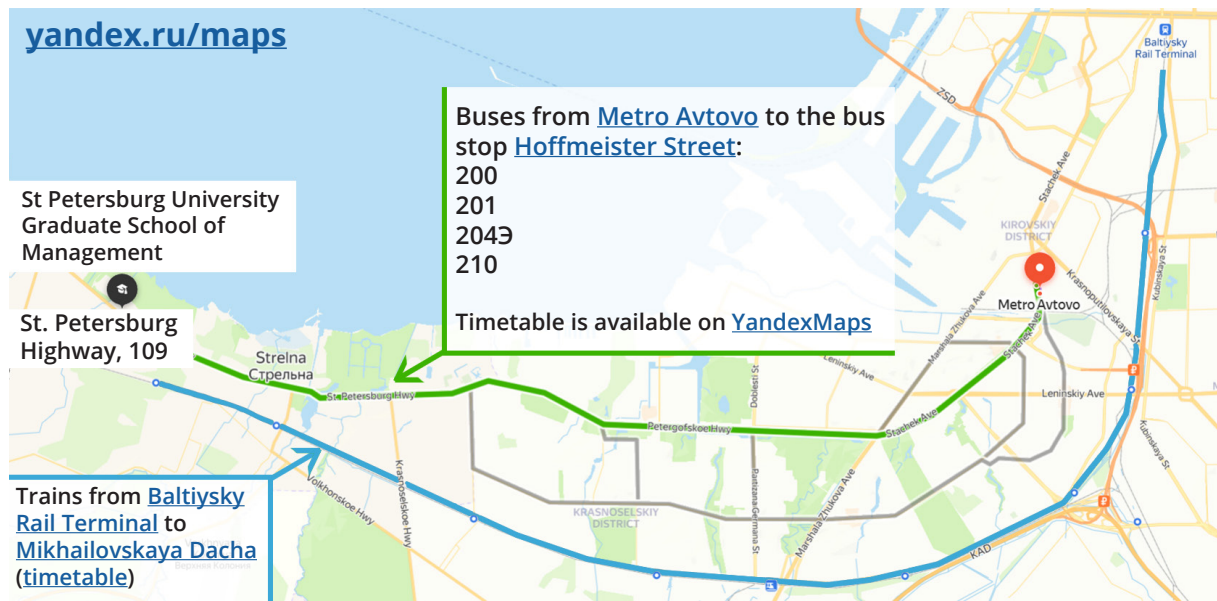


## **Dr. Sci., Prof. Andrey Kirsanov**

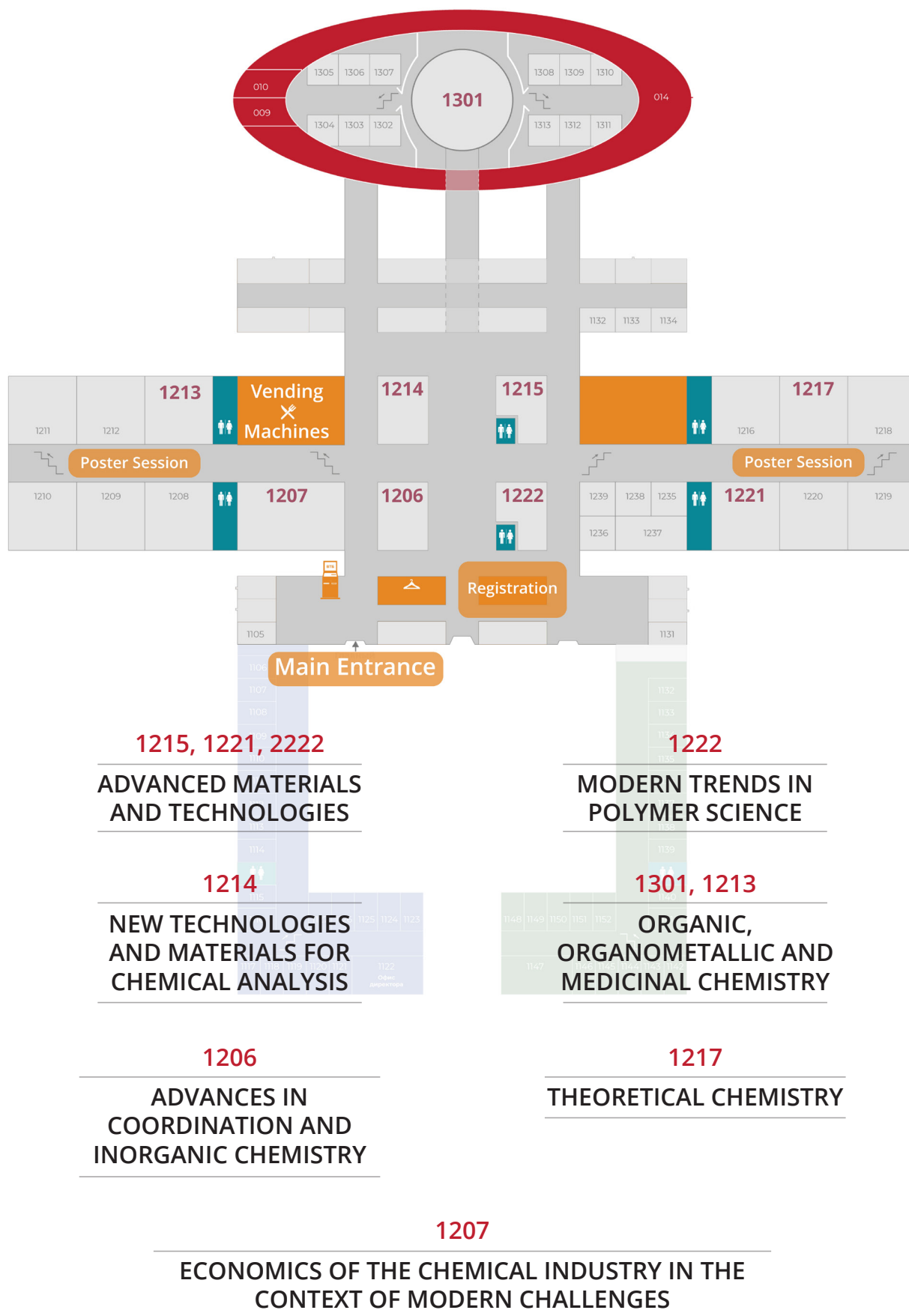
*St Petersburg University, St. Petersburg, Russia*

**Machine Learning, Artificial Intelligence and Chemometrics in Analytical Chemistry - What's the Difference?**

# LOCATION



# BUILDING PLAN





# SCIENTIFIC PROGRAM

## MONDAY, 02.09

*St. Petersburg Highway, 109, Peterhof, St. Petersburg*

16:00 - 18:00 Registration

## TUESDAY, 03.09

9:00 - 10:00 Registration  
Poster Placement

10:00 - 10:30 Opening Ceremony 1301  
The Speech of the General Sponsor  
The Speech of Dr. Sci. I.A. Balova  
The Speech of Invited Guests

10:30 - 11:15 Academician of the RAS, Dr. Sci. **Yulia Gorbunova**

11:15 - 11:30 Coffee Break

11:30 - 12:15 Corr. Member of the RAS, Dr. Sci. **Alexander Terent'ev**

12:15 - 13:00 **Dr. Rongxin Su**

13:00 - 13:45 Dr. Sci **Olga Korableva**

13:45 - 15:00 Lunch Time

15:00 - 16:45 Poster Session

17:00 - 20:00 Welcome Party See page 10

## WEDNESDAY, 04.09

9:00 - 10:00 Registration

9:00 - 11:00 Section Presentations

1215, 1221

ADVANCED MATERIALS AND  
TECHNOLOGIES

1222

MODERN TRENDS IN POLYMER  
SCIENCE

1214

NEW TECHNOLOGIES AND  
MATERIALS FOR CHEMICAL  
ANALYSIS

1301, 1213

ORGANIC,  
ORGANOMETALLIC  
AND MEDICINAL  
CHEMISTRY

1206


ADVANCES IN  
COORDINATION  
AND INORGANIC  
CHEMISTRY

1217

THEORETICAL  
CHEMISTRY

1207

ECONOMICS OF THE  
CHEMICAL INDUSTRY IN  
THE CONTEXT OF MODERN  
CHALLENGES



11:00 - 11:20	Coffee Break	
11:20 - 13:20	Section Presentations	
11:20 - 16:05	Bilateral Forum «Sino-Russian Joint Research Center for Chemistry»	2222
11:20 - 13:20	Master Class of ChemistryEasy	1207
13:20 - 14:20	Lunch Time	
14:20 - 15:20	Panel Discussion «Bridging the Gap: Science and Industry in Conversation»	1301
16:30 - 20:00	Excursion to the Dmitri Mendeleev Museum and Archives Sightseeing tour of Saint Petersburg Excursion to the St Petersburg University Research Park	

## THURSDAY, 05.09

9:00 - 10:00	Registration
9:30 - 11:30	Section Presentations

1215, 2222  
ADVANCED MATERIALS AND TECHNOLOGIES

1222  
MODERN TRENDS IN POLYMER SCIENCE

1214  
NEW TECHNOLOGIES AND MATERIALS FOR CHEMICAL ANALYSIS

1301, 1213  
ORGANIC, ORGANOMETALLIC AND MEDICINAL CHEMISTRY

1206  
ADVANCES IN COORDINATION AND INORGANIC CHEMISTRY

1217  
THEORETICAL CHEMISTRY

1207  
ECONOMICS OF THE CHEMICAL INDUSTRY IN THE CONTEXT OF MODERN CHALLENGES

11:30 - 11:50	Coffee Break	
11:50 - 13:50	Section Presentations	
13:50 - 14:50	Lunch Time	
14:50 - 16:50	Section Presentations	
16:50 - 17:10	Coffee Break	
17:00 - 18:30	Poster Session Sponsors' Presentations	1222
18:30 - 20:00	«Mendeleev Battle»	See page 10



**FRIDAY, 06.09**

10:00 - 10:45	Dr. Sci. Sergei Shtykov	<b>1301</b>
10:45 - 11:30	Dr. Ping Xu	
11:30 - 12:15	Dr. Daniel Pasquini	
12:15 - 13:00	Dr. Sci. Artem Oganov	
13:00 - 13:30	Coffee Break	
13:30 - 14:30	Best Speakers Awarding Ceremony Closing Ceremony	

# SPONSORS PROGRAM



**THURSDAY, 05.09, 1222**

17:00 - 17:20

**LABTEST**

**Cooperation of RCC «LABTEST» with Scientific and Control Laboratories. Experience and Opportunities**

17:20 - 17:40

**AXELPHARM**

Skornyakov Yu.V.

**Modern Requirements of the Pharmaceutical Industry for the Quality of Peptide and Low-Molecular Organic Compounds**

# 1. ADVANCED MATERIALS AND TECHNOLOGIES

CHAIRMAN: Dr. Sci. **Alina Manshina**, Institute of Chemistry, SPbU

SECRETARY: Dr. **Anna Vasileva**, Institute of Chemistry, SPbU

## ORAL REPORTS

**WEDNESDAY, 04.09, Room 1215**

9:00 - 9:40  
**KEYNOTE  
SPEAKER**

*Dr. Sci. Pavel Postnikov*

**Plasmon-Assisted Chemistry: From Mechanisms to Application**

9:50 - 10:00

*Lobanova E.M., Bochenkov V.E., Bahratov I.A.*

**CHIRAL PLASMONIC NANOCRESCENTS FOR SENSING: SYNTHESIS AND OPTICAL PROPERTIES**

10:00 - 10:10

*Murausky D.I., Artem'ev M.V.*

**USING DIELECTRIC MIE-RESONANCES IN SEMICONDUCTOR NANOHETEROSTRUCTURES FOR PHOTOCATALYSIS ENHANCING**

10:10 - 10:20

*Del Carpio Rocha A., Soldatova D.A.*

**THE ROLE OF THE SHELL IN HYBRID MOLECULAR-PLASMONIC NANOSTRUCTURES**

10:20 - 10:30

*Tkachenko D.S., Meshina K.I., Zheltova V.V., Bobrysheva N.P., Osmolowsky M.G., Voznesenskiy M.A., Osmolovskaya O.M*

**DISTINCTIVE FEATURES OF THE Fe<sub>3</sub>O<sub>4</sub>@ZnO CORE-SHELL NANOPARTICLE FORMATION, THEIR STRUCTURE AND PHOTOCATALYTIC ACTIVITY**

10:30 - 10:40

*Golovin M.S., Mironova A.T., Zakharchenkova V.P., Bulatova E.A., Bol'shakov O.I.*

**PROMISING PHOTOCATALYSTS BASED ON POLY(TRIAZINE IMIDE)**

10:40-10:50

*Kharina S.N., Kurenkova A.Yu., Kozlova E.A.*

**MODIFIED GRAPHITIC CARBON NITRIDE-BASED COMPOSITES AS PHOTOCATALYSTS FOR HYDROGEN PRODUCTION UNDER VISIBLE LIGHT**

10:50 - 11:00

*Matsenko R.O., Silyukov O. I., Kurnosenko S.A.*

**PREPARATION OF NANOCOMPOSITES BASED ON EXFOLIATED ORGANIC-INORGANIC DERIVATIVES OF LAYERED DOUBLE HYDROXIDES AND LAYERED PEROVSKITE-LIKE OXIDES**



11:20 - 11:40  
**INVITED  
SPEAKER**

*Dr. Kirill Grzhegorzhevskii, Levchenko A.E., Kopchuk D.S.,  
Nikonov I.L., Valieva M.I., Borovykh D.V.*

**Hybrid Nanocluster-Embedded Hydrogels For The  
Controlled Drug Release and Bioink application**

11:50 - 12:00

*Podurets A.A., Skripkin E.V., Bobrysheva N.P., Osmolowsky M.G.,  
Voznesenskiy M.A., Osmolovskaya O.M.*

**DESIGN OF THE PHOTOCATALYTIC PROPERTIES OF TIN  
DIOXIDE NANOPARTICLES THROUGH STRUCTURAL  
PARAMETERS AND SHAPE**

12:00 - 12:10

*Galaeva Z.R., Khramtsov P.V.*

**SYNTHESIS OF FLUORESCENT ALBUMIN NANOPARTICLES  
BY DESOLVATION METHOD**

12:10 - 12:20

*Doroshenko A.V., Tomina E.V., Jujukin K.V.*

**COMPARISON OF PHOTOCATALYTIC PROPERTIES OF  
CoFe<sub>2</sub>O<sub>4</sub>, MgFe<sub>2</sub>O<sub>4</sub> AND Co<sub>0,5</sub>Mg<sub>0,5</sub>O<sub>4</sub>**

12:20 - 12:30

*Fazliev T.R., Selishchev D.S.*

**FORMATION OF PEROXIDE SPECIES DURING  
PHOTOCATALYTIC WATER SPLITTING OVER TiO<sub>2</sub>-BASED  
PHOTOCATALYSTS**

12:30 - 12:40

*Shumilkin A.S., Vernaya O.I., Semenov A.M., Shabatina T.I.*

**CRYOCHEMICAL SYNTHESIS OF MAGNETIC IRON OXIDE  
NANOPARTICLES AND THEIR HYBRID SYSTEMS WITH  
CHLORAMPHENICOL**

12:40 - 12:50

*Arbanas S., Kolesnik I.V.*

**PHOTOPROTECTIVE AND PHOTOCATALYTIC PROPERTIES  
OF COMPLEX CERIUM AND TITANIUM OXIDES**

12:50 - 13:00


*Aleksandrov Yu.D., Sergeyev V.G., Karpushkin E.A.*

**SIZE AND STABILIZER - DEPENDENT CATALYTIC BEHAVIOR  
OF GOLD NANOPARTICLES**

13:00 - 13:10

*Lolaeva A.V., Zhivchikova A.N., Tepliakova M.M., Akkuratov A.V.,  
Kuznetsov I.E.*

**NOVEL THIAZOLOTHIAZOLE-BASED CONJUGATED  
POLYMER FOR THE INDOOR PHOTOVOLTAIC  
APPLICATIONS**



13:10 - 13:20

*Petrova V.I., Kozlov S.S., Alexeeva O.V., Nikolskaia A.B., Shevaleyevskiy O.I.*

**OPTIMIZATION OF DYE SENSITIZED SOLAR CELLS FOR EFFICIENT OPERATION UNDER LOW-LIGHT CONDITIONS AND ARTIFICIAL INDOOR ILLUMINATION**

**WEDNESDAY, 04.09, Room 1221**

9:50 - 10:00

*Agapitova M.M., Tepliakova M.M.*

**DESIGN OF ELECTRONE-TRANSPORT MATERIALS FOR WIDE-BANDGAP PEROVSKITE SOLAR CELLS**

10:00 - 10:10

*Beklemyshev V.E., Zvereva I.A., Magomedova A.G., Orudzhev F.F.*

**SYNTHESIS AND STUDY OF PHOTOCATALYTIC AND PIEZOPHOTOCATALYTIC PROPERTIES OF PEROVSKITE-TYPE LAYERED OXIDE  $\text{Bi}_3\text{NbTiO}_9$**

10:10 - 10:20

*Boldyreva A.G., Tepliakova M.M., Novikov A.V., Petrov V.G., Parfenova O., Vasilev A., Saranin D., Stevenson J.K.*

**EFFECT OF GAMMA-RAYS ON RECOMBINATION DYNAMICS AND DEFECT CONCENTRATION IN A WIDE BANDGAP PEROVSKITE**

10:20 - 10:30

*Dzhouse-Ivanina S.A., Parfenova O.R.*

**BI-SOLVENT ENGINEERING METHOD FOR IMPROVING THE EFFICIENCY AND STABILITY OF A WIDE-BANDGAP PEROVSKITE**

10:30 - 10:40

*Sideltsev M.E., Zhivchikova A.N., Kuznetsov I. E., Piryazev A.A., Nikitenko N.G., Akkuratov A.V.*

**THE DESIGN OF ALKYLSTYLIL-SUBSTITUTED HOLE TRANSPORT MATERIALS FOR PEROVSKITE SOLAR CELLS**

10:40 - 10:50

*Rashitova K.I., Gerasimov S.A., Bobrysheva N.P., Osmolowsky M.G., Osmolovskaya O.M.*

**MULTIFUNCTIONAL SORBENT/PHOTOCATALYST MATERIALS BASED ON Mg-Al LAYERED DOUBLE HYDROXIDES**

10:50 - 11:00

*Novikov S.S., Silyukov O.I.*

**STUDY OF THE EXFOLIATION OF LAYERED DOUBLE HYDROXIDES IN AQUEOUS MEDIA AND THEIR PHOTOCATALYTIC ACTIVITY**

- 11:50 - 12:00 *Prytkov V.A., Osipova A.M., Hannanov A.A., Kuznetsov I.V., Kutyreva M.P.*  
**ONE-STEP SYNTHESIS OF SILVER-CONTAINING NANOCOMPOSITES BASED ON FUNCTIONALIZED HYPERBRANCHED POLYESTERS USING SYNTHETIC GREEN CHEMISTRY APPROACHES**
- 12:00 - 12:10 *Ananina A.A., Nartova A.V., Semikolenov S.V., Kovtunova L.M., Dmitrachkov A.M., Kvon R.I., Sobolev V.I., Bukhtiyarov V.I.*  
**THE EFFECT OF SIBUNITE TREATMENT IN NO ON THE CATALYTIC PROPERTIES OF Pd/C CATALYSTS IN THE FORMIC ACID DECOMPOSITION**
- 12:10 - 12:20 *Dobrovolskii A.A., Mikhaylov A.A., Platonov V.B., Rumyantseva M.N., Prihodchenko P.V.*  
**GENERATION OF A SENSOR SIGNAL TO REDUCING GASES IN NANOCRYSTALLINE SnO<sub>2</sub>, SYNTHESIZED BY PEROXIDE ASSISTED SOL GEL METHOD**
- 12:20 - 12:30 *Kuchkaev Aidar M., Kuchkaev Airat M., Yakhvarov D.G.*  
**NEW APPROACHES FOR THE FUNCTIONALIZATION OF FEW-LAYER BLACK PHOSPHORUS WITH THE FORMATION OF COVALENT P-C BONDS**
- 12:30 - 12:40 *Kuznetsov I.E., Piryazev A.A., Sagdullina D.K., Anokhin D.V., Zhivchikova A.N., Sideltsev M.E., Tepliakova M.M., Ivanov D.A., Akkuratov A.V.*  
**EFFECT OF PROCESSING SOLVENT ON THE HOLE TRANSPORT IN ORGANIC SEMICONDUCTOR SMALL MOLECULES**
- 12:40 - 12:50 *Asharchuk A.A., Kubarkov A.V., Sergeyev V.G.*  
**POLYMER / CARBON NANOTUBES COMPOSITES AS WATER-PROCESSABLE BINDERS FOR Li ION BATTERY ELECTRODES**
- 12:50 - 13:00 *Kyzlasova D.A., Ulihin A.S., Uvarov N.F.*  
**N-METHYL-N-PROPYLPYPERIDINIUM PERCHLORATE DOPING BY LITHIUM PERCHLORATE AS ELECTROLYTE FOR LITHIUM-ION BATTERIES**
- 13:00 - 13:10 *Veselova V.O., Gajtko O.M.*  
**EFFECT OF SOLVENT AND CATALYST ON THE HYDROLYSIS RATE OF GERMANIUM ALKOXIDES – KEY STEP IN THE PRODUCTION OF GeO<sub>2</sub> AEROGELS**
- 13:10 - 13:20 *Skrypnik M.U., Platonov V.B., Vasiliev R.B.*  
**NANOCOMPOSITES WITH CHARGE TRANSFER FOR RECOGNITION ORGANIC MOLECULES IN GAS PHASE BASED ON PHOTOCATALYSIS**



**THURSDAY, 05.09, Room 1215**

9:30 - 10:10  
**KEYNOTE  
SPEAKER**

*Dr. Wang Lei*

**Construction of Artificial-Cell-Based Micromotors and the Investigation of Their Life-Like Behaviors**

10:10 - 10:20

*Kaimonov M.R., Safronova T.V.*

**A NEW APPROACH FOR OBTAINING COMPOSITE CERAMIC MATERIALS IN THE  $\text{Na}_2\text{O}$ - $\text{CaO}$ - $\text{SiO}_2$ - $\text{P}_2\text{O}_5$  SYSTEM FOR MEDICAL APPLICATIONS**

10:20 - 10:30

*Skripkin E.V., Podurets A.A., Osmolowsky M.G., Bobrysheva N.P., Voznesenskiy A.M., Osmolovskaya O.M.*

**ENHANCING ANTIBIOTIC REMOVAL FROM WASTEWATER USING TIN DIOXIDE NANOPARTICLES OF VARIOUS SHAPE: INVESTIGATING THE IMPACT OF STRUCTURAL PARAMETERS ON PHOTOCATALYSIS**

10:30 - 10:40

*Fedorov V.S., Likhomanova R.B., Yudintceva N.M., Ziganshin R.H., Bobkov D.E., Kolesnichenko Yu.V., Botalova D.P., Shevtsov M.A.*

**NANOSCALE SYSTEM FOR THE HSP70 INTERACTOME ISOLATION FROM TUMOR CELLS**

10:40 - 10:50

*Wan Zhao, Xiaojun Han*

**CONSTRUCTION OF HOLLOW ARTIFICIAL TISSUES BASED ON MAGNETIC ARCHIMEDES EFFECT**

10:50 - 11:00

*Boyu Yang, Shubin Li, Wei Mu, Zhao Wang and Xiaojun Han*

**LIGHT-HARVESTING ARTIFICIAL CELLS CONTAINING CYANOBACTERIA FOR  $\text{CO}_2$  FIXATION AND FURTHER METABOLISM MIMICKING**

11:00 - 11:10

*Presnyakov K.Yu., Kuprianova V.L., Lenivaya A.A., Pidenko P.S.*

**BIOINORGANIC SORBENT BASED ON IMPRINTED BOVINE SERUM ALBUMIN FOR EXTRACTION OF ECOTOXICANTS**

11:10 - 11:20

*Shmykov B.D., Zaborova O.V.*

**STRUCTURAL FEATURES OF CATIONIC LIPIDS FOR LIPID NANOPARTICLES FORMATION**

11:20 - 11:30

*Chao Li, Xiaojun Han*

**REVERSIBLE DEFORMATION OF ARTIFICIAL CELL COLONIES TRIGGERED BY ACTIN POLYMERIZATION FOR MUSCLE BEHAVIOR MIMICRY**

11:50 - 12:10

**INVITED  
SPEAKER**

*Dr. Sun Jianmin, Lin Liang, Yifei Ye*

**Design of Lewis Acid-Base Bifunctional Catalyst for Chemical Conversion of CO<sub>2</sub> to Cyclic Carbonate**

12:20 - 12:30

*Zverev S.A., Selivanova A.A., Zvereva A.S., Vinogradova Ya. V.*

**ALUMINA AND ZIRCONIA AS NANOCONTAINERS FOR REPELLENT DELIVERY AND PROTECTIVE CLOTHING DEVELOPMENT**

12:30 - 12:40

*Shneiderman A.A., Komkova M.A., Karyakin A.A.*

**NANOZYMES «ARTIFICIAL PEROXIDASE» FOR THE SUPPRESSION OF REACTIVE OXYGEN SPECIES**

12:40 - 12:50

*Muravev A.A., Botnar A.A., Skorb E.V.*

**CRYSTALLIZATION CONTROL OF ANIONIC THIALIXARENES ON SILICON SURFACE COATED WITH CATIONIC POLY(ETHYLENEIMINE)**

12:50 - 13:00

*Lyashchuk V.K., Kladko D.V.*

**MAGNETIC CILIA PLATFORM FOR pH SENSING BY FLEXIBLE SENSOR**

13:00 - 13:10

*Dubov L.A., Karyakin A.A., Komkova M.A.*

**ELECTROANALYTICAL SYSTEM FOR DIRECT H<sub>2</sub>O<sub>2</sub> DETECTION IN EXHALED AEROSOL**

13:10 - 13:20

*Levshakova A.A., Khairullina E.M., Ninayan R.G., Popov A.Yu., Kalinichev A.A., Manshina A.A.*

**HIGHLY EFFICIENT LASER-INDUCED SYNTHESIS OF ELECTRODE MATERIALS FROM DEEP EUTECTIC SOLVENTS FOR BIOGENIC AMINE DETERMINATION**

13:20 - 13:30

*Solovyeva M.I., Zhuravlev E.S., Stepanov G.A., Kozlova Y.N., Morozova V.V., Richter V.A., Kozlov D.V., Selishchev D.S.*

**PHOTOACTIVE SELF-CLEANING MATERIALS MODIFIED WITH TiO<sub>2</sub>-N FOR DESTRUCTION OF CONTAMINANTS UNDER VISIBLE LIGHT**

13:30 - 13:40

*Svakhina Ya.A., Titova M.E., Pyagay I.N.*

**INVESTIGATION OF THE POSSIBLE APPLICATION OF TECHNOGENIC SILICA GEL FOR HYDROTHERMAL SYNTHESIS OF LTA-TYPE ZEOLITES**



13:40 - 13:50

*Amdur A.M., Fedorov S.A., Kurmacheva V.S.*

**PHYSICO-CHEMICAL FEATURES OF PULVERIZED COAL FUEL FOR BLAST FURNACES**

14:50 - 15:00

*Chekuryaev A.G.*

**PHYSICO-MECHANICAL PROPERTIES AND MICROSTRUCTURE OF CERAMICS MADE OF COMPOSITE MATERIALS OF DIAMOND-SILICON CARBIDE COMPOSITION**

15:00 - 15:10

*Ermakova L.V., Smyslova V.G., Karpyuk P.V., Saifutyarov R.R., Sokolov P.S.*

**MICROSTRUCTURE OF GYAGG:Ce CERAMICS OBTAINED VIA DLP 3D-PRINTING**

15:10 - 15:20

*Kuznetsova P.D., Mukhanova E.A.*

**LUMINESCENT PROPERTIES OF CALCIUM TUNGSTATE DOPED WITH RARE EARTH ELEMENTS**

15:20 - 15:30

*Murashko A.M., Filippov Ya.Yu.*

**BIOCOMPATIBLE CERAMIC MATERIALS BASED ON  $\text{Ca}_3(\text{PO}_4)_2$ - $\text{CaNaPO}_4$  SYSTEM**

15:30 - 15:40

*Medvedev V.A., Mikhailov M.D., Manshina A.A.*

**SYNTHESIS AND STUDY OF OXIDE CERAMICS  $\text{Al}_2\text{O}_3$  STRUCTURES BY LASER SINTERING**

15:40 - 15:50

*Dyuskina D.A.*

**STUDY OF THE PHYSICAL AND MECHANICAL CHARACTERISTICS OF «IDEAL» CERAMICS (DIAMOND - SILICON CARBIDE COMPOSITE)**

15:50 - 16:00

*Sitnikova L.A., Dolzhikova E.A., Savina A.A., Abakumov A.M.*

**SURFACE-MODIFIED HIGH ENERGY DENSITY Ni-RICH LAYERED CATHODE MATERIALS FOR ADVANCED LITHIUM-ION BATTERIES**

16:00 - 16:10

*Pan Wang, Xijiang Han, Yunchen Du*

**PREPARATION AND ELECTROMAGNETIC WAVE ABSORPTION PROPERTIES OF Ni/C COMPOSITE AEROGELS**

16:10 - 16:20

*Borodina O.A., Yeletsky P.M., Lebedeva M.V., Mozyleva M.A.*

**ACTIVATED CARBON FROM HIGH-DENSITY BIOMASS FOR ELECTRODES OF SUPERCAPACITORS ON NON-AQUEOUS ELECTROLYTES**

16:20 - 16:30

*Wei Zhang, Yongping Bai, Zhen Yang, Ruolin Wang, Linghui Meng, Yu Wang*

**SYNTHESIS OF UV-CURABLE DISULFIDE FUNCTIONALIZED POLYSILOXANE FOR STRETCHABLE GOLD ELECTRODES WITH MICROCRACK**

**THURSDAY, 05.09, Room 2222**

12:20 - 12:30

*Menshchikov I.E., Grinchenko A.E., Shelyakin I.D., Chugaev S.S., Shkolin A.V.*

**LONG-TERM ADSORPTION STORAGE OF LIQUEFIED NATURAL GAS VAPORS BASED ON THE CAPILLARY CONDENSATION EFFECT IN NOVEL MICRO-MESOPOROUS CARBON COMPOSITES**

12:30 - 12:40

*Neupokoev A.I., Minich I.A., Zvereva I.A., Kruchkova T.A., Sheshko T.F.*

**MESOPOROSITY DEVELOPMENT IN ZEOLITES AND STUDY OF GLYCEROL SORPTION AND CATALYTIC PROPERTIES OF MICROPOROUS AND MESOPOROUS ZEOLITES MODIFIED WITH TRANSITIONAL METALS**

12:40 - 12:50  
**ONLINE**

*Mrachkovskaya D.A., Gudkova E.G., Kuryakov V.N.*

**PREPARATION AND STUDY OF PHYSICO-CHEMICAL PROPERTIES OF PARAFFIN NANO-SIZED AQUEOUS DISPERSIONS. DEVELOPMENT OF PHASE CHANGE MATERIALS BASED ON PARAFFINS**

12:50 - 13:00

*Leonchuk S.S., Falchevskaya A.S., Morozova P.A., Gromov N.V., Vinogradov V.V.*

**TEMPLATE-FREE SYNTHESIS OF POROUS METAL- AND METALLOID-BASED NANOMATERIALS WITH THE USE OF THE EUTECTIC SODIUM-POTASSIUM ALLOY AS A REAGENT**

13:00 - 13:10

*Gradov A.E.*

**APPLICATION OF 3d TRANSITION METAL-CONTAINING SILICA IN SYNTHESIS OF CARBON NANOTUBES**

13:10 - 13:20

*Garifullin K.Z., Mezentsev I.A., Losev T.V., Bashirov I.I., Salimov R.G., Klikushin A.S., Podryabinkin E.V., Malyshev V.I., Chaliy V.A., Novikov I.S., Shapeev A.V., Medvedev M.G.*

**MACHINE-LEARNED INTERATOMIC POTENTIAL FOR MODELING ICP-CVD**



13:20 - 13:30

*Sheshkovas A.Z., Veselovskaya J.V., Rogov V.A., Kozlov D.V.*

**CO<sub>2</sub> ABSORPTION BY COMPOSITE MATERIALS BASED ON POLYETHYLENIMINE**

13:30 - 13:40

**ONLINE**

*Preobrazhenskiy I.I., Klimashina E.S., Putlyayev V.I.*

**BIORESORPTION OF MAGNESIUM-BASED CERAMIC**

13:40 - 13:50

**ONLINE**

*Zagorovskaya K.D., Boldyreva A.G.*

**PARYLENE-N THIN FILM ENCAPSULATION FOR ENHANCED PEROVSKITE SOLAR CELLS STABILITY**

14:50 - 15:00

**ONLINE**

*Baghali M., Ziyadi H., Ghaffarimoghadam M., Sadri D.*

**PREPARATION OF NANOFIBROUS MATS AND THEIR IN-VITRO ASSESSMENTS IN THE TREATMENT OF PARKINSON'S DISEASE**

15:00 - 15:10

*Jiarui Du, Guanying Chen*

**MOF-COATED UPCONVERSION NANOPARTICLE AGENTS ENABLE SYNERGISTIC PHOTODYNAMIC THERAPY AND IMMUNOTHERAPY**

15:10 - 15:20

*Kornienko A.I., Ivanov V.E., Popova N.R.*

**INVESTIGATION OF CERIUM FLUORIDE NANOPARTICLES MODIFIED WITH FLAVIN MONONUCLEOTIDE FOR PHOTODYNAMIC THERAPY APPLICATION**

15:20 - 15:30

*Weichen Wang, Xiaojun Han*

**CONSTRUCTION OF ARTIFICIAL PHOTOSYNTHETIC ORGANELLES**

15:30 - 15:40

*Tao Jia, Guanying Chen*

**MONITORING HYDROGEN PEROXIDE IN TUMOR METASTASIS: ACHIEVING TARGETED AND PERSISTENT LUMINESCENT SURVEILLANCE**

15:40 - 15:50

*Aliyu B.O., Tracey C.T., Krivoschapkin P.V., Krivoschapkina E.F.*

**CARBON DOT/CHITOSAN NANOCRYSTAL HYBRID FOR WASTEWATER DYE REMOVAL**

15:50 - 16:00

*Mediantsev E.S., Lobova N.A., Ivanov I.I.*

**EXPLORING DAST MICROCRYSTALS: ADVANCES IN OPTICAL MATERIALS SCIENCE**

16:00 - 16:10

**ONLINE**

*Saihe Yang, Yifei Zhang*

**A TYPE II PHOTOINITIATOR FOR ACHIEVING EFFICIENT PHOTOCURING IN A SINGLE-COMPONENT SYSTEM**



16:10 - 16:20

*Shilov N.R., Aga-Tagiyeva S.E., Ni V.A., Magomedov K.E., Sobolev K.V., Rodionova V.V.*

**APPLICATION OF  $Ti_3C_2T_x/Fe_3O_4$ @PAA NANOCOMPOSITE FOR WATER PURIFICATION FROM METHYLENE BLUE DYE**

16:20 - 16:30

**ONLINE**

*Kurtsevich E.A., Kogolev D.A., Fatkullin M.I., Postnikov P.S.*

**LASER-INDUCED CARBONIZATION OF SURFACE-GROWN Ni-BDC FOR THE CREATION OF THE BEND SENSOR FROM PET WASTE**

## POSTER SESSION

**TUESDAY, 03.09, 15:00 - 16:45**

1-1. *Volik K.K., Kuznetsova P.D., Mukhanova E.A.*

**OPTIMIZATION OF NANOSIZED CAF<sub>2</sub>:EU SYNTHESIS VIA EXPERIMENTAL DESIGN**

1-2. *Voskanyan L.A., Morokhovets M.A., Tkachenko D.S., Bobrysheva N.P., Osmolowsky M.G., Voznesenskiy, M.A., Osmolovskaya O.M.*

**SYNTHETIC APPROACHES TO OBTAIN A GREEN PALETTE OF MULTIFUNCTIONAL PIGMENTS BASED ON CHROMIUM-DOPED HYDROXYAPATITE NANOPARTICLES**

1-3. *Agapov I.V., Podurets A.A., Osmolowsky M.G., Bobrysheva N.P., Voznesenskiy M.A., Osmolovskaya O.M.*

**Cr-DOPED SnO<sub>2</sub> NANOPARTICLES: INFLUENCE OF SYNTHESIS CONDITIONS AND STRUCTURAL PARAMETRES ON PHOTOCATALYTIC ACTIVITY**

1-4. *Bystrevsky I.D., Gatina E.N.*

**MODIFICATION OF NANOTUBULAR NICKEL HYDROSILICATE BY COBALT COMPOUNDS IN SITU AND BY HYDROTHERMAL TREATMENT**

1-5. *Goryacheva E.A., Strokin P.D., Goryacheva O.A., Popova N.P., Goryacheva I.Y.*

**ANALYSIS OF THE PROPERTIES OF CERIUM OXIDE NANOPARTICLES**

1-6. *Kotova J.O., Kovshova T.S., Vinokurov E.G., Gelperina S.E.*

**DEVELOPMENT OF CURCUMIN-LOADED PLGA NANOPARTICLES WITH OPTIMIZED RELEASE RATE USING FACTORIAL DESIGN OF EXPERIMENT**

1-7. *Kurguzkina M.E., Ugolkov V.L.*

**STUDY OF THERMAL DECOMPOSITION OF HYDROSILICATE NANOSCROLLS ON THE BASIS OF THE SYSTEM  $Mg_3Si_2O_5(OH)_4-Ni_3Si_2O_5(OH)_4$**



1-8. *Makeeva A.A., Vernaya O.I., Semenov A.M., Shabatina T.I.*

**GREEN SYNTHESIS OF SILVER NANOPARTICLES AND CRYOFORMATION OF THEIR HYBRID NANOSYSTEMS WITH DIOXIDINE**

1-9. *Statsenko T.G., Golubkov S.S., Koltsov S.I., Morozova S.M.*

**DOUBLE SENSORS FOR MONITORING FREEZING AND SPOILAGE OF PRODUCTS BASED ON LATEX NANOPARTICLES AND CURCUMIN**

1-10. *Frais M.S., Minich I.A., Zvereva I.A.*

**SYNTHESIS AND STUDY OF PHYSICAL-CHEMICAL AND FUNCTIONAL PROPERTIES OF A COMPOSITE ORGANIC-INORGANIC PHOTOCATALYST BASED ON COMPLEX TANTALUM OXIDE WITH A LAYERED STRUCTURE TYPE**

1-11. *Meshina K.I., Barabanov N.M., Tkachenko D.S., Bobrysheva N.P., Osmolovsky M.G., Voznesensky M.A., Osmolovskaya O.M.*

**THE CONTROL OF ZnO ORIENTED ATTACHMENT PROCESSES AS A TOOL FOR REGULATING ITS PHOTOCATALYTIC ACTIVITY**

1-12. *Orazov Zh.K., Bakhadur A.M., Uralbekov B.M., Schneider R.*

**IRON-DOPED TITANIUM OXIDE PRODUCED FROM IRON-DOPED MIL-125 AND ITS PHOTOCATALYTIC ACTIVITY**

1-13. *Syukkalova E.A., Kolokolova N.D., Voskanyan L.A., Sadetskaya A.V., Osmolovsky M.G., Bobrysheva N.P., Voznesenskiy M.A., Osmolovskaya O.M.*

**DIRECTED MODIFICATION OF HYDROXYAPATITE-BASED BIOCOMPATIBLE MATERIAL AS A WAY TO REGULATE ITS PROPERTIES**

1-14. *Bridenko L.A., Nishanbaev I. Zh., Moskalenko I. V., Skorb E. V.*

**ENCAPSULATION OF TEA POLYPHENOLS INTO MELAMINE BARBITURATE SUPRAMOLECULAR ASSEMBLY**

1-15. *Churakova A.A., Iskhakova E.I.*

**STRUCTURE AND SURFACE STUDY OF TiNi ALLOY AFTER PRELIMINARY MARTENSITIC ELECTROCHEMICAL TESTING**

1-16. *Bikbaeva G.I., Pilip A.G., Egorova A.V., Medvedev V.A., Kolesnikov I.E., Pankin D.V., Mamonova D.V., Manshina A.A.*

**PHOTOPHARMACOLOGY: EXPLORING THE POTENTIAL OF LUMINESCENT NANOPARTICLES AND PHOTOSWITCHABLE PHOSPHONATES IN DISEASE TREATMENT**

1-17. *Egorova V.V., Povalyaev P.V., Frantsina E.V., Petrova Yu.Yu.*

**RECYCLING OF ASPHALTENE SEDIMENTS IN A PLASMA REACTOR AT DIFFERENT DISCHARGE INITIATION TIMES**

1-18. *Kudymov V.K., Dermenji A., Zemtsova E.G., Smirnov V.M.*

**THE EFFECT OF THE REINFORCING PHASE PARTICLE SIZE ON THE MECHANICAL PROPERTIES OF COMPOSITE MATERIALS WITH A NICKEL MATRIX**

1-19. *Maliavina Y.M., Silaeva A.A., Romakhina T.R., Kukushkina E.A., Snimshchikova Y.O., Rodnikov D.T.*

**INVESTIGATION OF THE PERMEABILITY OF PAINT COATINGS FILLED WITH BASALT PRODUCTION WASTE**

1-20. *Markarian A.A., Podurets A.A., Voznesenskiy M.A.; Bobrysheva N.P., Osmolowsky M.G., Osmolovskaya O.M., Sokolov I.A.*

**BOEHMITE NANOPARTICLES-BASED MATERIAL AS A SORBENT FOR TETRACYCLINE ANTIBIOTICS UTILIZATION FROM WASTEWATER**

1-21. *Petropavlovskii K.S., Novicenkova T.B., Kalyaskin P.A., Sulman M.G.*

**SELF-REINFORCEMENT EFFECT IN THE PROCESS OF SYNTHESIS OF GYPSUM COMPOSITES BASED ON FLY ASH WITH A HIGH CONTENT OF FREE CALCIUM OXIDE**

1-22. *Shainova R.S., Karamyan H.H., Sahakyan A.T., Avagyan M. A., Aperyanyan A.J.*

**DEVELOPMENT OF COMPLEX MORTARS BASED ON BENTONITE CLAY**

1-23. *Sharapova E.K., Murashova N.M.*

**EXTRACTANT-CONTAINING MICROEMULSIONS BASED ON SODIUM DODECYL SULFATE FOR LEACHING OF NON-FERROUS METALS FROM ORE RAW MATERIALS**

1-24. *Sheichenko E.D., Tronev I.V., Vasilyeva D.N., Kozlova T.O.*

**SYNTHESIS OF CRYSTALLINE CERIC PHOSPHATES OF A GIVEN MICROSTRUCTURE**

1-25. *Solodovnikova P.A., Telegin T.E., Ugrumova M.V., Vostretsova D.A.*

**SYNTHESIS AND STUDY OF THE THERMOSTABLE ALUMINUM OXIDE PROPERTIES FOR USAGE IN THREE-WAY CATALYSTS**

1-26. *Steshenko A.A., Murashova N.M.*

**CHEMICAL POLISHING OF COPPER USING INVERSE MICROEMULSION CONTAINING NITRIC ACID**

**THURSDAY, 05.09, 17:00 - 18:30**

1-27. *Vinogradova E.A., Molchanov V.P.*

**INVESTIGATION OF THE PROPERTIES OF TETRAMETHYLENEDIETHYLENETETRAMINE FOR THE DEVELOPMENT OF AN ANTICORROSIVE COATING**



1-28. *Zdretsov I.M., Gerasimov A.M.*

**OPTIMISATION OF ZEOLITE LTA SYNTHESIS FROM KAOLIN VIA RESPONSE SURFACE METHODOLOGY**

1-29. *Abakumova E.V., Bedarkova A.O., Tarasova N.A., Animitsa I.E.*

**ION TRANSPORT OF 3D-METAL DOPED LAYERED PEROVSKITES BASED ON  $\text{BaLaInO}_4$**

1-30. *Davydov N.A., Gubanov A.N., Silyukov O.I., Rodionov I.A.*

**INVESTIGATION OF PHOTODEPOSITED PLATINUM LOCALIZATION AT THE LAYERED OXIDES  $\text{HCa}_2\text{Nb}_3\text{O}_{10}$ ,  $\text{H}_2\text{La}_2\text{Ti}_3\text{O}_{10}$  AND THEIR ORGANO-INORGANIC HYBRIDS**

1-31. *Gabdrakhmanov R.R., Minich I.A., Zvereva I.A.*

**SYNTHESIS AND EXFOLIATION OF ORGANIC-INORGANIC HYBRIDS OF PEROVSKITE-LIKE BISMUTH NIOBATE BY TOPOCHEMICAL REACTIONS**

1-32. *Ustinova A.I., Voitovich V.V., Silyukov O.I.*

**SYNTHESIS AND STUDY OF MANGANESE-CONTAINING PHOTOCATALYSTS BASED ON  $\text{Na}_2\text{La}_2\text{Ti}_3\text{O}_{10}$  LAYERED OXIDE**

1-33. *Kalmakhelidze M.V., Mukhanova E.A.*

**INDIUM METAL-ORGANIC FRAMEWORK AS A POTENTIAL DRUG DELIVERY SYSTEM**

1-34. *Doroshenko I.V., Dmitrieva M.A., Filippova I.S., Krivoschapkina E.F.*

**ZIF-8 MEMBRANE FOR THE EXTRACTION OF LITHIUM**

1-35. *Boyko S.A., Esefiyeva T.Yu., Kovshova T.S., Malinovskaya J.A., Abakumov M.A., Gelperina S.E.*

**PHARMACOKINETIC STUDY OF NANOPARTICLE-BASED PACLITAXEL FORMULATIONS AFTER PRE-TREATMENT WITH RITONAVIR**

1-36. *Usmanova G.S., Latypova L.R., Mustafin A.G.*

**STUDY OF ADSORPTION PROPERTIES OF POLY[2-METHYL-1H-INDOLE] DERIVATIVES**

1-37. *Kozlova L.A., Rytova M.A., Vartiainen V.V., Nazarov D.V.*

**ATOMIC LAYER DEPOSITION OF ZINC-TITANIUM AND ALUMINIUM-TITANIUM OXIDE NANOCOATINGS ON MAGNESIUM ALLOYS AND INVESTIGATION OF THEIR CORROSION PROTECTION AND BIOMEDICAL PROPERTIES**

1-38. *Olenich E.A., Gorodov V.V., Milenin S.A., Cherkaev G.V., Khanin D.A., Buzin M.I., Muzafarov A.M.*

**THERMAL AND FROST-RESISTANT POLYDIMETHYL(METHYLBENZYL) SILOXANES: SYNTHESIS AND PROPERTIES**

1-39. *Trefilov V.S., Lindin E.Y., Burenina O.Y., Kubareva E.A.*

**SMALL NON-CODING 6S RNAS IN REGULATION OF SURFACTIN BIOSYNTHESIS IN BACILLUS SUBTILIS**

1-40. *Svinko V.O., Solovyeva E.V.*

**HYBRID SYSTEMS BASED ON GOLD NANOPARTICLES, CHITOSAN AND PROTOPORPHYRIN AS AGENTS OF ANTIBACTERIAL PHOTODYNAMIC THERAPY**

1-41. *Nutan Shukla, Ratnesh Das, Mukhanova E.E., Soldatov A.*

**ENCAPSULATION OF HYDROPHOBIC ANTICANCER DRUGS USING PLASMONIC GOLD NANORODS (GNRS) FOR SIMULTANEOUS CHEMOTHERAPY AND PHOTOTHERMAL THERAPY (CHT-PTT)**

1-42. *Maslennikova M.S., Zarubin D.M., Kachalova E.A., Salomatina E.V., Smirnova L.A.*

**PROPERTIES OF NANOCOMPOSITE MATERIALS BASED ON POLYSACCHARIDES**

1-43. *Kritchenkov I.S., Kritchenkova A.Kh.*

**LUMINESCENT SENSORS OF HUMAN BODY TEMPERATURE BASED ON COPPER(I) CLUSTER WITH THIAMAZOLE AND NATURAL POLYSACCHARIDES**

1-44. *Shilovskikh E.E., Meleshko A.A.*

**SYNTHESIS OF PERFORATED ZINC OXIDE NANOSHEETS WITH THE ASSISTANCE OF REACTIONS AT THE AQUEOUS SOLUTION OF ZINC SALT - ETHYLENEDIAMINE (AIR) INTERFACE**

1-45. *Balabanov S.V., Sychov M.M., Perevislov S.N.*

**«IDEAL»: DIAMOND-CARBIDE-SILICON COMPOSITE FOR LIGHTWEIGHT CERAMIC ARMOR PROTECTION**

1-46. *Bondareva A.F., Grigorieva V.D.*

**$\text{Na}_6\text{Mo}_{11}\text{O}_{36}$  SCINTILLATING CRYSTALS: GROWTH, MORPHOLOGY AND OPTICAL PROPERTIES**

1-47. *Pankratova E.M., Kurlov A.S.*

**PRODUCTION OF WC-ZrO<sub>2</sub> CERAMICS FROM NANOCRYSTALLINE MIXTURES**

1-48. *Shiribazarova E.B., Korobatova N.M., Koroleva O.N.*

**EFFECT OF THE SiO<sub>2</sub>/GeO<sub>2</sub> RATIO IN THE Na<sub>2</sub>O-B<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>-GeO<sub>2</sub> SYSTEM ON THE CHARACTERISTICS OF POROUS GLASSES**

1-49. *Kharchenko I.A., Ryzhkov I.I., Simunin M.M., Lebedev D.V., Vaulin N.V.*

**STUDY OF IONIC CONDUCTIVITY OF NANOPOROUS MEMBRANES WITH ELECTRICALLY CONDUCTIVE CARBON COATING**



1-50. *Sychinskaia K.A., Ermakov S.S.*

**DEVELOPMENT OF A TECHNIQUE FOR DETERMINING THE ACTIVITY OF ARGININE DEIMINASE USING A VOLTAMMETRIC AMMONIA SENSOR BASED ON COPPER(II) SULFATE COATED WITH A POLYMER MEMBRANE**

1-51. *Pavlova A.D., Savina A.A., Abakumov A.M.*

**COMPOSITE SINGLE CRYSTAL LAYERED OXIDES AS POSITIVE ELECTRODES FOR ADVANCED LI-ION BATTERIES**

1-52. *Streminskaya R.A., Krivoschapkin P.V.*

**SYNTHESIS OF NANOSTRUCTURED COPPER COMPOUNDS FOR ELECTROCATALYTIC UTILIZATION**

1-53. *Sobol M.E., Sukhanov K.S., Gilev A.R., Kiselev E.A., Cherepanov V.A.*

**SYNTHESIS, CRYSTAL STRUCTURE AND FUNCTIONAL PROPERTIES OF  $\text{La}_{2-x}\text{A}_x\text{Ni}_{1-y}\text{Cu}_y\text{O}_{4+\delta}$  (A=Pr, Nd; x=0.5, 1.0, 1.5, y=0.4, 0.6, 0.8) AS CATHODE MATERIAL FOR SOFC**

1-54. *Rodionova U.M., Levin O.V., Kustin R.P., Filippova S.S.*

**SYNTHESIS AND ELECTROCHEMICAL PROPERTIES OF POLYNIMESALTMEN**

## 2. MODERN TRENDS IN POLYMER SCIENCE

CHAIRMAN: Dr. Sci. **Penkova Anastasia**, Institute of Chemistry, SPbU

SECRETARY: Dr. **Kuzminova Anna**, Institute of Chemistry, SPbU

### ORAL REPORTS

**WEDNESDAY, 04.09, Room 1222**

9:00 - 9:16

**KEYNOTE  
SPEAKER**

*Dr. Sci. Alexei Volkov*

**Polymers for Separation on Molecular Level**

9:16 - 9:32

**INVITED  
SPEAKER**

*Dr. Tatiana Plisko, Burts K.S., Penkova A.V., Bildyukevich A.V.*

**Influence of Molecular Weight and Concentration of Poly(Diallyldimethylammonium Chloride) Added to Coagulant on the Structure and Performance of Thin Film Composite Membranes for Nanofiltration**

9:32 - 9:44

*Kuzminova A.I., Stepanova A.S., Dmitrenko M.E., Penkova A.V.*

**DEVELOPMENT OF NOVEL SODIUM ALGINATE BASED MEMBRANES MODIFIED WITH Zr-MOFs FOR ISOPROPANOL DEHYDRATION**

9:44 - 9:56

*Mikulan A.I., Kuzminova A.I., Dmitrenko M.E., Dubovenko R.R., Penkova A.V.*

**DEVELOPMENT AND CHARACTERISATION OF NOVEL COMPOSITE MEMBRANES BASED ON CARBOXYMETHYL CELLULOSE/MOF FOR PERVAPORATION**

9:56 - 10:08

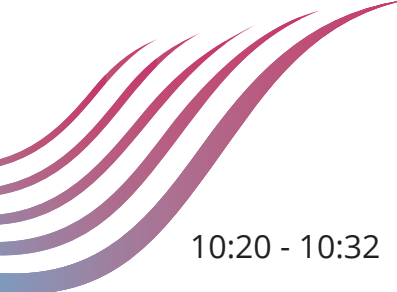
*Dubovenko R.R., Dmitrenko M.E., Kuzminova A.I., Mikulan A.I., Puzikova M.E., Selyutin A.A., Penkova A.V.*

**DEVELOPMENT AND RESEARCH ON COMPOSITE MEMBRANES BASED ON CARBOXYMETHYLCELLULOSE FOR THE HYBRID PROCESS «ESTERIFICATION + PERVAPORATION»**

10:08-10:20

*Golubkov S.S., Statsenko T.G., Mamontov M.A., Don G.M., Lihomanov V.S., Sanginov E.A., Belmesov A.A., Kashin A.M., Levchenko A.V., Morozova S.M.*

**FUNCTIONAL MATERIALS BASED ON FLUORINATED POLYMERS FOR FUEL CELLS AND ELECTROACTIVE DEVICES**



10:20 - 10:32

*Morozova S.M., Golubkov S.S., Statsenko T. G., Baturina E.P.,  
Don G.M., Lihomanov V.S., Sanginov E.A., Belmesov A.A.,  
Kashin A.M., Levchenko A.V.*

**NANOSTRUCTURED POLYMERIC MATERIALS BY  
SELF-ASSEMBLY: FABRICATION TECHNIQUES AND  
APPLICATION**

10:32 - 10:44

*Chicharov A.A., Krasnova V.V., Vlasova A.O., Zaitsev S.D.*

**PET-RAFT POLYMERIZATION OF METHYL METHACRYLATE  
IN THE PRESENCE OF POLYMER MODIFIED TITANIUM  
DIOXIDE**

10:44 - 10:56

*Khankishiyeva R., Mammadova G., Axundzada H.V., Azizova A.,  
Ahmad S., Khudaverdiev V.*

**ENHANCING MECHANICAL PROPERTIES OF NBR/EPDM  
BLENDS THROUGH GAMMA RADIATION AND EPOXIDIZED  
ACRYLONITRILE BUTADIENE RUBBER (ENBR) AS A  
COMPATIBILIZER**

11:20 - 11:32

*Dmitrenko M.E., Kuzminova A.I., Pasquini D., Penkova A.V.*

**DEVELOPMENT AND STUDY OF CARRAGEENAN/STARCH/  
NANOCELLULOSE FILMS FOR ADVANCED EDIBLE  
PACKAGING MATERIAL**

11:32 - 11:44

*Pozdniakova A.V., Sukhanova A.A.*

**EFFECT OF ZINC OXIDE NANOPARTICLES ON THE  
PROPERTIES OF PLA-FILMS**

11:44 - 11:56

*Tryakhov D.E.*

**ENZYMATIC HYDROLYSIS AS A NEW WAY  
FOR STARCH NANOCRYSTALS PREPARATION**

11:56 - 12:08

*Sokolov A.S., Sukhorukov G.B.*

**PHOTO-SWITCHING OF IRON ALGINATE HYDROGEL VIA  
DIFFERENT WAVELENGTH LIGHT**

12:08 - 12:20

*Mikhailovskaya O.A., Kuzminova A.I., Dubovenko R.R.,  
Penkova A.V., Dmitrenko M.E.*

**DEVELOPMENT AND STUDY OF PERVAPORATION  
MEMBRANES FROM POLYELECTROLYTE COMPLEX  
MODIFIED WITH GRAPHENE OXIDE**



12:20 - 12:32 *Gushchina K.S., Lobanova K.S., Vavilova A.S., Kuznetsova Yu.L.*  
**SYNTHESIS OF TRIPLE COPOLYMERS OF COLLAGEN-POLYSACCHARIDE-METHYL METHACRYLATE AS A BASIS OF BIOMATERIAL FOR REGENERATIVE MEDICINE**

12:32 - 12:44 *Ryzhkova A.S., Makeeva A.A., Vernaya O.I., Semenov A.M., Shabatina T.I.*  
**PREPARATION OF TARGETED DRUG DELIVERY SYSTEMS BASED ON COLLAGEN DERIVATIVES AND CHITOSAN USING VARIOUS CROSS-LINKING AGENTS**

12:44 - 12:56 *Chernikova E.E., Zagvozkin M.D., Brussevich A.*  
**DEVELOPMENT AND STUDY OF PHYSICOCHEMICAL PROPERTIES OF PH-SENSITIVE DELIVERY SYSTEMS OF ENCAPSULATED BSA BASED ON CHITOSAN AND HYDROXYAPATITE**

12:56 - 13:08 *Zagvozkin M.D., Chernikova E.E., Brussevich A.*  
**RESEARCH ON OBTAINING A SYSTEM FOR TARGETED DELIVERY OF PROTEIN OBJECTS BASED ON CHITOSAN NANOPARTICLES WITH CHEMISORBED OBJECT APPLICATION**


13:08 - 13:20 *Voroshnina A.A.*  
**STRUCTURE AND PROPERTIES OF INCLUSION COMPLEXES OF AMYLOSE WITH FATTY ACIDS**

## **THURSDAY, 05.09, Room 1222**

9:30 - 9:42 *Bagaeva I.O., Sinitsyna E.S., Tennikova T.B., Korzhikova-Vlakh E.G.*  
**NANOPARTICLES BASED ON AMPHIPHILIC COPOLYMERS FOR COMBINATION DRUG DELIVERY**

9:42 - 9:54 *Bokatyi A.N., Dubashynskaya N.V., Skorik Y.A.*  
**POLYSACCHARIDE-BASED POLYELECTROLYTE COMPLEXES AS OPHTHALMIC DEXAMETHASONE DELIVERY SYSTEMS**

9:54 - 10:08 *Istomina L.I., Zverev S.A.*  
**CYPERMETHRIN AND PERMETHRIN-BASED POLYACRYLATE COMPOSITE FILMS FOR TICK BITE PREVENTION**



10:08 - 10:20

*Alikparova E.R., Guliaeva P.S., Sinitsyna E.S.,  
Korzhirov-Vlakh V.A., Korzhikova-Vlakh E.G., Tennikova T.B.*  
**INTERPOLYMER COMPOSITES OF POLYESTERS WITH  
POLYSACCHARIDES**

10:20 - 10:32

*Makushchenko I.S., Kozlov I.A.*  
**ANTI-CORROSION SEALANT TO PREVENT CREVICE  
CORROSION OF MATING MATERIALS**

10:32 - 10:44

*Dzhuzha A.Yu., Levit M.L., Korzhikova-Vlakh E.G.*  
**DUAL-DRUG DELIVERY SYSTEMS BASED ON  
POLYPEPTIDES OF DIFFERENT ARCHITECTURE**

10:44 - 10:56

*Konstantinova A.O., Semenova A.Yu., Chistyakov E.M.*  
**POLYMER MATERIALS WITH INCREASED FIRE  
RESISTANCE BASED ON EPOXY RESINS CONTAINING  
ARILOXYPHOSPHAZENES**

10:56 - 11:08

*Gryazev I.P., Peshkova M.A.*  
**DEVELOPMENT OF POLYMERIC CALIBRATION-FREE  
DEVICE BASED ON OPTICAL SENSORS FOR IN SITU  
ANALYSIS OF BIOLOGICAL FLUIDS**

11:08 - 11:20

*Mitroshin A.M., Miltsov S.A., Litvinova L.S., Smyslov R.Yu.,  
Yakimansky A.V.*  
**NEW COPOLYCARBAZOLES WITH DELAYED  
FLUORESCENCE**

11:20 - 11:32

*Lokhaeva Z.A., Soboleva J.A., Storozhuk I.P.*  
**SELF-HEALING POLYURETHANE BLOCK COPOLYMERS  
WITH CONTROLLED PROPERTIES**

11:50 - 12:02

*Rafikova A.R., Milyaeva O.Yu., Noskov B.A.*  
**DYNAMIC SURFACE PROPERTIES OF  $\beta$ -CASEIN FIBRILS  
ADSORPTION LAYERS**

12:02 - 12:14

*Isakov N.A., Belousov M.V., Nizhnikov A.A., Noskov B.A.*  
**SPREAD AND ADSORBED LAYERS OF PLANT PROTEIN  
CUPIN-1.1 AND ITS AGGREGATES**

12:14 - 12:26

*Vihireva A.D., Vdovina O.S., Shirshin K.V.*  
**ACRYLAMIDE AND DIALLYLAMINE HYDROCHLORIDE  
COPOLYMERS FOR IMPROVING THE STRENGTH  
CHARACTERISTICS OF RECOVERED PAPERBOARD**

- 
- 12:26 - 12:38 *Koltsova D.M., Zacharova V.A., Karshieva S.Sh.*  
**PRODUCTION OF HYDROGEL INKS FOR FRESH 3D PRINTING BASED ON ESTERIFIED PECTIN**
- 12:38 - 12:50 *Silaeva A.A., Soldatov M.A., Malyavina Y.M., Rodnikov D.T.*  
**TRENDS IN CHEMISTRY OF RESINS FOR CATHODIC ELECTRODEPOSITION COATINGS**
- 12:50 - 13:02 *Borodina A.M., Kostromin S.V., Bronnikov S.V.*  
**SYNTHESIS AND INVESTIGATION OF POLYMER HYDROGELS FILLED WITH CARBON QUANTUM DOTS**
- 13:02 - 13:14 *Dolmatova A.G., Levin O.V.*  
**INVESTIGATION OF INFLUENCE OF THE ELECTROLYTE NATURE AND COMPOSITION ON THE ELECTROCATALYTIC ACTIVITY OF POLY(TEMPO-PYRROLE)**
- 13:14 - 13:26 *Stamer K.S., Baltaeva M.B., Orlov M.A., Wagle V.*  
**ONLINE SMART POLYUREA-BASED SYSTEMS FOR UPSTREAM APPLICATIONS**
- 14:50 - 15:02 *Yakimanskiy A.A., Zhukova E.V., Kashina A.V., Chulkova T.G., Yakimansky A.V.*  
**ACYCLIC DIAMINOCARBENE PALLADIUM(II) COMPLEXES AS SUZUKI POLYCONDENSATION CATALYSTS**
- 15:02 - 15:14 *Fedoskin I.A., Markov E.S., Vasiliev A.S., Trishin Yu.G.*  
**SYNTHESIS AND EVALUATION OF THE EFFECTIVENESS OF POLYCARBOXYLATE SUPERPLASTICIZER**
- 15:14 - 15:26 *Khina A.G., Bulkatov D.P., Buryakov V.S., Kuleznev A.A., Storozhuk I.P.*  
**POLYETHERIMIDES OF COPOLYMER STRUCTURE AND THEIR THERMAL PROPERTIES**
- 15:26 - 15:38 *Koziavina D.A., Nechaeva A.M., Belousova V.A., Vnukova A.A., Bagrov D.V., Mezhuev Y.O.*  
**SYNTHESIS AND CHARACTERIZATION OF NOVEL AMPHIPHILIC COPOLYMERS OF N-VINYL-2-PYRROLIDONE AND OLEIC ACID**
- 15:38 - 15:50 *Kachmarzhik A.D., Nikolaev I.A., Galukhin A.V.*  
**MECHANISM AND KINETICS OF CYANATE ESTERS CYCLOTRIMERIZATION IN DIFFERENT MEDIA**

15:50 - 16:02

*Styazhkin D.V., Plotnikova N.V.*

**INFLUENCE OF THE METHOD FOR OBTAINING THE SOLVATE COMPLEX  $GdCl_3 \cdot n(i-PrOH)$  ON ITS PARTICLE SIZE AND ACTIVITY OF THE GADOLINIUM CATALYST  $GdCl_3 \cdot n(i-PrOH)-Al(i-Bu)_3$  IN THE POLYMERIZATION OF ISOPRENE**

16:02 - 16:14

*Karpov G.O., Bermeshev M.V.*

**PALLADIUM COMPLEXES WITH PHOSPHINE-THIOETHER LIGANDS FOR VINYL-ADDITION POLYMERIZATION OF NORBORNENE AND ITS DERIVATIVES**

16:14 - 16:26

*Pyatakov D.A., Ivchenko P.V., Tavtorkin A.N., Nifant'ev I.E.*

**COMBINED RECYCLING AND UPCYCLING OF POLY(BISPHENOL A CARBONATE) THROUGH METAL ACETATE CATALYZED GLYCOLYSIS**

16:26 - 16:38

*Ponomareva P.F., Platonova E.O., Solodilov V.I.*

**NEW CHAIN EXTENDER FOR SELF-HEALING POLYURETHANE**

16:38 - 16:50

*Sorin E.S., Baimuratova R.K., Dzhardimalieva G.I.*

**HIGH-STRENGTH SELF-HEALING METALLOPOLYMERS OF ACRYLAMIDE AND ACRYLIC ACID**

## POSTER SESSION

**TUESDAY, 03.09, 15:00 - 16:45**

2-1. *Bakirova E.R.*

**PROPERTIES OF POLYMER MATERIALS BASED ON COMPOSITIONS OF POLYCAPROLACTONE-CHITOSAN-MEDICINAL SUBSTANCE**

2-2. *Baturina E.P., Golubkov S.S., Statsenko T.G., Don G.M., Lihomanov V.S., Vinyukov A.V., Kashin A.M., Maryasevskaya A.V., Levchenko A.V., Ivanov D.A., Morozova S.M.*

**INFLUENCE OF THE NATURE OF THE LIQUID PHASE IN THE IONOMER'S DISPERSION ON ITS CONFORMATION AND FILMS MICROSTRUCTURE**

2-3. *Belyaeva A.A., Averchik A.S., Korzhikova-Vlakh E.G., Salmina A.B., Morozova S.M.*

**POLY(N-ISOPROPYLACRYLAMIDE) IS THE BASIS OF STIMULUS-RESPONSIBLE MATERIALS FOR THE CREATION OF ACTUATORS AND CELLULAR SCAFFOLDS**

2-4. *Blokhin A.N., Kozina N.D., Razina A.B., Tenkovtsev A.V.*

**NOVEL MIKTOARM STAR POLYMERS WITH A CALIZ[8]ARENE CORE AND PEG/ POLYOXAZOLINE ARMS**

2-5. *Bryantseva J.D., Uflyand I.E.*

**USE OF ZIRCONIUM-CONTAINING MIXED-LIGAND METAL-ORGANIC FRAMEWORKS IN SOLID-PHASE EXTRACTION OF ORGANIC DYES**

2-6. *Burachevskaya O.A., Butova V.V., Ozhogin I.V., Pugachev A.D., Starikov A.S., Tereshchenko A.A., Borodkin G.S.*

**MODIFICATION OF MOFS BY SPIROPYRAN MOLECULES**

2-7. *Burts K.S., Plisko T.V., Penkova A.V., Bilyukevich A.V.*

**NOVEL THIN FILM COMPOSITE NANOFILTRATION MEMBRANES WITH POLYANILINE INTERMEDIATE LAYER**

2-8. *Chernomorova M.A., Uflyand I.E., Zhinzhiro V.A.*

**SOLID-PHASE EXTRACTION OF PERSONAL CARE PRODUCTS USING NICKEL TEREPHTHALATE COMPLEX WITH 2,2'-BIPYRIDINE**

2-9. *Chetverikova D.A., Pokhvishcheva N.V., Peshkova M.A.*

**DETERMINATION OF PARTITION COEFFICIENTS OF LIPOPHILIC ELECTROLYTES BETWEEN WATER AND PLASTICIZED POLYVINYLCHLORIDE MEMBRANE**

2-10. *Danilova E.E., Fetin P.A., Zorin I.M.*

**COMB-LIKE POLYELECTROLYTES BASED ON LOW MOLECULAR WEIGHT BLOCK COPOLYMER OF THE SURFACTANTS AND PEG-ACRYLATE FOR MICELLAR CATALYSIS**

2-11. *Dogadina A.A., Maslennikov D.V.*

**SYNTHESIS AND CHARACTERISATION OF THE FUNCTIONAL PROPERTIES OF STARCH CITRATES BASED ON THERMALLY TREATED CORN STARCHES**

2-12. *Dudka D.V., Mityukov A.V., Malkin A.Ya.*

**HIGHLY FILLED ALUMINUM-BASED COMPOSITE MATERIALS IN POWDER INJECTION MOLDING AND IN FUSED FILAMENT FABRICATION**

2-13. *Fedotova E.V., Borisov E.V., Pankin D.V., Paston S.V.*

**APPLICATION OF RAMAN SPECTROSCOPY TO RESEARCH IN THE STRUCTURE OF BOVINE SERUM ALBUMIN IN FILMS**

2-14. *Filippova I.S., Dmitrieva M.A., Doroshenko I.V.*

**POLYMERIC MEMBRANE FUNCTIONALISED WITH 4'-AMINOBENZO-15-CROWN-5-ETHER (4AB15C5) FOR LITHIUM EXTRACTION**



2-15. *Gorlo V.D., Pidenko P.S., Burmistrova N.A.*

**THE SYNTHESIS OF MOLECULARLY IMPRINTED POLYANILINE SPECIFIC FOR ZEARALENONE BASED ON EXPERIMENTAL DESIGN**

2-16. *Gotfried S.D., Mikhalev D.B., Belyakov A.V.*

**THE EFFECT OF A POLYMER BINDER ON THE COLOR AND RHEOLOGICAL CHARACTERISTICS OF THE PYROTECHNIC COMPOSITION OF BLUE FLAME**

2-17. *Gudkin A.V., Grigoriev D.V., Sivtsov E.V., Uspenskaya M.V.*

**STUDYING OF THE INFLUENCE OF pH ON THE KINETICS OF RELEASE OF SULFANILAMIDE FROM POLYMER COMPOSITE MATERIAL BASED ON ACRYLIC HYDROGELS AND DETONATION NANODIAMONDS**

2-18. *Ivanova D.N., Borisov E.V., Pankin D.V., Paston S.V.*

**APPLICATION OF FTIR SPECTROSCOPY TO STUDY THE B-A TRANSITION IN THE SECONDARY STRUCTURE OF DNA**

2-19. *Kablov I.V., Kaskeh V., Kravchenko I.E., Zorina T.E., Zorin V.P.*

**CO-SOLVENTS EFFECTS IN THE DEVELOPMENT OF A DRUG DELIVERY SYSTEM FOR PHOTSENSITIZERS USING COPOLIMER DEXTRAN-POLY(N-ISOPROPYLACRYLAMIDE)**

2-20. *Khrebina A.D., Zorin I.M., Vlasov P.S., Noskov B.A.*

**DYNAMIC PROPERTIES OF ADSORPTION AND SPREAD LAYERS OF STYRENE AND HYDROPHOBISED VINYL BENZYL COPOLYELECTROLYTES**

2-21. *Konnova M.E., Anwar M., Dastgir S.*

**EFFECTIVE DEPOLYMERIZATION OF PET-WASTE VIA CHEMOLYSIS METHODS**

2-22. *Korovina A.M., Kuzminova A.I., Dmitrenko M.E., Dubovenko R.R., Penkova A.V.*

**DEVELOPMENT OF NOVEL MEMBRANES BASED ON SODIUM ALGINATE MODIFIED BY ZnBIM FOR PERVAPORATION**

2-23. *Kudrina S.A., Dmitrenko M.E., Kuzminova A.I., Polyakov V.A., Kalmahelidze M.V., Penkova A.V.*

**DEVELOPMENT AND STUDY OF PERVAPORATION MIXED MATRIX MEMBRANES CARBOXYMETHYL CELLULOSE/ZIF-67**

2-24. *Solomakha O.A., Stepanova M.A., Gofman I.V., Dobrodumov A.V., Nashchekina Y.A., Nashchekin A.V., Korzhikova-Vlakh E.G.*

**MODIFICATION OF NANOCRYSTALLINE CELLULOSE TO IMPROVE THE PROPERTIES OF BONE REPLACEMENT MATERIALS BASED ON POLY(E-CAPROLACTONE)**

2-25. *Loza J.S., Loza N.V., Falina I.V.*

**EFFECTS OF THE MODIFICATION WITH ZIRCONIUM HYDROGEN PHOSPHATE ON THE PROPERTIES OF PERFLUORINATED MEMBRANES**

2-26. *Malandina M.A., Mikhaylova P. A., Falchevskaya A.S.*

**TRIBOELECTRIC NANOGENERATORS DIFFERENT SHAPES BASED ON THE GALLIUM ALLOYS FOR ENERGY HARVESTING**

**THURSDAY, 05.09, 17:00 - 18:30**

2-27. *Maliavina Y.M., Silaeva A.A., Romakhina T.R., Kukushkina E.A., Snimshchikova Y.O., Rodnikov D.T.*

**INVESTIGATION OF THE PERMEABILITY OF PAINT COATINGS FILLED WITH BASALT PRODUCTION WASTE**

2-28. *Manapova E.E.*

**EPOXY VITRIMERS WITH A RECONFIGURABLE POLYMER MATRIX**

2-29. *Meshcheryakova E.E., Falina I.V., Kononenko N.A., Timofeev S.V.*

**TRANSPORT AND MECHANICAL PROPERTIES OF THE MF-4SK PERFLUORINATED MEMBRANES WITH VARYING CONTENTS OF INERT FLUOROPOLYMER AND ZIRCONIUM HYDROGEN PHOSPHATE**

2-30. *Mikhailova P.A., Malandina M.A., Falchevskaya A.S.*

**APPLICATION OF LIQUID GaInSn ALLOY IN THE DEVELOPMENT OF FLEXIBLE SENSORS AND TRIBOELECTRIC NANOGENERATORS FOR HEALTH MONITORING**

2-31. *Muratova A.D., Komolkin A.V., Markelov D.A.*

**IMPACT OF MODELING CELL SIZES ON THE HYDRODYNAMIC RADIUS OF PAMAM DENDRIMERS G2 IN METHANOL**

2-32. *Naumkina V.N., Zhinzhiro V.A., Uflyand I.E.*

**SOLID PHASE EXTRACTION OF ORGANIC DYES: NEW HORIZONS WITH NICKEL TRIMESINATE**

2-33. *Nazemutdinova V.R., Sadovnikov K.S., Wozniak A.I., Morontsev A.A., Zhigarev V.A., Bermeshev M.V.*

**SYNTHESIS OF DIMERS, TRIMERS, TETRAMERS AND PENTAMERS OF 5-N-BUTYLNORBONENE BY ROMP IN THE PRESENCE OF THE 1ST AND 2ND GENERATION GRUBBS CATALYST. HYDROGENATION OF METATHESIS POLYMERIZATION PRODUCTS**

2-34. *Nechaeva A.A., Saratovceva E.E., Pantileeva S.V., Mezhev Y.O.*

**SYNTHESIS AND PHASE BEHAVIOR OF NOVEL TEMPERATURE-RESPONSIVE COPOLYMERS OF N-VINYL-2-PYRROLIDONE**



2-35. *Orlov M.S., Baeva A.S., Sinitsyna E.S., Korzhikov-Vlakh V.A.*

**SOFT POLY( $\epsilon$ -CAPROLACTONE)-BASED CORE-SHELL NANOPARTICLES**

2-36. *Puzikova M.E., Kuzminova A.I., Dmitrenko M.E., Dubovenko R.R., Penkova A.V.*

**DEVELOPMENT AND INVESTIGATION OF NOVEL POROUS MEMBRANES BASED ON CELLULOSE ACETATE MODIFIED BY POLYMERS AND CARBON NANOPARTICLES**

2-37. *Rakovskaya N.S., Kuzminova A.I., Dmitrenko M.E., Dubovenko R.R., Penkova A.V.*

**DEVELOPMENT OF NOVEL MEMBRANES BASED ON POLYETHER BLOCK AMIDE MODIFIED BY METAL-ORGANIC FRAMEWORK MIL-125**

2-38. *Rodnikov D.T., Ahkar Kaung Myint, Malyavina Y.M., Ozdoev A.A., Silaeva A.A., Soldatov M.A.*

**THE PREPARATION OF A PAINT COATING BASED ON AN ACRYLIC COPOLYMER AND A BLOCKED ISOCYANATE UTILISING THE CATHODIC ELECTRODEPOSITION METHOD**

2-39. *Rotanova K.Yu., Milyaeva O.Yu.*

**IMPACT OF PH AND IONIC STRENGTH ON SILK FIBROIN SELF-ASSEMBLY AT AIR-WATER INTERFACE**

2-40. *Salomatin K.A., Kuzminova A.I., Dmitrenko M.E., Dubovenko R.R., Selyutin A.A., Penkova A.V.*

**CHARACTERIZATION OF NOVEL DENSE MEMBRANES BASED ON CHITOSAN MODIFIED BY MIL-125**

2-41. *Shonin G.A., Savkina S.R., Serafimov V.V., Tverdokhleba A.R., Kuzminova A.I., Dubovenko R.R., Dmitrenko M.E., Penkova A.V.*

**DEVELOPMENT OF NOVEL MEMBRANE MATERIALS FOR EFFECTIVE WATER TREATMENT**

2-42. *Siaglova E.D., Piryazev A.A., Ivanov D.A.*

**EXPLORING CRYSTALLIZATION AND MELTING OF POLY(ARYL-ETHER-ETHER-KETONE) WITH FAST SCANNING CALORIMETRY**

2-43. *Srivastava A.A., Bondarev V.P., Kostyleva E.I., Ordina E.V.*

**FILLERS AND MODIFIERS FOR POLYORGANOSILOXANES**

2-44. *Stepanova A.S., Kuzminova A.I., Dmitrenko M.E., Dubovenko R.R., Penkova A.V.*

**NOVEL NANOFILTRATION MEMBRANES BASED ON POLY(ESTER-BLOCK-AMIDE) MODIFIED BY METAL-ORGANIC FRAMEWORKS**



2-45. *Sundareva Yu.A., Salomatina E.V., Smirnova O.N., Zarubin D.M., Smirnova L.A.*

**STUDYING THE EFFECT OF THE NATURE OF THE SOLVENT ACID ON THE PROPERTIES OF CHITOSAN FILMS MODIFIED WITH TITANIUM DIOXIDE NANOPARTICLES**

2-46. *Tishchenko N.A., Vyshivannaya O.V., Tikhonov V.E., Bezrodnykh E.A., Piskarev V.E., Aysin R.R., Antonov Y.A., Orlov V.N., Blagodatskikh I.V.*

**INTERACTION BETWEEN CHITOSAN AND ALBUMIN IN WEAKLY ALKALINE MEDIA**

2-47. *Ustyukhina I.S., Dubashynskaya N.V., Petrova V.A., Skorik Y.A.*

**FUCOIDAN/NANOCHITIN MICROGELS FOR VAGINAL DELIVERY OF METRONIDAZOLE**

2-48. *Uzhegov A.A., Gumerov R.A., Rudyak V. Yu., Potemkin I.I.*

**COMPUTER SIMULATIONS OF AMPHIPHILIC STIMULI-RESPONSIVE MICROGELS WITH HYDROPHOBIC MACRO-CROSSLINKERS**

2-49. *Vinogradov R.A., Zharikov A.A., Zezina E.A., Pozdnyakov A.S., Zezin A.A.*

**ONE- POT PREPARATION OF METAL – POLYMER NANOCOMPOSITE IN IRRADIATED SOLUTION  $\text{HAuCl}_4$  AND 1-VINYL-1,3-IMIDAZOLE: FEATURES FORMATION OF GOLD NANOPARTICLES AND 1-VINYL-1,3-IMIDAZOLE POLYMERIZATION**

2-50. *Vlasov A.M., Vlasova A.O., Zaitsev S.D.*

**SYNTHESIS AND INVESTIGATION OF PH-SWITCHABLE RAFT AGENTS IN POLYMERIZATION OF VINYL MONOMERS**

2-51. *Yarchenko P.S., Safonova E.A.*

**STRUCTURAL BEHAVIOR OF AQUEOUS AND AQUEOUS-SALT SOLUTIONS OF POLYMERIZED IMIDAZOLIUM IONIC LIQUID**

2-52. *Zakharova D.V., Morozova S.M.*

**ION-CONDUCTING POLYMERIC MATERIALS FOR ELECTROCHEMICAL STORAGE DEVICES**

2-53. *Zherdochkina Y.S., Ugolkova M.A., Belova O.A., Lazareva O.L., Popova E.I., Nevskiy R.E., Sokovishin A.V.*

**RESEARCH OF AGING OF PLASTIC DETAILS FOR TPTS EQUIPMENT**

### 3. NEW TECHNOLOGIES AND MATERIALS FOR CHEMICAL ANALYSIS

CHAIRMAN: Dr. Sci. **Andrey Bulatov**, Institute of Chemistry, SPbU

SECRETARY: Dr. **Irina Timofeeva**, Institute of Chemistry, SPbU

#### ORAL REPORTS

#### WEDNESDAY, 04.09, Room 1214

9:00 - 9:20

**KEYNOTE  
SPEAKER**

*Dr. Sci. Vladimir Apyari, Furletov A.A., Matiash M.V.,  
Tolmacheva V.V., Dmitrienko S.G., Zolotov Yu.A.*

**Gold and Silver Nanoparticles in Spectrophotometric/  
Colorimetric Analysis: Behavior, Peculiarities,  
Opportunities**

9:20 - 9:35

*Melesova M.A., Kirsanov D.O., Shishov A.Y., Bulatov A.V.*

**THE SIMULTANEOUS DETERMINATION OF METHANOL,  
GLYCEROL, AND WATER IN BIODIESEL USING DEEP  
EUTECTIC SOLVENTS**

9:35 - 9:50

*Abramyan A.D., Golovin M.S., Zakharchenkova V.P.,  
Bol'shakov O.I., Mironova A.T., Stankovich D.M.*

**SENSING REACHING THE STARS: ZINC OXIDE  
MICROSTRUCTURE DEVELOPMENT FOR VITAMIN  
DETECTION**

9:50 - 10:05

*Kasimovskaya V.S., Eliseev A.A., Karyakin A.A., Komkova M.A.*

**PULSE POWER GENERATION CHRONOAMPEROMETRY  
FOR HIGHLY SENSITIVE GLUCOSE MONITORING**

10:05 - 10:20

*Kechin A.A., Androsova A.V., Kartsova L.A.*

**INFLUENCE OF AGING PROCESSES ON INK CLUSTERING**

10:20 - 10:35


*Boichenko E.S., Khaydukova M.M., Andreev I.I., Sirro S.V.,  
Kirsanov D.O.*

**PAINT IT BLUE: IDENTIFICATION OF SYNTHETIC AND  
NATURAL ULTRAMARINE VIA NIR SPECTROSCOPY AND  
CHEMOMETRICS**

10:35 - 10:50

*Antonova A.N., Kochetkova M.A., Timofeeva I.I., Bulatov A.V.,  
Shishov A.Y.*

**A SMARTPHONE-BASED COLORIMETRIC DETERMINATION  
OF POLYDADMAC IN TREATED WASTEWATER**



10:50 - 11:00	<i>Tuyakova S.G., Mikhalchenkov M.V., Kurgachev D.A.</i> <b>A NEW APPROACH TO MONITORING THE QUALITY OF EQUIPMENT CLEANING FROM "FEBUXOSTAT"</b>
11:20 - 11:40 <b>INVITED SPEAKER</b>	<i>Dr. Andrey Shishov</i> <b>Deep Eutectic Solvents in Microextraction Methods of Analysis</b>
11:40 - 11:55	<i>Pidenko P.S., Pidenko S.A., Burmistrova N.A.</i> <b>DUMMY TEMPLATE IMPRINTED PROTEINS FOR ZEARELENONE DETERMINATION IN GRAINS</b>
11:55 - 12:10	<i>Karpitskiy D.A., Bessonova E.A., Shishov A.Yu., Kartsova L.A.</i> <b>CHOLINE CHLORIDE-BASED DES, IMIDAZOLIUM IONIC LIQUIDS AND POLYDOPAMINE-COATED MAGNETIC NANOPARTICLES AS LIQUID AND SOLID SMART MATERIALS IN ANALYSIS OF NATURAL SAMPLES</b>
12:10 - 12:25	<i>Zhilkina A.V., Kolotov V.P., Tyurin D.A., Gromyak I.N., Sibrina M.A.</i> <b>DEVELOPMENT OF SAMPLE PREPARATION METHODS AT ATMOSPHERIC PRESSURE FOR DETERMINATION OF RARE EARTH ELEMENTS IN ROCKS BY INDUCTIVELY COUPLED PLASMA MASS SPECTROMETRY</b>
12:25 - 12:40	<i>Bulatova E.A., Golovin M.S., Mironova A.T., Zakharchenkova V.P., Nekorysnova N.S.</i> <b>ELECTROCHEMICAL DETECTION OF NITROFUZZONE USING A CARBON-PASTE ELECTRODE MODIFIED WITH LANTHANUM FERRITE</b>
12:40 - 12:55	<i>Prozherin I.S., Pokhvishcheva N.V., Menshova A.S., Peshkova M.A.</i> <b>WATER-SOLUBLE ACIDOCROMIC DYES LIPOPHILIZED WITH QUATERNARY AMMONIUM CATIONS AS TUNABLE HYDROGEN CHROMOIONOPHORES FOR POLYMERIC OPTICAL SENSORS</b>
12:55 - 13:10	<i>Bodulev O.L., Solovjev A.M., Sakharov I.Yu.</i> <b>CHEMILUMINESCENT PLATE-BASED METHODS FOR microRNA DETECTION USING ISOTHERMAL AMPLIFICATION</b>



**THURSDAY, 05.09, Room 1214**

9:30 - 10:00  
**INVITED  
SPEAKER**

*Dr. Olga Osmolovskaya*  
**Inorganic Nanosorbents for Solid-Phase  
Microextraction: Preparation, Most Important  
Parameters and Examples of Application**

10:00 - 10:15

*Drozhd D.D., Kornilov D.A., Strokin P.D., Goryacheva I.Yu.*  
**ALLOYED QUANTUM DOTS: FEW STEPS TOWARDS  
THE PHOTOLUMINESCENT LABEL PRODUCTION WITH  
FLEXIBLE PROPERTIES**

10:15 - 10:30

*Kurashov Y.V., Pochivalov A.S., Bulatov A.V., Garmonov S.Y.*  
**SUPRAMOLECULAR SOLVENT-BASED MICROEXTRACTION  
FOR CHROMATOGRAPHIC DETERMINATION OF  
ENROFLOXACIN IN MILK**

10:30 - 10:45

*Maliushevskaya A., Kartsova L.A.*  
**ANALYTICAL CAPABILITIES OF VARIOUS APPROACHES  
TO ELECTROPHORETIC DETERMINATION OF MONO- AND  
DISACCHARIDES**

10:45 - 11:00

*Alexandrovich A.S., Komkova M.A., Karyakin A.A.*  
**POLY(METHYLENE GREEN) NANOPARTICLES AS ANCHORS  
OF PQQ GLUCOSE DEHYDROGENASE FOR ITS MOST  
EFFICIENT BIOELECTROCATALYSIS**

11:00 - 11:15

*Abdullin Y.R., Nazzyrov M.I., Perfilova Y.A.*  
**DETERMINATION OF DRUG ENANTIOMERS USING A  
VOLTAMMETRIC SENSOR MODIFIED WITH MOLECULARLY  
IMPRINTED POLYPYRROLE**

11:15 - 11:30

*Pavlova A.A., Shekhovtsova A.D., Maleeva K.A., Smirnov E.A.*  
**SELF-ASSEMBLY OF SILVER NANOPARTICLES AT THE  
LIQUID-LIQUID INTERFACE AS SCAFFOLD FOR NEW  
GENERATION OF RAMAN SENSORS**


12:00 - 12:20  
**INVITED  
SPEAKER**

*Dr. Sci. Dmitry Kirsanov*  
**Machine Learning, Artificial Intelligence and  
Chemometrics in Analytical Chemistry - What's the  
Difference?**

12:20 - 12:35

*Kochetkova M.A., Timofeeva I.I., Bulatov A.V.*  
**DIGITAL IMAGE-BASED TEST SYSTEM FOR ON SITE  
DETERMINATION OF ASCORBIC ACID IN BABY FOOD**

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- 12:35 - 12:50 *Araslanova A.T., Bessonova E.A., Platonova N.B., Kartsova L.A.*  
**ANALYTICAL APPROACHES TO OBTAINING CHROMATOGRAPHIC PROFILES OF AMINO ACIDS AND GABA CONTENT IN GABA TEA BASED ON THE COLCHIS VARIETY BY HPLC-UV AND HPTLC METHODS**
- 12:50 - 13:05 *Yuskina E.A., Shishov A.Y., Panchuk V.V., Kirsanov D.O.*  
**EXPLORING THE PROPERTIES OF DEEP EUTECTIC SOLVENTS USING INDUCTANCE COIL HIGH-FREQUENCY CONTACTLESS SENSOR**
- 13:05 - 13:20 *Nazyrov M.I., Abdullin Y.R., Perfilova Y.A.*  
**DETERMINATION OF BIOLOGICALLY ACTIVE COMPOUNDS USING A VOLTAMMETRIC SENSOR BASED ON MOLECULARLY IMPRINTED POLY(3,4-ETHYLENEDIOXYTHIOPHENE)**
- 13:20 - 13:35 *Shigapov I.V., Khromova I.A., Lubimov S.E., Dubenskiy A.S., Maksimova Y.A., Statkus M.A.*  
**THE STUDY OF THE SORPTION OF RHENIUM FROM HYDROCHLORIC AND NITRIC ACID SOLUTIONS BY IMIDAZOLIUM POLYMER SORBENT FOR SUBSEQUENT MS-ICP DETERMINATION**
- 13:35 - 13:50 **SPONSOR** *Demidenko E.S., Botin A.A., Khasykova V.V., Podlesnova E.V.*  
**QUANTIFICATION OF FATTY ACIDS OLIGOMERS USING GC AND GC-MS METHODS**
- 15:00 - 15:15 *Saveliev M.Yu., Kirsanov D.O., Jahatspanian I.E.*  
**DETERMINATION OF HALITOSIS BY EXHALED BREATH ANALYSIS USING SEMICONDUCTOR METAL OXIDE SENSORS AND CHEMOMETRIC METHODS**
- 15:15 - 15:30 *Nizov E.R., Shishov A.Y.*  
**HPLC-FLD DETERMINATION OF PAHS IN NATURAL WATER SAMPLES USING HYDROPHOBIC DEEP EUTECTIC SOLVENTS**
- 15:30 - 15:45 *Sagitova A.S., Rumyantseva M.N., Krivetskiy V.V.*  
**SUB-PPM SHORT-CHAIN FATTY ACIDS DETECTION WITH LANTHANUM(III) MODIFIED TIN DIOXIDE GAS SENSORS**
- 15:45 - 16:00 *Lazov M.A., Karygin E.D., Ischenko A.A.*  
**ANALYSIS OF NANOPARTICLES AND NANOMATERIALS BY X-RAY PHOTOELECTRON SPECTROSCOPY (XPS)**



16:00 - 16:15

*Gaponova A.G., Adels K., Lang F., Monakhova J., Kirsanov D.O.*  
**QUANTIFICATION OF GLUCOSAMINE AND HYALURONIC ACID IN FOOD SUPPLEMENTS BY POTENTIOMETRIC MULTISENSOR SYSTEM**

16:15 - 16:30

*Vasilenko M., Araslanova A.T., Bessonova E.A., Kartsova L.A.*  
**MICROEXTRACTION PRE-CONCENTRATION OF STEROID HORMONES USING IONIC LIQUIDSMULTISENSOR SYSTEM**

16:30 - 16:45

*Barbayanov K.A., Veselova D.S., Timofeeva I.I., Bulatov A.V.*  
**LIQUID MICROEXTRACTION BASED ON "CLASSICAL" AND "GREEN" SOLVENTS FOR CHROMATOGRAPHIC DETERMINATION OF BIOTIN**

## POSTER SESSION

### TUESDAY, 03.09, 15:00 - 16:45

3-1. *Adamova A.A., Kartsova L.A., Fetin P.A.*

**NEW MICELLAR POLYELECTROLYTES – MODIFIERS OF ELECTROPHORETIC SYSTEMS**

3-2. *Afanasyev A.O., Podolina E.A., Livanov D.R.*

**SORPTIONED SPECTROMETRIC DETERMINATION OF PHENOL AND ALKADERIVATIONS IN WATER**

3-3. *Borodina A.F., Chikurova N.Yu., Patrushev D.P., Gorbovskaia A.V., Chernobrovkina A.V., Shpigun O.A.*

**SIMULTANEOUS DETERMINATION OF SWEETENERS AND CARBOHYDRATES USING LABORATORY-DESIGNED ADSORBENTS BASED ON SILICA AND POLYSTYRENE-DIVINYLBENZENE IN HILIC MODE**

3-4. *Butorlin O.S., Bessonova E.A., Karstova L.A.*

**SIMULTANEOUSLY DETERMINATION OF SHORT- AND LONG-CHAIN FATTY ACIDS BY HPLC IN THE FORM OF DERIVATIVES WITH 3-NITROPHENYLHYDRAZINE IN BIOLOGICAL OBJECTS**

3-5. *Cheremensky S.O., Egorov A.V.*

**WATER AND IONS MOBILITY IN LICI-CSCL-H<sub>2</sub>O TERNARY SOLUTION. A MOLECULAR DYNAMICS SIMULATION STUDY**

3-6. *Chichkanova E.S.*

**QUALITATIVE ANALYSIS OF VOLATILE COMPOUNDS OF LAVENDER FLOWERS BY TD-GX-MS METHOD DURING THEIR PASSIVE SORPTION ON MONOLITHIC SORPTION MATERIALS BNR-SIC**

3-7. *Chikin D.V., Loktionov P.A., Speshilov I.O., Pichugov R.D.*

**MONITORING THE STATE OF CHARGE OF ANTHRAQUINONE-VANADIUM REDOX FLOW BATTERY ELECTROLYTES**

3-8. *Danilova D.A., Ignatovich Z.V., Rogachev A.A.*

**DEVELOPMENT OF A GC-MS/MS METHOD FOR ANALYSIS OF ENERGY-SATURATED COMPOUNDS**

3-9. *Davletbaeva K.N., Rodinkov O.V.*

**EVALUATION OF THE ANALYTICAL CAPABILITIES OF HEADSPACE SINGLE-DROP MICROEXTRACTION FOR GAS CHROMATOGRAPHIC DETERMINATION OF ETHANOL IN SOFT DRINKS**

3-10. *Dolzhanskaya T.R., Banerjee T., Shishov A.Y.*

**FLOW EXTRACTION DEVICE BASED ON A ROTATING DISK FOR AUTOMATED SAMPLE PREPARATION OF AQUEOUS MEDIUM. DETERMINATION OF POLYCYCLIC AROMATIC HYDROCARBONS IN NATURAL WATERS**

3-11. *Dvoinykh D.D., Kochetkova M.A., Zubakina E.A., Timofeeva I.I., Bulatov A.V.*

**MICELLAR MICROEXTRACTION BASED ON ALKYL POLYGLUCOSIDE FOR THE DETERMINATION OF PHOSPHATES**

3-12. *Fedosov P. A., Shishov A.Y., Bochko T.N.*

**SPECTROPHOTOMETRIC DETERMINATION OF ALUMINIUM IN FOOD SAMPLES USING MADDER'S EXTRACT AND DEEP EUTECTIC SOLVENTS**

3-13. *Furletov A.A., Yakimenko A.V., Apyari V.V., Dmitrienko S.G., Zolotov Yu.A.*

**ASSEMBLABLE MICROFLUIDIC PAPER-BASED DEVICES MODIFIED WITH SILVER NANOPARTICLES FOR COLORIMETRIC DETERMINATION OF BIOFLAVONOIDS**

3-14. *Gaga A.S., Serebryakov K.V., Ilyina A.M., Volgina T.N., Gavrilenko M.A.*

**SIMPLE SMARTPHONE BASED DETERMINATION OF CHLORIDES IN OIL USING A TRANSPARENT OPTODE**

3-15. *Ganieva A.Sh., Androsova A.V., Kartsova L.A.*

**DETERMINATION OF PHENYL- AND INDOLE CARBOXYLIC ACIDS BY CAPILLARY ELECTROPHORESIS USING IMIDAZOLE-BASED COVALENT COATINGS**

3-16. *Gorbunov P.E., Ponomareva A.N.*

**INDICATOR METHOD FOR QUANTATIVE DETERMINATION OF ACID-BASE SITES ON THE SURFACE OF OXIDE MATERIALS**

3-17. *Igosheva V.S., Kiseleva D.V., Kudyakova V.S., Kel P.V., Fokina A.K.*

**MULTI-METHOD SPECTROSCOPIC TRACE ELEMENTAL ANALYSIS OF QUARTZ AND SYNTHESIZED SILICON**



3-18. *Ikhlaynen Y.A., Rodin I.A., Zorina A.A., Sinetova M.A., Klychnikov O.I.*

**DESCRIBING DIVERCITY OF MICROCYSTINS IN MICROCYSTIS SP. CELL CULTURE BY COMBINATION OF LC-HRMS WITH MOLECULAR NETWORKING**

3-19. *Ivakina K.V., Shemiakina A.O., Chernobrovkina A.V., Spigun O.A.*

**RELATIONSHIP BETWEEN THERMODYNAMIC PARAMETERS AND RETENTION MECHANISM FOR POLAR COMPOUNDS IN HYDROPHILIC INTERACTION LIQUID CHROMATOGRAPHY**

3-20. *Ivanova S.V., Nikitina T.G.*

**DETERMINATION OF 4-ACETAMIDOPHENYL ACETATE AS PARACETAMOL IMPURITY BY HPLC AND MEKC**

3-21. *Kaleeva M.A., Danilov D.A., Kurlov A.S.*

**DETERMINATION OF OXYGEN IN CERAMICS BASED ON WC, ZrC, Y<sub>2</sub>O<sub>3</sub>**

3-22. *Kalmykova A.D., Ziyatdinova G.K.*

**POLYMER-MODIFIED ELECTRODES FOR THE DETERMINATION OF EUGENOL AND TRANS ANETHOLE IN ESSENTIAL OILS**

3-23. *Kazanina D.A., Babain V.A., Kirsanov D.O.*

**HYDROPHOBIC ANIONS. EFFECT ON THE EXTRACTION AND SENSITIVITY OF MEMBRANE SENSORS**

3-24. *Kazin V.I., Zakharchenko E.A., Khlodneva A.O., Dogadkin D.N., Gromyak I.N., Tyurin D.A., Kolotov V.P.*

**INFLUENCE OF THE SPECTRAL INTERFERENCE ON THE DETERMINATION OF PRECIOUS METALS IN BLACK SHALE SAMPLES BY THE ICP-MS METHOD**

3-25. *Khlodneva A.O., Kazin V.I., Zakharchenko E.A., Zhilkina A.V., Dogadkin D.N., Tyurin D.A., Kolotov V.P.*

**MODIFIED CARBON NANOMATERIALS FOR CONCENTRATING ULTRA-LOW RARE EARTH ELEMENTS CONCENTRATIONS IN GEOLOGICAL SAMPLES**

3-26. *Khrolenko R.A., Kupriyanova G.S.*

**DETERMINATION OF ADULTERATION MARKERS USING 1H NMR SPECTROSCOPY**

3-27. *Korina E.A., Karaberova A.S., Bulatova E.A., Golovin M.S., Stankovich D.M., Gusev S.A., Fadeev V.V., Bol'shakov O.I.*

**SAMARIUM CUPRATE WITH MICRON-SIZE PORES FOR DRUG SENSING**



3-28. *Kulinich Y.A., Tolmacheva V.V., Apyari V.V.*

**MAGNETIC SOLID-PHASE EXTRACTION BASED ON MAGNETIC HYPERCROSSLINKED POLYSTYRENE FOR DETERMINATION OF FLUOROQUINOLONES IN MILK WITH HPLC**

3-29. *Lazaretova A.I., Bessonova E.A., Kartsova L.A.*

**DEVELOPMENT OF ANALYTICAL APPROACHES FOR THE DETERMINATION OF LOW MOLECULAR WEIGHT ORGANIC ACIDS IN BIOLOGICAL FLUIDS**

3-30. *Lodianov I.O., Pochivalov A.S., Bulatov A.V.*

**MICROEXTRACTION OF FLUOROQUINOLONES FROM BIOLOGICAL FLUIDS USING SUPRAMOLECULAR SOLVENTS BASED ON DI-(2-ETHYLHEXYL)-PHOSPHORIC ACID SALT**

3-31. *Pavlova K.V., Pochivalov A.S., Bulatov A.V.*

**MICELLE-MEDIATED EXTRACTION OF GLYPHOSATE FROM FOOD SAMPLES FOLLOWED BY ITS DERIVATIZATION, ENRICHMENT AND LIQUID CHROMATOGRAPHIC DETERMINATION**

**THURSDAY, 05.09, 17:00 - 18:30**

3-32. *Lusnikova K.M., Krekhova F.M., Shishov A.Yu.*

**MICROEXTRACTION SEPARATION OF FLUOROQUINOLONE ANTIBIOTICS USING THREE-COMPONENT DEEP EUTECTIC SOLVENTS FOR THEIR DETERMINATION IN SEDIMENT**

3-33. *Makhrov D.E., Ionova I.V., Ionov D.S.*

**METAL-FREE PHOSPHORESCENT MATERIALS FOR OXYGEN SENSING WITH NAPHTHALENE- $\beta$ -CYCLODEXTRIN-HYDROCARBON COMPLEXES**

3-34. *Markova U.O., Shishov A.Y., Bulatov A.V.*

**AN AUTOMATED MICROEXTRACTION PROCEDURE FOR DETERMINATION OF HEAVY METALS IN FOOD PRODUCTS WITH THE USE OF A NOVEL SULFUR-RICH DEEP EUTECTIC SOLVENT**

3-35. *Morocho D.S., Minich I.A.*

**ORGANIC-INORGANIC HYBRIDS OF LAYERED PEROVSKITES: ENHANCING PHOTOCATALYTIC ACTIVITY THROUGH INTERCALATION AND GRAFTING**

3-36. *Muradymov R.R., Banerjee T., Shishov A.Y.*

**QUASIHIDROPHOBIC DEEP EUTECTIC SOLVENTS: A VERSATILE APPROACH FOR DYES DETERMINATION IN FOOD PRODUCTS**



3-37. *Mursalov R.K., Martynova N.A., Prischepa O.A., Rusanova T.Yu.*

**SPECTROPHOTOMETRIC DETERMINATION OF CEFTRIAZONE AND CEFOTAXIME IN MILK**

3-38. *Mursalov R.K., Kulapina E.G.*

**MODIFIED SCREEN-PRINTED SENSORS FOR THE DETECTION OF CERTAIN CEPHALOSPORIN ANTIBIOTICS**

3-39. *Pantin A.V., Navolotskaya D.V.*

**ELECTROCHEMICAL SENSOR BASED ON GOLD IDE FOR QUANTITATIVE DETERMINATION OF MIR-371A-3P - BIOMARKER OF TESTICULAR GERM CELL TUMORS**

3-40. *Pleshakov V.M., Nikitina V.N., Karyakin A.A.*

**ELECTROCHEMICAL LACTATE BIOSENSORS BASED ON CHITOSAN MEMBRANE FOR CONTINUOUS ANALYSIS**

3-41. *Purytskin I.P., Biryuzov A.A., Tolmacheva V.V., Apyari V.V.*

**APPLICATION OF IRON OXIDE NANOPARTICLES AS A MAGNETIC SORBENT IN MATRIX SOLID-PHASE DISPERSION FOR EXTRACTION OF TETRACYCLINES FROM MILK AND THEIR CHROMATOGRAPHIC DETERMINATION**

3-42. *Serebryakov K.V., Khachkovskii A.V., Gaga A.S., Volgina T.N., Gavrilenko M.A.*

**REVERSIBLE POLYMER COLORIMETRIC pH SENSOR**

3-43. *Shabunina A.Yu., Rusanova T.Yu.*

**COMBINATION OF ATR IR SPECTROSCOPY WITH CHEMOMETRIC APPROACHES FOR CLASSIFICATION OF III GENERATION CEPHALOSPORINS ANTIBIOTICS**

3-44. *Sidelnikov V.O., Ganeev A.A., Chuchina V.A., Kravtsov D.V., Gubal A.R., Krylov O.A.*

**PULSED GLOW DISCHARGE MASS SPECTROMETRY FOR VOC DETERMINATION IN AIR SAMPLES BEFORE AND DURING SURGERY TO REMOVE A BLADDER TUMOR**

3-45. *Smagina M.A., Shemiakina A.O., Ivanova E.D., Chernobrovkina A.V., Shpigun O.A.*

**STUDY OF THE RETENTION MECHANISM FOR ORGANIC AND INORGANIC IONS IN HILIC WITH SILICA- AND POLY(STYRENE-DIVINYLBENZENE)-BASED STATIONARY PHASES**

3-46. *Smolyanov N.A., Kirsanov D.O.*

**3D PRINTING WITH A POLYMER MODIFIED USING MOLECULAR EMITTERS BASED ON CYCLOMETALLIC EUROPIUM COMPOUNDS FOR THE DEVELOPMENT OF A «SPECTROPHOTOMETER IN A CUVETTE»**

3-47. *Syutkin V.S., Peshkova M.A.*

**TAILORING DIGITAL MACROPHOTOGRAPHY FOR IMAGING OF OPTICAL SENSORS**

3-48. *Talipova I.I., Gorbovskaia A.V., Uzhel A.S.*

**MIXED-MODE POLYMER-BASED STATIONARY PHASES WITH GRAFTED ZWITTERIONIC CHAINS**

3-49. *Tanykova N.G., Chudova E.S., Petrova Yu.Yu.*

**STUDY OF ORGANIC MATTER DISTRIBUTION IN OIL SHALE BY MICRO-FTIR AND SEM-EDS**

3-50. *Timichev A.A., Pogonia E.V., Gorbovskaia A.V., Uzhel A.S.*

**ANALYSIS OF BEVERAGES AND ORAL HYGIENE PRODUCTS USING NOVEL STATIONARY PHASES FOR ION CHROMATOGRAPHY**

3-51. *Timoshenko V.V., Harb A.H., Ermolenko Yu.E., Smirnov I.V.*

**CHEMICAL SENSORS FOR POTENTIOMETRIC MONITORING IN THE PRODUCTION OF RADIOPHARMACEUTICAL YTTRIUM-90**

3-52. *Urusova S.V., Shishov A.Yu., Melesova M.A.*

**DETERMINATION OF BIOACTIVE COMPOUND IN PRÍMULA VÉRIS USING DEEP EUTECTIC SOLUTIONS**

3-53. *Usanova E.D., Melekhin A.O.*

**BETA-LACTAM ANTIBIOTIC STABILITY IN CHICKEN MEAT**

3-54. *Varabyova V.V., Zuraev A.V.*

**THE EFFECT OF THE MOBILE PHASE ADDITIVES ON FRAGMENTATION PATHWAYS IN THE ANALYSIS OF OCTOGEN (HMX) AND HEXOGEN (RDX) BY HIGH-PERFORMANCE LIQUID CHROMATOGRAPHY WITH MASS-SPECTROMETRY**

3-55. *Vasileva E.N., Ikhlaynen Y.A., Rodin I.A.*

**CHARACTERISATION OF THE COMPONENT COMPOSITION OF BREWING HOP VARIETIES USING HPLC-HRMS AND MOLECULAR NETWORKS**

3-56. *Vasilyeva A.A., Fokina A.S., Gorbunova M.V., Apyari V.V.*

**SILICA NANODOTS AS LUMINESCENT REAGENTS FOR THE DETERMINATION OF CATECHOLAMINES**

3-57. *Veselova D.S., Barbayanov K.A., Timofeeva I.I., Bulatov A.V.*

**THE NEW GENERATION OF GREEN SOLVENTS FOR THE EXTRACTION OF B GROUP VITAMINS FROM FOODS**



3-58. *Yatsyshina V.S., Shishov A.Y., Nizov E.R.*

**THE INTERFERING EFFECT OF DEEP EUTECTIC SOLVENTS ON THE DETERMINATION OF FLAVONOIDS IN PLANTS MATERIALS**

3-59. *Zhalnina T.V., Khudozhitkov A.E., Kolokolov D.I.*

**HYDROGEN BOND STRENGTH AND PHASE TRANSITION IN PYRIDINIUM-BASED IONIC LIQUIDS AS VIEWED BY SOLID-STATE <sup>2</sup>H NMR**

3-60. *Zhidomorova K.A., Enikeeva M.O.*

**THE SYNTHESIS OF NANOPARTICLES AND THE PHASE FORMATION IN THE LAPO<sub>4</sub>-GDPO<sub>4</sub> YPO<sub>4</sub>-(nH<sub>2</sub>O) SYSTEM UNDER SOFT CHEMISTRY METHODS**

3-61. *Ziangirova E.R., Kolobova E.A., Solovyeva E.V., Kartsova L.A.*

**COMPARATIVE STUDY OF POLY(DIALLYLDIMETHYLAMMONIUM CHLORIDE) AND CHITOSAN AS PHYSICALLY ADSORBED COATINGS FOR ELECTROPHORETIC SEPARATION OF BIOLOGICALLY ACTIVE COMPOUNDS**

## 4. ORGANIC, ORGANOMETALLIC AND MEDICINAL CHEMISTRY

CHAIRMAN: Dr. **Olga Bakulina**, Institute of Chemistry, SPbU

SECRETARY: Ms. **Polina Paramonova**, Institute of Chemistry, SPbU

### ORAL REPORTS

#### WEDNESDAY, 04.09, Room 1301

9:00 - 9:35

**KEYNOTE  
SPEAKER**

*Dr. Sci. Leonid Fershtat*

**Nitrogen-Oxygen Heterocyclic Systems: Novel Synthetic Approaches and Emerging Trends**

9:36 - 9:51

**SPONSOR**

*Kolychev E.L.*

**INDUSTRIALLY APPLICABLE PHOSGENE-FREE SYNTHESIS OF ARYL ISOCYANATES**

9:52 - 10:02

*Bolotova I.A., Ustyuzhanin, A. O., Sergeeva E. S., Faizdrakhmanova A. A., Hai Y., Stepanov A. V., Ushakov I. A., Lyssenko K. A., You L., Lvov A. G.*

**2,3-DIARYLMALEATE SALTS AS A VERSATILE CLASS OF DIARYLETHENES WITH A FULL SPECTRUM OF PHOTOACTIVITY IN WATER**

10:03 - 10:13

*Kuleshov A.V., Andreev I.A., Ratmanova N.K., Trushkov I.V.*

**DONOR-ACCEPTOR CYCLOPROPANES WITH A PHOSPHONATE GROUP AS AN ACCEPTOR: SYNTHESIS, PROPERTIES**

10:14 - 10:24

*Semenov A.V., Baykov S.V., Soldatova N.S., Postnikov P.S., Boyarskiy V.P.*

**C-N COUPLING WITH DIARYLIODONIUM(III) SALTS: NEW APPROACH FOR SELECTIVE N-ARYLATION OF FIVE MEMBERED HETEROCYCLES**

10:25 - 10:35


*Giricheva M.A., Vorobiev I.G., Budruev A.V.*

**SYNTHESIS OF 1,3-DICARBONYL AZEPINES VIA PHOTOINITIATED REACTIONS OF ARYL AZIDES WITH CARBON-BASED NUCLEOPHILES**

10:36 - 10:46

*Yegoryan H.A., Yermalovyan L.V., Hakobyan E.K., Sirakanyan S.N., Geronikaki A., Hovakimyan A.A.*

**SYNTHESIS OF NEW HETEROCYCLIC SYSTEMS: PYRIMIDO[4',5':4,5]FURO[2,3-c]-2,7-NAPHTHYRIDINES**



10:47 - 10:57

*Chernovskii N.D., Zaikin P.A.*

**CATALYST-FREE PHOTOCHEMICAL C-H BOND  
FLUORINATION OF AROMATIC CARBONYL COMPOUNDS**

11:20 - 11:30

*Ledovskaya M.S., Voronin V.V.*

**CALCIUM CARBIDE AS A SOLID ACETYLENE ANALOGUE IN  
ORGANIC SYNTHESIS**

11:31 - 11:41

*Kozlenko A.S., Pugachev A.D., Makarova N.I., Rostovtseva I.A.,  
Metelitsa A.V., Ozhogin I.V.*

**HALOGENATED SPIROPYRANS' DERIVATIVES AS  
PROMISING BUILDING BLOCKS FOR SMART MATERIALS**

11:42 - 11:52

*Simbirtseva A.E., Obydenov D.L., Kornev M.Y., Sosnovskikh V.Y.*

**A NEW APPROACH FOR THE SYNTHESIS OF  
MEROCYANINE DYES VIA ENAMINATION OF 4H-PYRANES  
AND THEIR DERIVATIVES**

11:53 - 12:03

*Boichenko M.A., Trushkov I.V., Ivanova O.A.*

**NUCLEOPHILIC RING-OPENING REACTIONS IN THE  
SYNTHESIS OF HETEROCYCLES FROM DONOR-ACCEPTOR  
CYCLOPROPANES**

12:04 - 12:14

*Ikonnikova V.A., Mikhaylov A.A.*

**SYNTHETIC STUDIES TOWARDS HASUBANAN  
ALKALOIDS. ESTABLISHMENT OF TANDEM SIGMATROPIC  
REARRANGEMENT, RING-CONTRACTION AND  
DEAROMATISATION METHODOLOGIES**

12:15 - 12:25

*Stepanov A.V., Ushakov I.A., Lysenko K.A., Lvov A.G.*

**CHEMICAL MODIFICATIONS OF DIHYDROQUERCETIN  
TOWARDS PHOTOACTIVE DERIVATIVES**

12:26 - 12:36

*Arkaniya L.Z., Khoroshilova O.V., Vasilyev A.V.*

**TRANSFORMATIONS OF TMS ESTERS OF  $\beta$ -ARYL- $\alpha$ -  
THIOPHENYL-TRIFLUOROPROPANOLS UNDER THE  
ACTION OF ACIDS**

12:37 - 12:47

*Stebletsova I.A., Larin A.A., Fershtat L.L.*

**RECENT ADVANCES IN THE SYNTHESIS AND  
FUNCTIONALIZATION OF 4-AZIDOFUROXANES TOWARDS  
1,2,3-TRIAZOLES**

12:48 - 12:58

*Iurina E.S., Raesi G.R., Kulikova L.N.*

**SYNTHESIS OF BIOLOGICALLY ACTIVE DERIVATIVES OF  
N-ALKYL-10-CHLORO-1,2,3,4-TETRAHYDROBENZO[b][1,6]  
NAPHTHYRIDINES**

12:59 - 13:09 *Puchkov V., Koval V., Revtovich S., Lyfenko A., Morozova E., Solyev P.*  
**SYNTHESIS OF THIOSULFINATES WITH ANTIMICROBIAL ACTIVITY**

13:10 - 13:20 *Kuznetsov N.A., Samet A.V.*  
**REDIRECTING THE [3 + 2] CYCLOADDITION REACTION BETWEEN PYRIDINIUM YLIDES AND 1-ARYLNITROALKENES TOWARD [4 + 1] ANNULATION**

### WEDNESDAY, 04.09, Room 1213

9:55 - 10:05 *Pugachev A.D., Kozlenko A.S., Ozhogin I.V., Makarova N.I., Rostovtseva I.A., Sazykina M.A., Sazykin I.S., Matukhno A.E., Ponyatovskaya A.M., Borodkin G.S.*  
**MOLECULAR DESIGN AND SYNTHESIS OF SPIROPYRAN FLUORESCENT PROBES**

10:06 - 10:16 *Karapetyan A.V., Gharibyan Y.A., Gharibyan T.K., Yengoyan A.P., Ghazaryan E.A.*  
**GREEN, ONE-POT SYNTHESIS OF PYRAZOLE DERIVATIVES BASED ON CHALCONES**


10:17 - 10:27 *Bykov V.N., Ukhanev S.A., Ushakov I.A., Vologzhanina A.V., Antsiferov E.A., Klimenko L.S., Lvov A.G.*  
**ACTIVATION OF ANTHRAQUINONE'S ELECTROPHILICITY BY LIGHT FOR A DYNAMIC C-O BOND**

10:28 - 10:38 *Astakhova N.E., Vasilenko D.A., Averina E.B.*  
**TERT-BUTYLNITRITE IN THE SYNTHESIS OF FUNCTIONALIZED ISOXAZOLE DERIVATIVES**

10:39 - 10:49 *Vidyakina A.A., Silonov S.A., Danilkina N.A.*  
**DEVELOPMENT OF CYCLOALKYNE DYE REAGENTS: ROLE OF THE NATURE OF ALKYNE AND LINKER PART**

10:50 - 11:00 *Antropov S.M., Tokmacheva S.A., Trushkov I.V.*  
**SYNTHESIS OF NEW CYCLIC SYSTEMS PERI-ANNULATED TO THE INDOLE RING**

11:20 - 11:30 *Strekalova S.O., Kononov A.I., Khvorova M.A., Zlygostev A., Saveliev G.N., Budnikova Y.H.*  
**ELECTROOXIDATIVE AMIDATION OF ARENES WITH NITRILES**



11:31 - 11:41

*Kuleshov D.O., Gromov I.A., Pikovskoi I.I., Onuchina A.A., Voronov I.S.*

**APPLICATION OF MULTIPLEXED ELECTROSPRAY FOR MICRODROPLET CHEMICAL SYNTHESIS PROBLEMS**

11:42 - 11:52

*Filippov I.P., Rostovskii N.V., Zakharov T.N., Grishin A.V., Novikov M.S., Khlebnikov A.F.*

**FORMATION OF PYRROLE AND 1H-CYCLOPENT[C] PYRID-1-ONE DERIVATIVES BY DBU-MEDIATED TRANSFORMATIONS OF 4-ALKYL-2-AZABUTA-1,3-DIENES**

11:53 - 12:03

*Aleshin R.P., Galukhin A.V.*

**AZIDE-ALKYNE CYCLOADDITION OF ARYL PROPARGYL ETHERS: KINETICS AND SYNTHETIC FEATURES OF THE PROCESS IN NON-ISOTHERMAL CONDITIONS**

12:04 - 12:14

*Obydennik A.Y., Titov A.A., Varlamov A.V.*

**DIVERGENT REARRANGEMENT IN THE CONSTRUCTION OF PYRROLO[2,1-b][3]BENZAZEPINE AND PYRIDO[2,1-a] ISOQUINOLINE SCAFFOLDS UNDER DIFFERENT CONDITIONS**

12:15 - 12:25

*Shuingalieva D. V., Vil' V. A., Gorlov E. S., Akulov A. A., Varaksin M. V., Terent'ev A. O.*

**RADICAL ALKYLATION USING ACYCLIC DIACYL PEROXIDES CONDITIONS**

12:26 - 12:36

*Pasyukov D.V., Shevchenko M.A., Chernyshev V.M.*

**SYNTHESIS AND FUNCTIONALIZATION OF HALOGEN METHYL IMIDAZOLIUM SALTS**

12:37 - 12:47

*Tikhonov T. P., Shorohov V. V., Trushkov I. V., Ivanova O. A.*


**DIVERGENT SYNTHESIS OF 2-AMINOQUINOLINES, 2-AMINOARYL-SUBSTITUTED CYCLOPROPANES AND CYCLOPROPA[C]QUINOLONES FROM ORTHO-AMINO-SUBSTITUTED BENZALDEHYDES**



- 12:48 - 12:58 *Mingazhetdinova D.O., Agarkov A.S., Nefedova A.A., Ovsyannikov A.S., Litvinov I.A., Solovieva S.E., Antipin I.S.*  
**SYNTHESIS, STRUCTURE IN THE CRYSTALLINE PHASE AND NEW REARRANGEMENTS IN THE SERIES OF 2-ARYLHYDRAZONE THIAZOLO[3,2-a]PYRIMIDINE DERIVATIVES**
- 12:59- 13:09 *Merkulov V.G., Ivanova E.A., Rusakov S.P., Zharkov M.N.*  
**SUPERCRITICAL CARBON DIOXIDE AS PERSPECTIVE MEDIUM FOR PHOTOOXIDATION PROCESSES IN ORGANIC SYNTHESIS**
- 13:10- 13:20 *Meshalkin S.A., Tsybulin S.V., Tonkoglazova D.I., Antonov A.S.*  
**QUADRUPLE REACTIVITY OF STERICALLY HINDERED ORTHO-DIMETHYLAMINO ARYLOXIMES IN ACIDIC MEDIA**

### THURSDAY, 05.09, Room 1301

- 9:30 - 9:55  
**INVITED SPEAKER** *Dr. Sci. Dmitry Perekalin, Ankudinov N.M., Komarova A.A.*  
**Synthesis of Chiral Boranes by Asymmetric Insertion of Diazoacetates into B-H Bonds**
- 9:56 - 10:21  
**INVITED SPEAKER** *Alexander Bunev, Kudinov A.Yu., Kantin G.P.*  
**FEP-Based Design of Cereblon Ligands in Bifunctional Degradation Development**
- 10:22 - 10:32 *Gak A.S., Yan Liu, Yong Cui*  
**CHALLENGING CROSS-COUPLED REACTIONS BETWEEN SENSITIVE PYRIDINE DERIVATIVES**
- 10:33 - 10:43 *Polivanovskaia D.A., Birin K.P., Senchikhin I.N., Demina L.I., Tsivadze A.Yu.*  
**PYRAZINOPORPHYRINS – PROSPECTIVE BASIS FOR HETEROGENEOUS OXIDATION PHOTOCATALYSTS**
- 10:44 - 10:54 *Belousov M.S., Dubinina T.V.*  
**NOVEL PYRIDO[1,2-A]BENZIMIDAZOLE-FUSED PORPHYRAZINE COMPLEXES: SYNTHESIS, PHOTOCHEMICAL PROPERTIES AND PHOTODYNAMIC ACTIVITY**
- 10:55 - 11:05 *Sysoeva A.A.*  
**HALOGEN BOND DONORS AS EFFICIENT CATALYSTS FOR FUNCTIONALIZATION OF CARBONYL COMPOUNDS**



11:06 - 11:16

*Korobkov S.M., Birin K.P., Tsivadze A.Yu.*

**SINGLET OXYGEN-MEDIATED OXIDATION OF SULFIDES: A KINETIC AND DFT STUDY**

11:17 - 11:27

*Frolov M.A., Andreev M.V., Akishkina I.A., Burlakov V.V.*

**PHOTOCHEMICAL METHOD DEVELOPMENT FOR THE SYNTHESIS OF FIVE-MEMBERED METALLACYCLOCUMULENES AND STUDY OF THEIR REACTIVITY**

11:50 - 12:00

*Zimnitskiy N.S., Kaigorodova V.V., Korotaev V.Y., Obydenov D.L., Sosnovskikh V.Y.*

**ENAMINODIKETONES FROM 5-ARYLPENT-4-ENE-1,3-DIONES IN THE SYNTHESIS OF NITROGEN-CONTAINING HETEROCYCLES**

12:01 - 12:11

*Durakov S.A., Magasumov A.A., Flid V.R.*

**PALLADIUM-CATALYZED ALLYLIC SUBSTITUTION OF PRIMARY AND SECONDARY AMINES WITH ALLYL FORMATE**

12:12 - 12:22

*Novitskii G.O., Medvedeva A.A., Koshkin A.V., Vedernikov A.I., Lobova N.A.*

**SPECTRAL PROPERTIES OF TOLANE, STILBENE, TERPHENYL AND THEIR SUPRAMOLECULAR COMPLEXES IN SOLUTION AND SILICATE HYDROGEL**

12:23 - 12:33

*Orlov T.S., Pakhomova M.V., Bykov M.V., Suslov D.S.*

**NOVEL CATALYST SYSTEMS FOR THE ADDITION POLYMERIZATION NORBORNENE AND ITS DERIVATIVES BASED CATIONIC CYCLOPENTADIENYL COMPLEXES OF PALLADIUM**

12:34 - 12:44

*Gajazov E.R., Anisovich K.V., Ivanova O.A.*


**SYNTHESIS OF NOVEL MESOIONIC PYRIDAZIN-1-IUM-3-OLATES**

12:45 - 12:55

*Putnin I.O., Sysoeva A.A.*

**HALONIUM AND CHALCONIUM SALTS AS NONCOVALENT ORGANOCATALYSTS FOR ELECTROPHILIC ACTIVATION OF CARBONYL COMPOUNDS**

- 12:56 - 13:06 *Skorobogatkina I.A., Lebedeva N.S., Syrbu S.A.*  
**INVESTIGATION OF THE STATE OF ASYMMETRIC MONO-HETERYL SUBSTITUTED PORPHYRINS CONTAINING RESIDUES OF BENZOXAZOLE, BENZOTHAZOLE AND BENZIMIDAZOLE IN AQUEOUS SOLUTIONS. INTERACTION WITH ANIONIC SURFACTANT**
- 13:07 - 13:17 *Gavrilov G.A., Nguyen T.K., Katkova S.A., Rostovskii N.V., Kinzhalov M.A.*  
**SYNTHESIS OF BIOLOGICALLY ACTIVE NITROGENOUS HETEROCYCLES BASED ON A METALL-CATALYZED COUPLING OF ISOCYANIDES AND GUANIDINES**
- 13:18 - 13:28 *Kolos A.V., Nelybina Y.V., Perekalin D.S.*  
**RHODIUM COMPLEXES WITH PLANAR-CHIRAL CYCLOPENTADIENYL LIGANDS ASSEMBLED FROM ALKYNES**
- 13:29 - 13:39 *Ivanova E.A., Merkulov V.G., Zharkov M.N.*  
**APPLICATION OF C<sub>3</sub>N<sub>4</sub>@AEROGEL COMPOSITES FOR PHOTOCATALYTIC OXIDATION IN SC-CO<sub>2</sub> MEDIUM**
- 13:40 - 13:50 *Karcheuski A.A., Katkova S.A.*  
**OXIDATIVE ADDITION OF ALKYL HALYDES AND HALOGENS TO PLATINUM(II) ACYCLIC DIAMINOCARBENE COMPLEXES**
- 14:50 - 15:00 *Satsauskas A.L., Kirnosov S. A., Petrova A.V., Zheleznova T. Yu., Fisyuk A.S*  
**A SYNTHESIS AND PHTOTOPHYSICAL PROPERTIES OF 6-ETHYL-6,12-DIHYDRODIBENZO[b,h] [1,5] NAPHTHYRIDIN-7(5H)-ONES**
- 15:01 - 15:11 *Viktorova V.V., Obydenov D.L., Sosnovskikh V.Y.*  
**SYNTHESIS OF PYRAZOLO[4,3-C]PYRIDINES BASED ON THE AMINATION OF 4-PYRIDONES**
- 15:12 - 15:22 *Zinoveva A.D., Borisova T.N.*  
**THE TRANSFORMATIONS OF HETEROCYCLIC COMPOUNDS IN REACTIONS WITH INTERNAL ALKYNES**
- 15:23 - 15:33 *Ilyushchenko M.K., Salikov R.F., Tomilov Yu. V.*  
**ORGANOCATALYTIC ACTIVATION AND SUBSTITUTION IN ELECTRON-DEFICIENT VINYL HALIDES**



15:34 - 15:44

*Snetkov D.A., Grachova E.V.*

**A NEW CLASS OF CATIONIC PHOSPHINE LIGANDS  
CONTAINING A PHOSPHONIUM MOIETY: SYNTHESIS AND  
PHOTOPHYSICAL PROPERTIES**

15:45 - 15:55

*Starodubtseva K.V., Smirnov A.A., Kartsev D.D.*

**MICROREACTORS ARRAY BASED ON WETTABILITY  
PATTERNS FOR HIGH-TROUGHPUT ORGANIC SYNTHESIS**

15:56 - 16:06

*Degtyareva V.S., Shamanaev I.V., Gerasimov E.Yu.,  
Pakharukova V.P., Bukhtiyarova G.A.*

**INFLUENCE OF TEMPERATURE TREATMENT ON THE  
CATALYTIC PROPERTIES OF COBALT CATALYSTS FOR THE  
SELECTIVE HYDROGENATION OF P-IODONITROBENZENE**

16:07 - 16:17

*Ponomorev I.S., Yunusova P.R., Ivanenko T.Y., Rubaylo A.I.,  
Lutoshkin M. A.*

**SYNTHESIS OF NITROGEN-CONTAINING DERIVATIVES OF  
2,1,3-BENZOTELLURADIAZOLE**

16:18 - 16:28

*Kurbanova G.A., Slabko O.Y.*

**REACTION OF QUINOID DERIVATIVES OF PYRIDO[1,2-A]  
BENZIMIDAZOLE WITH N-ACETYLCYSTEINE**

16:29 - 16:39

*Puskov G.I., Dubovtsev A.Yu.*

**INTERMOLECULAR GOLD-CATALYZED N-TRANSFER  
INVOLVING ARYLAZIDES: A ROUTE TO FUNCTIONALIZED  
2-AMINOINDOLES**

16:40 - 16:50

*Sumina A.A., Selishcheva S.A., Sosnina V.M., Bulavchenko O.A.,  
Yakovlev V.A.*

**COPPER-CHROMIUM CATALYSTS FOR THE  
HYDROGENATION OF FURFURAL TO FURFURYL ALCOHOL  
IN VARIOUS MODES**

**THURSDAY, 05.09, Room 1213**

10:35 - 10:45

*Pokidova O.V., Emel'yanova N.S., Novikova V.O., Kulikov A.V.,  
Sanina N.A.*

**PARTICIPATION OF ALBUMIN AND GLUTATHIONE IN THE  
BIOTRANSFORMATION OF NITROSYL IRON COMPLEXES**

- 10:46 - 10:56 *Patra C., Eldeeb A.A., Kolpashchikov D.M.*  
**MULTICOMPONENT ASO AGENT FOR INTRACELLULAR  
OVEREXPRESSION AND MUTATION RECOGNITION**
- 10:57 - 11:07 *Tafran L., Drozd V.S., Moustapha Y.N., Kolpashchikov D.M.,  
Eldeeb A.A.*  
**DEVELOPMENT OF THE BiASO THRESHOLDER GATES  
MODULATED BY DIFFERENT CONCENTRATIONS OF THE  
CANCER MARKER**
- 11:08 - 11:18 *Udalova V.E., Petrova A.L., Tennikova T.B., Guryanov I.A.,  
Silonov S.A.*  
**BIOHYBRID VASCULAR ENDOTHELIAL GROWTH FACTOR  
INHIBITORS**
- 11:19 - 11:29 *Diachkova A.Y., Ostroverchov P.V.*  
**PRODUCTION OF PYRIDINE-CONTAINING NATURAL  
CHLORINES FOR COMBINED ANTITUMOR THERAPY**
- 11:50 - 12:00 *Makarova T.M.*  
**ALLOSTERIC DESTABILIZATION OF THE RIBOSOMAL  
PEPTIDYL TRANSFERASE CENTER: A MOLECULAR  
DYNAMICS STUDY**
- 12:01 - 12:11 *Demchuk D.V., Adaeva O.I., Semenova M.N., Semenov V.V.*  
**DISCOVERY OF 4,5-DIARYLPYRIDAZINES AS A NEW CLASS  
OF ANTI-TUBULIN AGENTS**
- 12:12 - 12:22 *Marinich I.I., Chzhu O.P., Aravishvili D.E.*  
**ASSESSMENT OF PHYSIOLOGICAL ACTIVITY OF  
POTENTIAL DRUG SUBSTANCES BY CHROMATOGRAPHIC  
AND OPTICAL METHODS**
- 12:23 - 12:33 *Golubeva E.A., Lavrov M.I., Zamoyski V.L., Grigoriev V.V.,  
Palyulin V.A.*  
**NEW ALLOSTERIC AMPA RECEPTOR MODULATORS  
BASED ON TRICYCLIC BISPIDINE DERIVATIVES WITH  
INDANE MOIETY**
- 12:34 - 12:44 *Novikova V.O., Pokidova O.V., Kulikov A.V., Emel`yanova N.S.,  
Konyukhova A.S., Sanina N.A.*  
**INTERACTION OF NITROSYL IRON COMPLEXES WITH  
SUBSTRATES IN MODEL BIOLOGICAL SYSTEMS AND  
BIODISTRIBUTION OF THEIR DECOMPOSITION PRODUCTS**



12:45 - 12:55

*Zakharkiva A.M., Kazantseva K.I., Kurzina I.A.*

**COMPARISON OF THE METHODS OF TRITERPENIC ACIDS EXTRACTION FROM SIBERIAN FIR**

12:56 - 13:06

*Nbeaa A., Moustapha A. Y., Nour and El-Deeb A.A.*

**OPTIMIZATION OF SELECTIVITY AND STABILITY OF ALREADY SELECTED APTAMER FOR BSA**

13:07 - 13:17

*Mansurova E.E., Chudinov N.Yu., Shulaeva M.M., Fazleeva R.R., Voloshina A.D., Lyubina A.P., Nizameev I.R., Kadirov M.K., Ziganshina A.Yu., Semenov V.E., Antipin I.S.*

**CREATION AND CHARACTERISTICS OF NANOCARRIERS FOR THE DELIVERY OF DRUGS AND ANTIDOTES**

13:18 - 13:28

*Novokshonova A.D.*

**APPLICATION OF POLYCARBONYL COMPOUNDS AND THEIR HETEROCYCLIC DERIVATIVES IN BIOMEDICINE AND BIOTECHNOLOGY**

13:29 - 13:39

*Kuznetsov A.N., Krylov V.B., Nifantiev N.E.*

**LINEAR OLIGOSACCHARIDE FRAGMENTS OF BRUCELLA CYCLIC  $\beta$ -(1-2)-GLUCAN: SYNTHESIS, NMR AND IMMUNOCHEMICAL INVESTIGATION**

13:40 - 13:50

*Khaskanova I.M., Shelenkova I.E., Nesterova A.I., Osroverkhov P.V., Vadekhina V.V., Abakumov M.A.*

**PROMISING ATP INHIBITOR MOLECULES FOR THE TREATMENT OF NONALCOHOLIC FATTY LIVER DISEASE**

14:50 - 15:00

*Fatykhova A.A., Madzhidov T.I.*

**DE NOVO DESIGN BASED ON MONTE-CARLO TREE SEARCH**

15:01 - 15:11

*Mazina L.M., Novikova V.O., Pokidova O.V., Konyukhova A.S., Sanina N.A.*

**INFLUENCE OF NITROSYL IRON COMPLEXES WITH AROMATIC LIGANDS ON THERAPEUTIC ENZYMATIC TARGETS**

15:12 - 15:22

*Makarov D.A., Jasko M.V., Karpenko I.L., Efremenkova O.V., Vasilyeva B.F., Avdanina D.A., Zhgun A.A., Kochetkov S.N., Alexandrova L.A.*

**5-SUBSTITUTED N4-ALKYLCYTIDINES AS PROMISING INHIBITORS WITH A WIDE SPECTRUM OF BIOLOGICAL ACTIVITY**

- 15:23 - 15:33 *Kapustin R.V., Agrba A.I.*  
**MICROWAVE-ASSISTED SYNTHESIS OF ACETYLENE AND BENZENE IN CONTROLLED METHANE-PLASMA SYSTEM**
- 15:34 - 15:44 *Volkova D.S., Chudin O.S., Verpekin V.V.*  
**NEW POCOP-TYPE PINCER COMPLEXES WITH SIGMA-ALKYNYL LIGANDS: SYNTHESIS AND CHEMICAL PROPERTIES**
- 15:45 - 15:55 *Simonova V.M., Khripun V.D., Pestova O.N.*  
**THE CATALYTIC REDUCTION OF TRIMETHYLAMINE N-OXIDE IN REACTION WITH THE TUNGSTEN-CONTAINING ENZYME MODEL COMPLEX**
- 15:56 - 16:06 *Nnanyereugo V.O., Dubovichenko M.V., El-Deeb A.A.*  
**MULTIVALENT ANTISENSE OLIGONUCLEOTIDES FOR EFFICIENT RNA CLEAVAGE**
- 16:07 - 16:17 *Gubanov A.N., Verkhov V.A., Antonov A.S.*  
**EXPERIMENTAL STUDY OF «FLIPPING» METALATION OF 4-DIMETHYLAMINOPYRIDINE**
- 16:18 - 16:28 *Kutuzov I.A., Danilkina N.A.*  
**NICHOLAS REACTION IN CYCLOALKYNE-SULFAMATES SYNTHESIS**

## POSTER SESSION

### TUESDAY, 03.09, 15:00 - 16:45

- 4-1. *Abramov V.M., Tokhtueva M.D., Melekhin V.V., El'tsov O.S.*  
**SYNTHESIS OF Pt(IV) COMPLEXES OF ARYLBIPIRIDINES AS POTENTIAL ANTICANCER PRODRUGS**
- 4-2. *Adamchik M.A., Levashova E.Y., Dar'in D.V.*  
**3-DIAZOPYPERIDINE-2,4-DIONES IN THE SYNTHESIS OF SPIROCYCLIC BIS-LACTAMS VIA THE THERMALLY PROMOTED WOLFF REARRANGEMENT-STAUDINGER CYCLOADDITION**
- 4-3. *Agarkov A.S., Mingazhetdinova D.O., Nefedova A.A., Gabitova E.R., Kozhikhov A.A., Ovsyannikov A.S., Litvinov I.A., Voloshina A.D., Solovieva S.E., Antipin I.S.*  
**THIAZOLO[3,2-a]PYRIMIDINE DERIVATIVES: NEW REARRANGEMENTS, CHIRAL SUPRAMOLECULAR ARCHITECTURES IN THE CRYSTALLINE PHASE AND ANTITUMOR ACTIVITY**



4-4. *Alekseeva A.N., Fedorov A.N.*

**NEW CHROMONE-BASED DERIVATIVES OF 10-MEMBERED LACTONES OBTAINED BY TANDEM NUCLEOPHILIC ADDITION-INTRAMOLECULAR CONDENSATION REACTION**

4-5. *Aslanov S.F., Svinko V.O., Solovyeva E.V.*

**CHITOSAN COATED GOLD NANORODS AS PRECURSORS OF AGENTS FOR HYPERTHERMAL AND PHOTODYNAMIC THERAPY**

4-6. *Zeynalov E.B., Huseynov E.R., Sharifova S.K., Abdullaeva F.A., Behbudova S.K.*  
**SYNERGISTIC EFFECT IN THE CATALYTIC REACTION AEROBIC OXIDATION**

4-7. *Borisova Yu.G., Musin A.I., Dzhumaev Sh.Sh., Raskildina G.Z.*

**HYDROGENATION OF ARYLACROLEINS AS A METHOD FOR OBTAINING NEW CORROSION INHIBITORS**

4-8. *Chekunkov E.V., Minzanova S.T., Mironova L.G., Voloshina A.D., Milyukov V.A.*

**NEW SUGAR BEET PECTIN COMPLEXES WITH TETRACYCLINE: SYNTHESIS, PROPERTIES AND ANTIMICROBIAL ACTIVITY**

4-9. *Cherepanova V.A., Galushko A.S., Ananikov V.P.*

**STUDY OF THE DYNAMICS OF NANOSCALE SYSTEMS ON THE SURFACE OF CARBON MATERIALS UNDER CONDITIONS OF CATALYTIC CROSS-COUPPLING PROCESSES**

4-10. *Churbanova E.S., Gabdrakhmanova F.B., Parfenov A.A., Kleshnina S.R., Solovieva S.E., Antipin I.S.*

**SUPRAMOLECULAR COMPLEXES OF AZO-DERIVATIVES OF THIA CALIX[4] ARENES WITH RHODAMINE DYES FOR VISUALIZATION OF HYPOXIA ON CELLS**

4-11. *Demidov N.A., Nikolaev D.M.*

**DEVELOPMENT OF NOVEL FLUORESCENT ARCHAEORHODOPSIN-3 MUTANTS WITH IN SILICO DIRECTED EVOLUTION**

4-12. *Denisov A. A., Kazantsev D.A., Pestov A.V.*

**DEVELOPMENT OF A METHOD FOR THE PREPARATION OF 5-(ALKYLTHIO)-1H TETRAZOLES**

4-13. *Dolya D.A., Dubashynskaya N.V., Skorik Y.A.*

**SYNTHESIS OF CHITOSAN-HYDROXYCINNAMIC ACID CONJUGATES**

4-14. *Erdelyi K.E., Timofeev S.V., Anufriev S.A., Nasyrova D.I., Sivaev I.B.*

**SYNTHESIS OF NOVEL CARBORANYL-CARBENE COMPLEXES OF RHODIUM**



4-15. *Erina A.A., Borodulin V.B., Zybin D.I., Ishchenko A.A.*

**STUDY OF THE REACTION OF CYANOCOBALAMIN IN THE PRESENCE OF FENTON'S REACTIVE**

4-16. *Faizdrakhmanova A.A., Bykov V.N., Mikhailov I.E., Lvov A.G.*

**FLUORESCENT SWITCHES BASED ON PERI-ARYLOXYQUINONES**

4-17. *Fomin T.O., Krasilnikov V.A., Belskaya N.P.*

**FLUORESCENT PHOTOPROTECTIVE GROUPS BASED ON 1,2,3-TRIAZOLYLTHIAZOLE: SYNTHESIS AND PHOTOPHYSICAL PROPERTIES**

4-18. *Gabov I.S., Pestov A.V.*

**THE REACTIVITY OF EPICHLOROHYDRIN TOWARD CARBON DIOXIDE IN PRESENCE OF ANION EXCHANGE RESINS**

4-19. *Galiakhmetov S.A., Tonkoglazova D.I., Mulloyarova V.V., Antonov A.S.*

**ALKYLATION OF PHOSPHINE SELENIDES**

4-20. *Galkin E.S., Vidyakina A.A., Danilkina N.A.*

**NEW FLUORESCENT CYCLOALKYNE WITH C<sub>2</sub> SYMMETRY: SYNTHESIS AND APPLICATION IN BIOORTHOGONAL CHEMISTRY**

4-21. *Golubev A.S., Golubev I.M., Ostapchuk P.N., Strelkova T.V., Suponitsky K.Yu., Chkanikov N.D.*

**SYNTHESIS OF 4-(TRIFLUOROMETHYL)THIOCOUMARINS**

4-22. *Grigorkevich O.S., Zhurikov R.V., Kovalenko L.P., Durnev A.D., Gudasheva T.A., Dorofeev V.L.*

**DESIGN, SYNTHESIS AND ANTI-TUMOR ACTIVITY OF AN ORIGINAL MATRIX METALLOPROTEINASES-2 AND -9 INHIBITOR**

4-23. *Grishin A.V., Filippov I.P., Zakharov T.N., Khlebnikov A.F., Novikov M.S., Rostovskii N.V.*

**DBU-PROMOTED CYCLIZATIONS OF CYCLOPENTYL-SUBSTITUED OXAZAPOLYENES TO CYCLOPENTAPYRIDONES AND HYDROXYPYRROLES: EXPERIMENTAL AND DFT STUDY**

4-24. *Gromov N.V., Tsagaraev T.V., Andreeva A.S., Falchevskay A.S.*

**ANTAGONISTIC ACTIVITY OF GALLIUM AND ITS COMPOUNDS**

4-25. *Ivanova E.S., Nasakin O.E.*

**ALTERNATIVES TO RECYCLING HEPTYL INTO A PRACTICALLY VALUABLE BIOLOGICALLY ACTIVE COMPOUND**

4-26. *Ivanova M.M., Belousov M.S.*

**NOVEL CARBAZOLE-FUSED BORON SUBPORPHYRAZINES: SYNTHESIS AND STUDY OF OPTICAL AND PHOTOCHEMICAL PROPERTIES**



4-27. *Karagodin B.D., Dubovtsev A.Yu.*

**GOLD-CATALYZED CYCLOADDITION OF ENYNES AND CYANAMIDES**

4-28. *Karamanova D.A., Fatykhova A.A., Gimadiev T.R.*

**USING AN ORGANIC REACTION NETWORK TO PREDICTING SYNTHESIS PATHWAYS**

4-29. *Kazantsev D.A., Denisov A.A., Pestov A.V.*

**SYNTHESIS OF DINITRODIARYLAMINES – STRUCTURAL FRAGMENTS OF PHOTOLABILE GROUPS**

4-30. *Khashimova D.D., Efremova M.M., Govdi A.I.*

**MICROWAVE ASSISTED CYCLOADDITION OF BENZONITRILE OXIDES TO 1-IODOBUTA-1,3-DIYNES**

4-31. *Khmelevskaya E.A., Danilkina N.A., Aleksanyan N.N., Silonov S.A., Balova I.A.*

**MODIFICATION OF ACYCLIC ENEDIYNES AND STUDY OF THEIR BIOLOGICAL ACTIVITY**

4-32. *Kim M.D., Kaminskiy N.A., Govdi A.I., Danilkina N.A.*

**A REMARKABLE ARRAY OF COBALT- PROTECTED CYCLOALKYNE REAGENT PRECURSORS OBTAINED VIA NICHOLAS CYCLIZATION**

4-33. *Kononov A.I., Strekalova S.O., Zlygostev A.D., Khvorova M.A., Saveliev G.N., Budnikova Y.H.*

**C-N AND C-C BOND FORMATION IN ELECTROOXIDATION REACTIONS OF AROMATIC COMPOUNDS**

4-34. *Kotikova P.F., Dubovtsev A.Yu.*

**COINAGE (Au, Ag, Cu) METAL-CATALYZED (3+2) ANNULATION OF  $\alpha$ -AMINOKETONES AND ELECTRON-DEFICIENT ALKYNES AS A ROUTE TO 3-EWG-SUBSTITUTED PYRROLES**

4-35. *Koval V.S., Morozova E.A., Kulikova V.V., Revtovich S.V., Chobanyan A.A., Sidrorova A.I., Solyev P.N.*

**POLYIONIC VESICLES FOR TARGETED DELIVERY OF THE THERAPEUTIC ENZYME METHIONINE- $\gamma$ -LYASE**

4-36. *Krasilnikov V.A., Fomin T.O., Vargina M.V., Belskaya N.P.*

**NEW FLUOROPHORES BY THE INTEGRATION OF THE 2-ARYL-1,2,3-TRIAZOLE AND THIAZOLE RINGS**

4-37. *Kryazh V.V., Fershtat L.L.*

**SYNTHESIS OF NEW TETRAZINE-BASED POLYNITROGEN STRUCTURES**

4-38. *Ledneva A.I., Soldatova N.S.*

**SYNTHESIS OF NEW DONORS OF NON-COVALENT INTERACTION FROM DIARYLIODONIUM SALTS**

4-39. *Levashova E.Yu., Adamchik M.A., Dar'in D.V.*

**CHEMO- AND DIASTERESELECTIVE ENTRY INTO ALL-CARBON  $\alpha$  QUATERNARY ALDEHYDES VIA C-C INSERTION OF 4 DIAZOISOQUINOLIN-3-ONES INTO C-CHO BONDS**

4-40. *Logvinenko N.A., Volchkov N.S., Antonova A.S., Vasilyev K.A., Zubkov F.I.*

**ARCHITECTURE MODIFICATION OF HOVEYDA- GRUBBS TYPE RUTHENIUM CATALYSTS: A COMBINATION OF EFFICIENCY AND STABILITY IN THE OLEFINS METATESIS REACTION**

4-41. *Lystsova E.A., Maslivets A.N., Khramtsova E.E.*

**IN SITU GENERATION OF ACYL(1,3-BENZOTHAZOL-2-YL)KETENES: THERMOLYSIS OF PYRROLO[2,1-c][1,4]BENZOTHAZINE-1,2,4-TRIONES**

4-42. *Bodrov A.S., Makeev M.A., Ushakov A.V., Burashnikova M.M.*

**CATALYST FOR SELECTIVE OXIDATION OF PROPYLENE AND AMMONIA**

4-43. *Malakhova M.A., Gorbunov A.N.*

**TRIAZOLATED CALIX[4]SEMITUBES FEATURING STERICALLY HINDERED GROUPS AND ADDITIONAL FUNCTIONAL UNITS**

4-44. *Martyanov G.S., Barabanov M.A., Pestov A.V.*

**STEPWISE HYDROLISIS OF N-ALKYLATED 3,4-DIHYDROPYRIMIDO[2,1-a] ISOINDOL-6(2H)-ONES**

4-45. *Menchicov V.V., Govdi A.I.*

**SYNTHESIS NEW FLUORESCENT DYES BASED ON 4,5-DIETHYNYL-1,2,3-TRIAZOLES**

4-46. *Metelkina E.M., Nikolaev D.M.*

**DEVELOPMENT OF FAR-RED ARCHAERHODOPSIN-3-BASED FLUORESCENT GENETICALLY-ENCODED VOLTAGE INDICATORS**

4-47. *Molchanov M.I., Zavyalova V.V., Slovesnova N.V., Petrov A.Yu., Nikonov I.L., Galishev B.A., Kopchuk D.S., Grzhegorzhevskii K.V.*

**OPTIMIZATION OF THE ANTHOCYANINS EXTRACTION FROM THE RICE «SOUTHERN NIGHT»**



4-48. *Morozova P.Yu., Valueva S.V., Danilova A.B.*

**MODIFICATION OF RADACHLORIN WITH SELENIUM NANOPARTICLES AND AN AMPHIPHILIC MOLECULAR BRUSH FOR USE IN PDT**

**THURSDAY, 05.09, 17:00 - 18:30**

4-49. *Nepochatyi G.D., Popova E.A.*

**SYNTHESIS OF NEW METHYL 5(2METHOXY2OXOETHYL)1ARYL1,2,3TRIAZOLE4 CARBOXYLATES**

4-50. *Ponomarev A.S., Norkin R.R., Yanigina L.M., Khusainova L.A., Vovchenko A.A., Rizvanov A.A.*

**THE EFFECT OF GENETIC MODIFICATION ON THE LEVEL OF TRANSGLUTAMINASE 1 IN SKIN CELLS: EVALUATION OF EFFECTIVENESS AND SAFETY**

4-51. *Novikova V.P., Dubashynskaya N.V., Skorik Y.A.*

**POLYSACCHARIDE-BASED PREDNISOLONE DELIVERY SYSTEMS**

4-52. *Novoselskaya Y.S., Podrezova A.G., Nikitina E.V.*

**HYPERBARIC IMDAF REACTION BETWEEN BIS-FURYL DIENES AND FUMARIC ACID ESTERS**

4-53. *Ogurtsova A.D., Mikhaylov V.N.*

**THE RICHTER REACTION IN THE SYNTHESIS OF PYRAZOLO[4,3-b]PYRIDINE COMBRETASTATIN ANALOGS**

4-54. *Osipov A.A., Rajakumar K., Nayfert S.A., Zherebtsov D.A., Efremov A.N.*

**TERPHENYLDICARBOXYLIC ACID AS PROMISING LINKER FOR METAL-ORGANIC FRAMEWORKS**

4-55. *Oskolsky I.A., Alexandrova L.A., Makarov D.A., Jasko M. V., Karpenko I.L., Efremenkova O.V., Vasilyeva B.F., Avdanina D.A., Ermolyuk A.A., Benko E.E., Kalinin S.G., Kolganova T.V., Kochetkov S.N., Zhgun A.A.*

**N<sup>4</sup>-ALKYLMODIFIED CYTIDINE DERIVATIONS AS MICROBIAL GROWTH INHIBITORS**

4-56. *Pankov D.I., Terekhov R.P., Selivanova I.A.*

**CHROMATOGRAPHIC CONTROL OF DIHYDROQUERCETIN DIASTEREOMERIZATION**

4-57. *Serdyuchenko P.Yu., Bityukov O.V., Vil' V.A., Terent'ev A.O.*

**COBALT-CATALYZED PEROXIDATION OF CYCLIC CH-ACIDS**

4-58. *Perepechay A.A., Sukach S.M., Dyachenko V.D.*

**NEW MULTICOMPONENT METHODS FOR THE SYNTHESIS OF SUBSTITUTED 1,4-DIHYDRO-1,6-NAPHTHYRIDINES**

4-59. *Petropavlovskaya M.V., Palkeeva M.E., Molokoedov A.S., Ovchinnikov M.V., Sidorova M.V.*

**MINIMIZATION OF SIDE PROCESSES IN SOLID-PHASE PEPTIDE SYNTHESIS USING FMOC-DEPROTECTION REAGENTS ALTERNATIVE TO PIPERIDINE**

4-60. *Poltavtsev I.D., Kouame E.K., Ushakov I.A., Lysenko K.A., Lvov A.G.*

**FUNCTIONALIZED OXAZOLE DERIVATIVES: UNEXPECTED REACTIONS AND EFFECTS**

4-61. *Posypayko E.E., Buikin P.A., Korlyukov A.A.*

**MULTICOMPONENT CRYSTALS BASED ON FAVIPIRAVIR**

4-62. *Pronina Yu.A., Boitsov V.M., Stepanov A.V.*

**THE CONSTRUCTION OF SPIRO[1-AZABICYCLO[3.2.0]HEPTANE] FRAMEWORKS VIA 1,3-DIPOLAR CYCLOADDITION**

4-63. *Puzanov A.I., Vasilyev A.V.*

**REACTIONS OF LEVULINIC ACID WITH ARENES UNDER SUPERELECTROPHILIC ACTIVATION**

4-64. *Radiupov V.E., Nenova A.V., Kantin G.P., Dar'in D.V.*

**N-H INSERTION REACTION OF DIAZO COMPOUNDS IN TETRAZOLES**

4-65. *Rajakumar K., Osipov A.A., Efremov A.N., Zherebtsov D.A., Nayfert S.A.*

**THE CONCEPT OF «ANTI-MOF». STRUCTURAL FEATURES OF HEXAMETHYL-[1,1'-BIPHENYL]-4,4'-DIAMMONIUM SALTS**

4-66. *Reznichenko A.A., Reznichenko E.A., Ledovskaya M.S., Voronin V.V.*

**S-VINYL DERIVATIVES AS ACETYLENE SURROGATES IN THE SYNTHESIS OF PYRIDAZINES UNDER MICROWAVE ACTIVATION**

4-67. *Reznichenko E.A., Reznichenko A.A., Ledovskaya M.S., Voronin V.V.*

**CALCIUM CARBIDE IN TOTAL SYNTHESIS OF (HETERO)ARYL ACETYLENES**

4-68. *Romanenko I.A., Novikov M.S.*

**PHOSPHORUS(III) COMPOUNDS AS REAGENTS FOR THE TRANSFORMATION OF 2-HALOAZIRINES**

4-69. *Romanenko N.R., Faraonov M.A., Konarev D.V.*

**COORDINATION COMPLEXES OF THE ORGANIC DYE VIOLANTHRONE WITH VARIOUS TRANSITION METAL COMPOUNDS**

4-70. *Ryabchikova M.N., Nelyubin A.V., Zhdanov A.P., Zhizin K.Yu.*

**RECEIVING AND APPLYING CLOSO-BORANE ANIONS AND NATURAL AMINO ACIDS IN BNCT**



4-71. *Safinskaya Y.V., Il'in M.V., Bolotin D.S.*

**ORGANOCATALYSIS BASED ON CHALCOGEN- AND HALOGEN-BOND-DONATING CYANOBORORHYDRIDES**

4-72. *Sergeeva E.S., Svistova A.A., Vologzhanina A.V., Lyssenko K.A., Ushakov I.A., Lvov A.G.*

**UNEXPECTED PHOTOREACTIONS OF SEMI-STIFF-DIARYLETHENES**

4-73. *Shmelev A.A., Shaikhutdinov I.K., Sokolov A.V., Alexandrov E.V.*

**DESIGN OF FERROELECTRIC METAL-ORGANIC FRAMEWORKS BY REPLACING SYMMETRIC LIGANDS WITH POLAR ONES**

4-74. *Shnigirev R.B., Lvov A.G.*

**PHOTOCHROMIC DIARYLETHENE CONTAINING N-HETEROCYCLIC CARBENES**

4-75. *Shremzer E.S., Polivanovskaia D.A., Birin K.P., Tsvadze A.Yu.*

**ENHANCING THE PHOTOCATALYTIC EFFICIENCY OF PYRAZINOPORPHYRINS: INNOVATIVE STRATEGIES AND PERSPECTIVES**

4-76. *Sidorova A.I., Koval V.S., Morozova E.A., Revtovich S.V., Kulikova V.V., Anufrieva N.V., Solyev P.N.*

**SYNTHESIS OF DAIDZEIN DERIVATIVES FOR TARGETED DELIVERY**

4-77. *Sitdikova A.R., Shchegravina E.S., Svirshchevskaya E.V., Fedorov A.Yu.*

**DESIGN, SYNTHESIS AND BIOLOGICAL EVALUATION OF HYDROPHILIC PRODRUGS OF HETEROCYCLIC ALLOCOLCHICINOIDS**

4-78. *Sivoplyas E.A., Kulikov A.M.*

**REGULATION OF A HIGHLY CONSERVED PROTONCOGEN USING microRNA**

4-79. *Smirnova S.S., Selivanova M.M., Seromlyanova K.A., Zaytseva M.M., Markova E.B.*

**EFFECT OF POSITION B METAL SUBSTITUTION ON THE ACTIVITY OF YbxByOz COMPLEX-OXIDE SYSTEMS IN CATALYTIC CRACKING OF PROPANE**

4-80. *Sobov P.A., Faraonov M.A., Konarev D.V.*

**SUPPRESSION OF THE C60•- DIMERIZATION BY  $\pi$ -STACKING**

4-81. *Sokolova A.N., Bezhenar G.V., Zdereva P.S., Paponov B.V.*

**INTERACTION OF PURINE NUCLEIC BASE PERCHLORATES WITH ACETYLACETONE**

4-82. *Solodyankina O.V., Baykova S.O., Baykov S.V.*

**REACTION OF AMIDOXIMES WITH PYRIDINE-N-OXIDES**

4-83. *Syrovsky D.V., Fedin V.V., Usachev S.A., Sosnovskikh V.Ya.*

**SYNTHESIS AND SOME PROPERTIES OF 3-ALKYNYL-4-PYRONES**

4-84. *Titova P.K., Alikin N.A., Obydenov D.L., Steparuk E.V., Sosnovskikh V.Ya.*

**REACTIONS OF EPOXIDES OF ETHYL 5-ACYL-4-PYRONE-2-CARBOXYLATES WITH AMINES**

4-85. *Valov N.R.*

**A NEW SYNTHETIC WAY FOR THE PREPARATION OF TEMPO DERIVATIVES**

4-86. *Valutsa N., Gladkova E., Chepanova A., Zakharenko A., Luzina O., Salakhutdinov N., Lavrik O.*

**NOVEL 9-O BERBERINE DERIVATIVES AS TYROSYL-DNA PHOSPHODIESTERASE 1 INHIBITORS**

4-87. *Vasilchenko D.S., Rostovsky N.V., Trishin Yu.G.*

**HYDROGENATION OF O-H INSERTION PRODUCTS OF TERPENE ALCOHOLS WITH 5-ARYL-1-ARYLSULFONYL-1,2,3-TRIAZOLES**

4-88. *Vasileva M.S., Semenov A.V., Baykov S.V.*

**[3+2]-DIPOLAR CYCLOADDITION OF 1,2,3-TRIAZOLE N-OXIDES TO ARYNES**

4-89. *Vavilov M.V., Petushkov V.N., Rodionova N.S., Khokhlova A.N., Zagitova R.I., Dubinnyi M.A., Yampolsky I.V.*

**BRET IN BIOLUMINESCENT SYSTEM OF EARTHWORMS HENLEA SP**

4-90. *Volchkov N.S., Logvinenko N.A., Antonova A.S., Vasilyev K.A., Zubkov F.I.*

**HOVEYDA-GRUBBS RUTHENIUM CATALYST CONTAINING TRIDENTATE BENZYLIDENE LIGAND**

4-91. *Weber D.I., Sapegin A.V.*

**SYNTHESIS OF 3-ARYLSUBSTITUTED 4,5,6,7-TETRAHYDRO-[1,2,3]TRIAZOLO[1,5-a]PYRASINES WITH CATALYST-FREE AZIDE-ALKYNE CYCLOADDITION**

4-92. *Zagitova R.I., Purtov K.V., Shcheglov A.S., Belozerova O.A., Yampolsky I.V.*

**PEROXIDES OF POLYUNSATURATED FATTY ACIDS AS SUBSTRATES IN BIOLUMINESCENCE SYSTEM OF MARINE POLYCHAETE CHAETOPTERUS VARIOPEDATUS**

4-93. *Zaitseva Y.M., Mushatakov A.G., Smirnova S.S., Anistratov N.A., Selivanova M.M., Markova E.B.*

**ADSORPTION OF A CHEMICAL IRRITANT, PYRIDINE ON A METAL-ORGANIC FRAMEWORK NiABDC**



4-94. *Zanakhov T.O., Galenko E.E., Novikov M.S., Khlebnikov A.F.*

**HETEROANNULATION OF 2-(A-DIAZOACYL)-2H-AZIRINES WITH AMIDINES IN DIAZO SYNTHESIS OF FUNCTIONALIZED NAPHTO[1,2-D]IMIDAZOLES**

4-95. *Zapevalova M.V., Fonareva I.P., Shchegravina E.S., Scherbakov A.M., Svirshchevskaya E.V., Fedorov A.Yu.*

**NOVEL 2,4-DIMORPHOLINOQUINAZOLINE-BASED INHIBITORS OF PI3K-AKT-MTOR SIGNALING PATHWAY**

4-96. *Zavyalova V.V., Slovesnova N.V., Petrov A.Yu., Vatolina S.E., Krinochkin A.P., Kopchuk D.S., Zyryanov G.V.*

**PROSPECTS FOR THE USE OF UNUSABLE DRUGS AS SYNTHONS IN ORGANIC SYNTHESIS**

4-97. *Melnikov V.E., Khmelevskaya E.A., Danilkina N.A.*

**SYNTHESIS OF ETHYNYL SUBSTITUTED INDOLE-PYRROLINE DYADS UNDER NICHOLAS REACTION CONDITIONS**



## 5. ADVANCES IN COORDINATION AND INORGANIC CHEMISTRY

CHAIRMAN: Dr. **Nikita Bogachev**, Institute of Chemistry, SPbU

SECRETARY: Dr. **Yulia Toikka**, Institute of Chemistry, SPbU

### ORAL REPORTS

**WEDNESDAY, 04.09, Room 1206**

9:00 - 9:25

**KEYNOTE  
SPEAKER**

*Dr. Sci. Irina Goryacheva*

**Semiconductor Quantum Dots for Bioanalysis**

9:25 - 9:45

**INVITED  
SPEAKER**

*Dr. Sci. Andrey Mereshchenko, Butorlin O.S., Petrova A.S.,  
Toikka Yu.N., Badikov A.R., Bogachev N.A., Skripkin M.Yu.*

**Luminescent Heterometallic Rare Earth Based  
Terephthalate MOFs**

9:45 - 9:55

*Antonova Eling, Kinzhalov M.A.*

**SOLID STATE CONTROL OF THE PHOSPHORESCENCE  
OF PLATINUM(II) COMPLEXES BY INTERMOLECULAR  
INTERACTIONS**

9:55 - 10:05

*Boltkov Evgenii, Belousov Yu.A., Lermontova E.Kh.,  
Goncharenko V.E., Glazunova T.Yu.*

**RARE EARTH FLUOROTRIFLUOROACETATES: SYNTHESIS,  
STRUCTURE AND LUMINESCENCE PROPERTIES**

10:05 - 10:15

*Gromyko Anastasiya, Tretyakova G.O., Mirochnik A.G.,  
Fedorenko E.V.*

**SPIROBORATE COMPLEXES BASED ON BETA-DIKETONES  
AND BETA-KETOIMINES: SYNTHESIS AND LUMINESCENCE**

10:15 - 10:25

*Erzunov Dmitrii, Vashurin A.S.*

**FLUORESCENT ACTIVITY AND BEHAVIOUR ESPECIALITIES  
OF SUBSTITUTED PHTHALOCYANINE COMPLEXES**

10:25 - 10:35


*Valeriya Meshcheryakova, Glebov E.M.*

**PHOTOPHYSICAL AND PHOTOCHEMICAL PROPERTIES  
OF THE DIRHODIUM COMPLEX IN THE CONTEXT OF ITS  
POTENTIAL APPLICATION IN PHOTODYNAMIC THERAPY**

10:35 - 10:45

*Luginin Maksim, Grachova E.V.*

**SYNTHESIS AND PHOTOPHYSICAL PROPERTIES  
OF ANTHRACYL AND ETHYNYLANTHRACENE BIS  
CYCLOMETALLATED GOLD(III) COMPLEXES BEARING A  
ETHYNYLDIPHENYLPHOSPHORYL GROUP**



10:45 - 10:55

*Roman Shilov, Shakirova J.R., Baigildin V.A.*

**LUMINESCENT WATER-SOLUBLE BLOCK COPOLYMERS OF CYCLOMETALATED PLATINUM(II) COMPLEXES AND POLYVINYLPIRROLIDONE: SYNTHESIS, STRUCTURE AND AGGREGATION INDUCED EMISSION EFFECT**

11:20 - 11:30

*Abramova Evgeniya, Grachova E.V.*

**BIPYRIDINE-BASED PHOSPHINE OXIDES AS ANCILLARY LIGANDS FOR BIS-CYCLOMETALLATED IRIIDIUM(III) COMPLEXES**

11:30 - 11:40

*Burlakova Marina, Tsymbarenko D.M., Grebenyuk D.I.*

**SYNTHESIS AND STUDY OF POLYNUCLEAR REE HYDROXOTRIFLUOROACETATES**

11:40 - 11:50

*Eliseeva Anastasiya, Busygina A.A., Rozhkov A.V., Ivanov D.M., Bokach N.A.*

**METAL-INVOLVING NONCOVALENT INTERACTIONS IN PLATINUM(II) DITHIOCARBAMATE COMPLEXES**

11:50 - 12:00

*Kashina Maria, Kinzhalov M.A.*

**GREEN- AND BLUE-LIGHT HYDROSILYLATION PHOTOCATALYSIS WITH PLATINUM(II) METALLA NHETEROCYCLIC CARBENE COMPLEXES**

12:00 - 12:10

*Maria Lavrova, Mishurinskii S.A., Verzun S.A., Sirotin M.A., Korshunov V.M., Dolzhenko V.D.*

**CYCLOMETALATED RUTHENIUM(II) COMPLEXES WITH VARIOUS ARYLAZOLES: FINE TUNING OF ELECTRONIC STRUCTURE**

12:10 - 12:20

*Novikov Dmitriy, Koshenskova K.A., Nebykov D.N., Eremenko I.L., Lutsenko I.A.*

**COPPER(II) COMPLEXES AS PRECURSORS OF EFFECTIVE HYDROGENATION CATALYSTS**

12:20 - 12:30

*Paderina Aleksandra, Sizova A.A., Grachova E.V.*

**CATIONIC OR NEUTRAL: DEPENDANCE OF PHOTOPHYSICAL PROPERTIES OF BIS ALKYNYLPHOSPHONIUM Pt(II) COMPLEXES ON ANCILLARY LIGAND**

12:30 - 12:40

*Panova Elizaveta, Safin D.A.*

**SYNTHESIS AND MOLECULAR DOCKING STUDIES OF THE NICKEL(II) CHELATES WITH CYCLOHEXYL CONTAINING SCHIFF BASES**

12:40 - 12:50

*Daria Semeshkina, Dolzhenko V.D.*

**POLYNUCLEAR HETEROMETALLIC COMPLEXES OF LANTANIDES AND NICKEL WITH L-ALANINE**

12:50 - 13:00

*Tyupina Margarita, Miroslavov A.E., Sidorenko G.V., Sakhonenkova A.P.*

**NEW <sup>99m</sup>Tc RADIOPHARMACEUTICALS FOR MYOCARDIAL METABOLIC PROCESSES**

**THURSDAY, 05.09, Room 1206**

9:30 - 9:50

**INVITED  
SPEAKER**

*Dr. Jefferson L. Ferrari*

**The Conversion of Energy into Inorganic Materials Containing Rare Earths for Possible Use in Photodynamic Therapy**

9:50 - 10:00

*Ivanov Daniil*

**INTERMOLECULAR PNICTOGEN BONDING WITH METALS**

10:00 - 10:10

*Luhang Xu, Kostin M.A., Alkhuder O., Krutin D.V., Asfin R.E., Tolstoy P.M.*

**SPECTROSCOPIC STUDY OF HYDROGEN BONDING IN COMPLEXES OF PHOSPHINE OXIDES WITH PHENOLS AND ALCOHOLS**

10:10 - 10:20

*Kendin Mikhail, Shaulskaya M.D., Tsymbarenko D.M.*

**INTRIGUING LATTICE DYNAMICS IN ALIPHATIC METAL CARBOXYLATES: PHASE TRANSITIONS AND ANOMALOUS THERMAL EXPANSION**

10:20 - 10:30

*Kuchkaev Airat, Kuchkaev A.M., Sukhov A.V., Zueva E.M., Yakhvarov D.G.*

**WHITE IS THE NEW BLACK. COORDINATION COMPOUNDS DERIVED FROM WHITE PHOSPHORUS ACTIVATION AS ELECTROCATALYSTS FOR HYDROGEN PRODUCTION**

10:30 - 10:40

*Milenkaya Elena, Skripov N.I., Kornaukhova T.A., Belykh L.B., Schmidt F.K.*

**INFLUENCE OF P-ELEMENTS (P, S) ON THE PROPERTIES OF PALLADIUM CATALYSTS IN THE DIRECT SYNTHESIS OF HYDROGEN PEROXIDE**



10:40 - 10:50

*Nikandrov Nikita, Spasskaya S.A., Tsymbarenko D.M.*

**NANOSIZED CeO<sub>2</sub>: SYNTHESIS FROM POLYNUCLEAR COORDINATION COMPOUNDS AND STUDY OF ITS CATALYTIC PROPERTIES**

10:50 - 11:00

*Soldatova Natalia, Ivanov D.M., Abramov P.A, Postnikov P.S.*

**IODONIUM OCTAMOLYBDATE: NEW EDGE IN CHEMISTRY OF IODONIUM METALLATE**

11:00 - 11:10

*Suchkova Anastasia, Bykov M.V., Pakhomova M.V., Suslov D.S.*

**SYNTHESIS AND CATALYTIC PROPERTIES OF CATIONIC PALLADIUM AND NICKEL-ACETYLACETONATE COMPLEXES BEARING PYRIDINYLMINE LIGANDS**

11:10 - 11:20

*Sukhorukov Dmitry, Dmitruk K.A., Mukha S.A., Komova O.V., Simagina V.I., Netskina O.V.*

**A SOLVENT-FREE SYNTHESIS OF COBALT-CONTAINING CATALYSTS FOR THE HYDROLYSIS OF SODIUM BOROHYDRIDE**

11:20 - 11:30

*Ubovich Milosh, Mukhin K.A., Mazur Ya.E*

**PECULIARITIES OF COORDINATION OF WATER MOLECULES IN MIXTURES OF IONIC LIQUIDS AND WATER, CONTAINING Al<sup>3+</sup> CATION**

11:50 - 12:00

*Azimova Gunel, Babayev E.M.*

**CATALYTIC CONVERSION OF CARBON MONOXIDE INTO CARBON DIOXIDE IN THE PRESENCE OF COBALT FERRITE SPINELS**

12:00 - 12:10

*Bykov Andrey, Shestimerova T.A., Gontcharenko V.E., Shevelkov A.V.*

**TUNING OF CRYSTAL STRUCTURES OF ORGANIC-INORGANIC METAL HALIDES FOR REDUCING THE BANDGAP FOR LEAD-FREE PEROVSKITE PHOTOVOLTAICS**

12:10 - 12:20

*Di Zhou, Semenok D.V.*

**NUCLEAR MAGNETIC RESONANCE IN LANTHANUM SUPERHYDRIDES**

- 12:20 - 12:30 *Gaifullina Erika, Zarafutdinova Z.R., Gataullina R.M., Shmelev A.G., Kornev T.A, Nizameeva G.R., Ziyatdinova A.B., Amirov R.R.*  
**SULFUR QUANTUM DOTS STABILIZED BY CATIONIC SUPRAMOLECULAR STRUCTURES**
- 12:30 - 12:40 *Jyakhwo Susan*  
**DISCOVERING SELECTIVELY ANTIMICROBIAL INORGANIC NANOPARTICLES FOR TARGETED ERADICATION OF PATHOGENIC BACTERIA**
- 12:40 - 12:50 *Kalle Paulina, Churakov A.V., Kuzmina L.G., Bezzubov S.I.*  
**CRYSTAL STRUCTURES AND THERMAL PROPERTIES OF POTASSIUM ACETATE AND SORBATE**
- 12:50 - 13:00 *Kalyaskin Pyotr, Petropavlovskii K.S., Novicenkova T.B., Sulman M.G.*  
**SELF-REINFORCEMENT EFFECT IN THE PROCESS OF SYNTHESIS OF GYPSUM COMPOSITES BASED ON FLY ASH WITH A HIGH CONTENT OF FREE CALCIUM OXIDE**
- 13:00 - 13:10 *Lagunova Varvara, Filatov E.Yu., Korenev S.V.*  
**FORMATION OF METASTABLE SOLID SOLUTIONS  $Rh_xCu_{1-x}$  AND  $Ir_xCu_{1-x}$  DURING THERMAL DECOMPOSITION OF COMPLEX PRECURSORS**
- 13:10 - 13:20 *Popova Elena, Egorysheva A.V., Ellert O.G., Kirdyankin D.I., Imshennik V.K., Kulikova E.S., Khramov E.V.*  
**STRUCTURAL TRANSFORMATIONS IN PYROCHLORE-LIKE SOLID SOLUTIONS BASED ON  $Y_2FeTaO_7$**
- 13:20 - 13:30 *Semenok Dmitrii, Zhou D.*  
**HYDRIDE CHEMISTRY AT ULTRA-HIGH PRESSURE**
- 13:30 - 13:40 **ONLINE** *Abdulaziz Khokimov, Eminov A.M., Kadirova Z.R., Eminov Sh.O.*  
**PHYSICO-CHEMICAL STUDY OF THE COMPOSITION AND PROPERTIES OF DUNE SANDS OF YAZYAVAN**
- 13:40 - 13:50 **ONLINE** *Punda Aleksandr, Zhivulin V.E., Pavlova K., Gudkova S., Vinnik D.A.*  
**SYNTHESIS AND INVESTIGATION OF HEXAFERRITE  $BaFe_{12-x}In_xO_{19}$  ( $X = 0.25-1$ )**



14:50 - 14:55

*Toikka Yulia, Bokach N.A.*

**COCRYSTALS OF Cu<sub>4</sub>I<sub>4</sub>-CLUSTERS CONTAINING  
PERFLUOROARENE MOLECULES: STRUCTURAL AND  
LUMINESCENT STUDIES**

14:55 - 15:00

*Alatortsev Oleg, Volchkov V.V., Khimich M.N., Melnikov M.Ya.,  
Fomina M.V., Gromov S.P.*

**SPECIFICITY OF COMPLEXATION AND PHOTOINDUCED  
RECOORDINATION OF BIS-AZA-18-CROWN-6-  
CONTAINING DIBENZYLIDENECYCLOPENTANONE WITH  
ALKALI AND ALKALINE-EARTH METAL**

15:00 - 15:05

*Babitova Ekaterina, Sakhonenkova A.P., Miroslavov A. Ye.,  
Brechalov A.A.*

**NEW SYNTHESIS METHODS OF DECACARBONYL  
DITECHNETIUM-99**

15:05 - 15:10

*Badanina Ksenia, Korolev R.I., Makeev B.A., Zhuk N.A.*

**SYNTHESIS OF NANOCRYSTALLINE Bi<sub>2</sub>Cr<sub>0.5</sub>Co<sub>0.5</sub>Nb<sub>2</sub>O<sub>9</sub>+Δ  
CERAMICS**

15:10 - 15:15

*Bolotko Alyona, Shmelev M.A., Chistyakov A.S., Taydakov I.V.,  
Varaksina E.A., Sidorov A.A., Eremenko I.L.*

**DIRECTED DESIGN OF BRIGHTLY LUMINESCENT MIXED-  
CARBOXYLATE BENZOATE-PENTAFLUOROBENZOATE  
LANTHANIDE COMPLEXES**

15:15 - 15:20

*Brechalov Alexandr, Babitova E.S., Aleksandrof T.S., Smirnov I.V.*

**EXTRACTION SEPARATION OF YTTRIUM FROM  
STRONTIUM IN CARBONATE MEDIA**

15:20 - 15:25

*Dracheva Ekaterina, Paderina A.V., Luginin M.E., Snetkov D.A.*

**ALKYNYL GOLD(I) COMPLEXES WITH D-Π-A LIGANDS:  
SYNTHESIS AND PHOTOPHYSICAL PROPERTIES**

15:25 - 15:30

*Krot Anna, Matveev P.I.*


**SPECTROSCOPIC INVESTIGATION OF NP(V) COMPLEXES  
WITH N,O-DONOR LIGAND IN ORGANIC PHASE**

15:30 - 15:35

*Kudina Polina, Kazakov I.V.*

**BIDENTATE LEWIS ACIDS FOR SMALL MOLECULE  
ACTIVATION**

- 15:35 - 15:40 *Meshcheriakova Elizaveta, Tatarin S.V., Bezzubov S.I.*  
**DESIGN OF CYCLOMETALATED Ir(III) COMPLEXES WITH BENZOPHENAZINE AND BENZOQUINOXALINE MOIETIES FOR NIR EMISSION – EXPERIMENTAL AND THEORETICAL STUDY**
- 15:40 - 15:45 *Novikova Veronika, Zorina-Tikhonova E.N., Efimov N.N., Vologzhanina A.V., Eremenko I.L.*  
**STRUCTURE AND MAGNETIC PROPERTIES OF CoII AND MnII POLYMERS WITH ANIONS OF UNSATURATED MALONIC ACIDS AND BRIDGING N-DONOR LIGANDS**
- 15:45 - 15:50 *Pashkov Gregory, Berdonosov P.S., Lyssenko K.A., Markina M.M., Vasiliev A.N.*  
**NEW COPPER(II) SELENATES: SYNTHESIS, CRYSTAL STRUCTURE, PHYSICAL AND MAGNETIC PROPERTIES**
- 15:50 - 15:55 *Safronova Stefania, Luginin M.E., Grachova E.V.*  
**CYANIDO-BRIDGED HETEROMETALLIC Pt(II)-Au(III) COMPLEXES: SYNTHESIS AND PHOTOPHYSICAL PROPERTIES**
- 15:55 - 16:00 *Savinykh Polina, Golubeva Yu.A., Ermakova E.A.*  
**SYNTHESIS AND CYTOTOXICITY STUDY OF FERROCENYLMETHYL-L-METHIONINE AND ITS 2,2'-BIPYRIDINE / 1,10-PHENANTHROLINE BASED COPPER(II) COMPLEXES**
- 16:00 - 16:05 *Sharifullin Timur, Kazin P.E., Vasiliev A.V.*  
**ALL-INORGANIC SINGLE-ION MAGNET BASED ON HIGH-SPIN IRON(III) IN MAYENITE STRUCTURE**
- 16:05 - 16:10 *Shaulskaya Maria, Grebenyuk D.I., Voropaeva A.S., Tymbarenko D.M.*  
**STRUCTURAL PECULIARITIES AND TRANSFORMATIONS OF THE METAL-ORGANIC FRAMEWORKS FAMILY BASED ON LANTHANIDE TEREPHTHALATES**
- 16:10 - 16:15 *Shevchenko Anna, Doinikov D.A., Davydova E.I.*  
**TENSIMETRIC STUDY OF I<sub>2</sub>-L SYSTEMS (L = PYRIDINE, PYRAZINE, 4,4'-BIPYRIDINE, 2-AMINOPYRIDINE)**
- 16:15 - 16:20 *Sibiriyakov Michael, Kashnik I.V., Brylev K.A.*  
**OCTAHEDRAL HEXARHENIUM METHOXIDE CLUSTER COMPLEXES — NEW PRECURSORS FOR LIGAND EXCHANGE REACTIONS**



16:20 - 16:25

*Skripnyak Polina, Kinzhalov M.A.*

**EMITTERS BASED ON IRIDIUM(III) COMPLEXES WITH C,N-  
CHELATE ACYCLIC DIAMINOCARBENE LIGANDS**

16:25 - 16:30

*Strunin Daniil, Nikovsky I.A., Nelyubina Yu.V.*

**POLYNUCLEAR TRANSITION METAL COMPLEXES BASED  
ON SUBSTITUTED HYDROBENZAMIDES**

16:30 - 16:35

*Tatarin Sergei, Meshcheriakova E.A., Zhuravlev I.S., Minin M.M.,  
Bezzubov S.I.*

**DEVELOPMENT OF APPROACHES TOWARDS  
ENHANCEMENT OF VISIBLE LIGHT-ABSORPTION IN  
CYCLOMETALATED IRIDIUM(III) COMPLEXES**

16:35 - 16:40

*Tomas Matvei*

**METAL-ORGANIC FRAMEWORKS BASED ON {Zn<sub>12</sub>}  
AND {Zn<sub>10</sub>} CARBOXYLATE WHEELS AS POTENTIAL  
ADSORBENTS AND SENSORS**

16:40 - 16:45

*Zavodianskii Matvei, Tretyakova G.O., Svistunova I.V.*

**SYNTHESIS AND LUMINESCENT PROPERTIES OF  
POLYMETHINE DYES BASED ON BORON DIKETONATE  
COMPLEXES**

## POSTER SESSION

### TUESDAY, 03.09, 15:00 - 16:45

5-1. *Strokin Pavel, Goryacheva E.A., Goryacheva O.A., Popova N.R.,  
Goryacheva I.Yu.*

**HIGH-TEMPERATURE ORGANOMETALLIC SYNTHESIS OF LUMINESCENT  
CERIUM (IV) OXIDE NANOPARTICLES**

5-2. *Nykhrikova Ekaterina, Bezzubov S.I.*

**DESIGN AND SYNTHESIS OF HIGHLY EMISSIVE, WATER-SOLUBLE  
CYCLOMETALATED IRIDIUM(III) COMPLEX**

5-3. *Busygina Anastasiya, Eliseeva A.A., Rozhkov A.V.*

**CHALCOGEN BONDING INVOLVING SQUARE PLANAR PLATINUM(II)  
COMPLEXES BEARING CHELATING LIGANDS**

5-4. *Komova Polina, Kinzhalov M.A.*

**NON-COVALENT INTERACTIONS IN ADDUCTS OF PLATINUM(II) AND  
PALLADIUM(II) ISOCYANIDE COMPLEXES WITH MOLECULAR IODINE**



5-5. *Pushikhina Olga, Kozlyakova E.S., Karpova E.V.*

**SYNTHESIS OF POLYNUCLEAR MAGNETIC COPPER COMPLEXES BY CONTROLLED HYDROLYSIS**

5-6. *Vlassova Vassilissa, Bokach N.A.*

**SYNTHESIS AND STRUCTURE OF MONONUCLEAR COPPER(I) COMPLEXES WITH ISOCYANIDES LIGANDS**

5-7. *Sherstyuk Daria, Vinnik D.A., Zhivulin V.E., Shipkova E.D., Perov N.S.*

**CURIE TEMPERATURE OF  $\text{Ni}_x\text{Zn}_y\text{Co}_{1-x-y}\text{O}_4$  (x=0-1) FERRITE**

5-8. *Sherstyuk Darya, Zykova A.R., Kovalev A.I., Zhivulin V.E., Vinnik D.A.*

**SYNTHESIS OF BARIUM HEXAFERRITE WITH HIGH CHROMIUM SUBSTITUTION LEVEL AT DIFFERENT TEMPERATURES**

5-9. *Kiseleva Marina, Bezzubov S.I.*

**EFFECT OF CRYSTAL PACKING ON THE OPTICAL PROPERTIES OF CYCLOMETALATED RHODIUM(III) AND IRIDIUM(III) COMPLEXES WITH 1,3-DIKETONES**

5-10. *Markopolskii Roman, Timusheva N.B., Golubnichiy A.A., Morozov A.V., Savina A.A., Abakumov A.M.*

**IMPLEMENTATION OF BALL-MILL AND SINTERING ADDITIVES FOR GRAIN BOUNDARIES ENGINEERING IN GARNET-TYPE LLZO SOLID ELECTROLYTE**

5-11. *Chernyshev Savely, Vlasov M.I.*

**EVALUATION OF THE FLINAK MELT STRUCTURE BASED ON ELECTRONIC ABSORPTION SPECTRA**

5-12. *Alkhuder Omar, Kostin M.A., Tolstoy P.M.*

**PHOSPHINE OXIDES AS PROBES FOR STUDYING HYDROGEN BONDING**

5-13. *Zykova Alena, Kovalev A.I., Sherstyuk D.P., Zhivulin V.E., Vinnik D.A.*

**SYNTHESIS AND CRYSTAL STRUCTURE OF  $\text{SrFe}_{12-x}\text{Cr}_x\text{O}_{19}$  WITH HIGH CHROMIUM SUBSTITUTION LEVEL (x = 0-6)**

5-14. *Efremeev Leonid, Shmelev M.A., Shapovalov S.S., Varaksina E.A., Taidakov I.V., Sidorov A.A., Eremenko I.L.*

**HETEROANIONIC COMPLEXES OF REE'S WITH PENTAFLUOROBENZOIC AND 2,4,6-TRIMETHYLBENZOIC ACIDS AND AROMATIC N-DONOR LIGANDS**

5-15. *Zykov Sergey, Kuramshin B.K., Mironov V.A., Shtyrlin V.G.*

**SYNTHESIS AND STRUCTURE OF NOVEL MANGANESE CARBOXYLATE POLYMERS**

5-16. Yagovitin Roman, Tsvetkov D.S., Malyshkin D.A., Sereda V.V., Zuev A.Yu.

**SYNTHESIS AND PROPERTIES OF PRASEODYMIUM-BARIUM COBALTITES**

5-17. Shmelev Aleksandr, Shaikhutdinov I.K., Sokolov A.V., Alexandrov E.V.

**DESIGN OF FERROELECTRIC METAL-ORGANIC FRAMEWORKS BY REPLACING SYMMETRIC LIGANDS WITH POLAR ONES**

5-18. Tutmina Natalia, Komarovskikh M.R., Tereshina T.A., Dobrokhotova E.V., Rudnitskaya O.V., Kultyshkina E.K., Khrustalev V.N.

**A NEW DIMERIC THIOCARBAMIDE COMPLEX OF RUTHENIUM**

5-19. Kalinkina Valeria, Antina L.A., Kalygin A.A.

**WATER-SOLUBLE FORMS OF THERANOSTICS BASED ON BIS(BODIPY) AND PLURONIC® F127**

5-20. Verzun Stepan, Lavrova M.A., Mishurinskii S.A., Feoktistova A.V., Bytskevich Yu.M., Sirotin M.A., Korshunov V.M., Dolzhenko V.D.

**SYNTHESIS, OPTICAL AND ELECTROCHEMICAL PROPERTIES AND ELECTRONIC STRUCTURE OF CYCLOMETALATED Ru(II) COMPLEXES WITH 1-BENZYL-2-ARYLBENZIMIDAZOLES WITH DONOR SUBSTITUENTS IN THE BENZIMIDAZOLE FRAGMENT**

5-21. Mishurinskii Sergej, Elin A.D., Sirotin M.A., Korshunov V.M., Dolzhenko V.D., Lavrova M.A.

**ANTENNA LIGAND NATURE EFFECTS ON ELECTRONIC STRUCTURE AND OPTICAL PROPERTIES OF DYES BASED ON CYCLOMETALLATED Ru(II) COMPLEXES WITH CONJUGATED 2-ARYLIMIDAZOLES**

5-22. Astakhov Nikita, Berdonosov P.S.

**SYNTHESIS AND INVESTIGATION OF THE PROPERTIES OF NEW PHASES  $A_2B(SeO_3)_2Cl_2$  and  $A_5B(SeO_3)_4Cl_4$**

**THURSDAY, 05.09, 17:00 - 18:30**

5-23. Ivanov Aleksandr, Petrov D.S., Volkovich V.A., Smirnova V.V.

**SEPARATION OF ZIRCONIUM AND URANIUM USING GALLIUM-BASED ALLOYS**

5-24. Listova Anastasiia, Plakhova T.V., Kuzenkova A.S., Shaulskaya M.D., Tsymbarenko D.M., Gerasimov M.A., Novichkov D.A., Romanchuk A.Yu. Kalmykov S.N.

**TRANSFORMATIONS OF  $CeO_2$  NANOPARTICLES IN SODIUM-PHOSPHATE BUFFER SOLUTIONS: STRUCTURE AND PROPERTIES OF PRODUCTS**

5-25. Gavrikov Andrey

**RATIONAL DESIGN OF NEW HETEROMETALLIC YTTRIUM-BASED COMPLEXES AS PROSPECTIVE ANTIPROIFERATIVE AGENTS**

5-26. *Aleksandrov Timofey, Smirnov I.V., Brechalov A.A., Babitova E.S., Gorbunov P.E.*  
**STUDY OF THE KINETICS OF EXTRACTION OF EUROPIUM AND YTTRIUM IN CARBONATE AND NITRATE MEDIA BY THE IR ATR METHOD**

5-27. *Stozharova Marina, Eliseeva A.A., Ivanov D.M., Soldatova N.S.*  
**HALOGEN BONDING IN DIPHENYLIODONIUM DICHROMATE**

5-28. *Grigorieva Oksana*  
**NEW IODATE FLUORIDES WITH GENERAL COMPOSITION  $MICe(IO_3)_{6-x}F_x$  (MI = ALKALI METAL, X = 0 - 3)**

5-29. *Belareva Miryam, Murtazoev A.F., Moskin A.V., Berdonosov P.S., Vasiliev A.N.*  
 **$FeLn_2(SeO_3)_4X$  (Ln=La, Ce, Pr, Nd; X=Cl, Br) PHASES: SYNTHESIS, CRYSTAL STRUCTURE, MAGNETIC PROPERTIES**

5-30. *Parshukova Kristina, Makeev B.A., Sekushin N.A., Krzhizhanovskaya M.G., Koroleva A.V., Zhuk N.A.*  
**FEATURES OF PHASE FORMATION, DIELECTRIC PROPERTIES, XPS SPECTROSCOPY STUDY OF PYROCHLORE-TYPE  $Bi_2Cr_1/6Mn_1/6Fe_1/6Co_1/6Ni_1/6Cu_1/6Ta_2O_9+\Delta$**

5-31. *Taigina Marina, Sukhikh T.S., Berezin A.S., Nafikov M.D., Vinogradova K.A.*  
**MANGANESE(II) COMPLEXES BASED ON PHOSPHINATAMIDES: SYNTHESIS, STRUCTURE, PHOTOLUMINESCENT PROPERTIES**

5-32. *Buzoverov Mikhail, Gavrikov A.V., Ilyukhin A.B., Efimov N.N.*  
**NOVEL STABLE YTTERBIUM ACETYLACETONATE-QUINALDINATE COMPLEXES AS SINGLE-MOLECULE MAGNETS AND SURPRISINGLY EFFICIENT LUMINOPHORES**

5-33. *Kovalev Andrey, Zykova A.R., Sherstyuk D.P., Zhivulin V.E., Vinnik D.A.*  
**MAGNETIC PROPERTIES CHARACTERIZATION OF CROMIUM SUBSTITUTED SRONTIUM M-TYPE HEXAGONAL FERRITES**

5-34. *Kolbunova Anastasia, Klyukin I.N., Zhizhin K.Yu.*  
**SYNTHESIS AND PHYSICOCHEMICAL PROPERTIES OF O-BORYLATED CARBOXONIUM IONS**

5-35. *Glukhovich Ekaterina, Kazakov I.V.*  
**INTERACTION OF  $E(C_6F_5)_3 \cdot Et_2O$  (E=Al-In) with ICl: COMPETITION OF COMPLEXATION AND DECOMPOSITION**



5-36. *Kosykh Anastasiia, Rychkov V.N.*

**SYNTHESIS OF LAYERED Gd-Eu AND Y-Eu HYDROXIDES AND STUDY OF FLUORESCENT PROPERTIES OF ORGAN-INORGANIC COMPOSITES BASED ON THEM**

5-37. *Madieva Svetlana, Shakirova J.R., Tunik S.P.*

**SYNTHESIS OF NEW ORGANOMETALLIC COMPLEXES Re(I) WITH DIIMINE LIGANDS APPLICATION IN PHOTOACOUSTIC IMAGING**

5-38. *Kostareva Margarita, Ivanov D.M.*

**ELECTROPHILIC-NUCLEOPHILIC DUALISM OF IODIDES IN Pt(IV) DIALKYL CYANAMIDE COMPLEXES**

5-39. *Mikhaltsov Aleksei, Vesnovskii D.V.*

**SOLUTION-SOLID EQUILIBRIUM IN CO(NO<sub>3</sub>)<sub>2</sub> - 4,4'-BIPYRIDINE - EtOH-H<sub>2</sub>O SYSTEM**

5-40. *Medvedeva Margarita, Pestova O.N.*

**THERMAL EFFECTS OF DOUBLE SALTS DISSOLUTION IN THE SYSTEM LiCl-RbCl-H<sub>2</sub>O**

5-41. *Gashigullin Ruslan, Kendin M.P., Tsymbarenko D.M.*

**LACTATES AND PROPIONATES OF RARE EARTH ELEMENTS - SYNTHESIS, STRUCTURE AND APPLICATION FOR RARE EARTH NICKELATES FILMS DEPOSITION**

5-42. *Gusak Mikhail, Kinzhalov M.A.*

**TETREL INTERACTIONS IN IRIDIUM(III) XYLYLISOCYANIDE COMPLEXES**

## 6. THEORETICAL CHEMISTRY

CHAIRMAN: Dr., **Tupikina Elena**, Institute of Chemistry, SPbU

SECRETARY: **Verkhov Valerii**, Institute of Chemistry, SPbU

### ORAL REPORTS

**WEDNESDAY, 04.09, Room 1217**

- |                               |   |
|-------------------------------|---|
| 9:00 - 9:30                   | <i>Dr. Elena Tupikina</i><br><b>Quantum Chemistry in the Investigation of Non-Covalent Interactions</b>   |
| 9:30 - 9:40                   | <i>Chudakova M.V., Andreev D.S., Popov M.V., Korovchenko P.A.</i><br><b>CATALYTIC PYROLYSIS OF METHANE - PROMISING METHOD FOR PRODUCING HYDROGEN AND STRUCTURED CARBON MATERIAL</b> |
| 9:40 - 9:50                   | <i>Zaikin M.A.</i><br><b>PRODUCED JET-FUEL FROM RENEWABLE HYDROCARBON FEEDSTOCK</b>   |
| 9:50 - 10:00<br><b>ONLINE</b> | <i>Gordeeva J.F., Filatov E.S.</i><br><b>INFLUENCE OF THE DEGREE OF PREPARATION OF COMPONENTS FOR WORKING WITH HASTELLOY G35</b>  |
| 10:00 - 10:10                 | <i>Turchenko P.D., Skripnikov L.V.</i><br><b>MOLECULAR PARAMETER CHARACTERIZING NSD-PV IN THE <math>^{29}\text{Si}^{16}\text{O}^+</math> CATION</b>                                 |
| 10:10 - 10:20                 | <i>Moshchenkov A.D., Otlyotov A.A., Minenkov Y.V.</i><br><b>ACCURATE AB INITIO ENTHALPIES OF FORMATION OF GROUPS 10–12 METAL COMPLEXES WITH TETRAPHENYLPORPHYRIN</b>                |
| 10:20 - 10:30                 | <i>Timoshchuk K.V., Andoskin P.A., Semenov K.N.</i><br><b>STUDYING NITROGEN-CONTAINING HETEROCYCLES WITH STYRYLE SUBSTITUTES BY QUANTUM-CHEMICAL AND SPECTROPHOTOMETRIC METHOD</b>  |
| 10:30 - 10:40                 | <i>Kulikova Y.I., Timoshkin A.Y.</i><br><b>REACTIVITY OF I2 TOWARDS PERFLUORINATED LEWIS ACIDS OF GROUP 13 ELEMENTS: A COMPUTATIONAL STUDY</b>                                      |



10:40 - 10:50

*Cherezova P.Y., Porsev V.V.*

**QUANTUM CHEMICAL MODELING OF MECHANICAL PROPERTIES OF CARBON AND NITRIDE BORON NANOTUBES**

10:50 - 11:00

*Zubricheva D.V., Tikhova V.D., Tkachev A.V.*

**USE OF QUANTUM CHEMICAL CALCULATIONS IN THE EXTRACTION OF NOBLE METALS**

11:20 - 12:00

**INVITED  
SPEAKER**

*Dr. Denis Sabirov*

**Information Entropy in Theoretical Chemistry**

12:00 - 12:10

*Tsygankov A.A., Galimzyanov B.N., Mokshin A.V.*

**STRUCTURAL ANOMALY IN LIQUID ANTIMONY: DFT ANALYSIS**

12:10 - 12:20

*Chakalov E.R., Tolstoy P.M., Resnati G.*

**INTERROGATING BRIDGING HYDRON TUNNELING IN THE COUPLED HOMOCONJUGATED ANIONS OF SELENIC ACID**

12:20 - 12:30

*Verkhov V.A., Gubanov A.N., Antonov A.S.*

**THEORETICAL STUDY OF «FLIPPING» METALATION OF 4-DIMETHYLAMINOPYRIDINE**

12:30 - 12:40

*Rusanov D.A., Dzhiblavi K., Kuznetsov N.A., Malyshev V.I., Popović-Bijelić A., Samet A.V., Semenov V.V., Babak M.V., Medvedev M.G.*

**ELECTRON BUFFER EFFECT: GUIDING PYRIDINIUM YLIDES AND NITROALKENES TOWARD [3 + 2] OR [4 + 1] PRODUCTS**

12:40 - 12:50

*Titova A.A., Skakun M.A., Tupikina E.Yu.*

**INVESTIGATION OF MUTUAL INFLUENCE OF NH...N HYDROGEN BONDS IN AMIDINE SELF-ASSOCIATES BY MEANS OF QUANTUM CHEMISTRY**

12:50 - 13:00

*Odintsov K.V., Domratcheva T.M.*

**ESTIMATING ELECTRON TRANSFER RATES OF DNA REPAIR BY MEANS OF MULTICONFIGURATION QUANTUM CHEMISTRY CALCULATIONS**

13:00 - 13:10

*Shitov D.A., Kaplanskiy M.V., Tupikina E.Yu.*

**INFLUENCE OF IRON SPIN STATE AND LIGAND NUMBER ON ELECTRONIC STRUCTURE OF MODEL HEMOPROTEINS**

13:10 - 13:20

*Kaplanskiy M.V., Tolstoy P.M., Tupikina E.Yu.*

**THERMAL, SOLVATION AND QUANTUM EFFECTS  
IN MODELING OF HYDROGEN BONDS SPECTRAL  
PROPERTIES**

**THURSDAY, 05.09, Room 1217**

9:30 - 10:10

**KEYNOTE  
SPEAKER**

*Dr. Sci. Konstantin Lyssenko*

**Experimental Charge Density Studies of Crystalline  
Solids as the Inexhaustible Source of Data on  
Interatomic Interactions**

10:10 - 10:20

*Baigunov I.A., Kholmurodov Kh.T., Gladyshev P.P., Ibrahim M. A.*

**THE MOLECULAR DYNAMICS OF THE STRUCTURAL  
BEHAVIOUR OF THE ALCOHOL DEHYDROGENASE ENZYME  
ON THE ADSORBENT SURFACE**

10:20 - 10:30

*Ilicheva P.M., Pidenko P.S., Burmistrova N.A.*

**MOLECULAR MODELING OF BOVINE SERUM  
ALBUMIN IMPRINTED IN THE PRESENCE OF MULTIPLE  
MYCOTOXINS MOLECULES: INTERACTIONS AND BINDING  
MODE INSIGHTS**

10:30 - 10:40

*Makarov G.I., Korenkov V.A., Makarova T.M.*

**INTERACTION OF ED-20 EPOXY RESIN WITH THE SURFACE  
OF MODIFIED GRAPHENE: MOLECULAR DYNAMICS STUDY**

10:40 - 10:50

*Bashirov I.I., Chaliy V.A., Krivoshchapov N.V., Medvedev M.G.*

**DIFFRACTION PATTERNS DIFFERENCE AS A DRIVING  
FORCE IN MOLECULAR DYNAMICS**

10:50 - 11:00

*Sopova N.S., Bochenkov V.E.*

**PREDICTION OF INTERFACIAL PROPERTIES AND  
MICROEMULSION TYPE IN OCTANE-C10E4-WATER  
SYSTEMS THROUGH DISSIPATIVE PARTICLE DYNAMICS  
AND THE METHOD OF MOMENTS**

11:00 - 11:10

*Misikov G.Kh., Samarov A.A., Toikka A.M., Trofimova M.A.*

**THERMODYNAMIC VIEW ON THE ESTERIFICATION  
REACTION KINETICS**

11:10 - 11:20

*Smirnov A.A., Toikka M.A.*

**CORRELATION OF THE EXPERIMENTAL DATA ON LIQUID-  
LIQUID EQUILIBRIUM IN ALCOHOL - ESTER - DES  
SYSTEMS USING NRTL EQUATION**



11:20 - 11:30

*Leonova M.S., Krivitskaya A.V., Mulashkina T.I.*

**MOLECULAR MODELING OF THE PHOSPHORYLATION REACTION IN THE ACTIVE SITE OF PROTEIN KINASE A**

11:50 - 12:20

**INVITED  
SPEAKER**

*Dr. Andrey Kulsha, Ivashkevich O.A.*

**Strong Bases Design: Key Techniques and Stability Issues**

12:20 - 12:30

*Svinkin N.A., Kondratev V.M., Bolshakov A.D., Petrushenko I.K.*

**INTERACTION OF SUPERALKALIS NK3M (M = Li, Na, K) WITH CO<sub>2</sub>: A THEORETICAL STUDY**

12:30 - 12:40

*Eremeeva M.A., Krasovskaya Z.S., Serov N.S., Patra C.K.*

**DESIGN OF APTAMER SEQUENCES WITH PREDETERMINED AFFINITY TO SMALL MOLECULES USING ARTIFICIAL INTELLIGENCE**

12:40 - 12:50

*Rybin N., Chalykh O., Noviko I., Shapeev A.*

**THERMOPHYSICAL PROPERTIES OF LIQUID ELECTROLYTES AND CRYSTAL STRUCTURE PREDICTION USING MOMENT TENSOR POTENTIAL**

12:50 - 13:00

*Vakhrushev A.A., Matveev A.V., Nartova A.V.*

**CONVOLUTIONAL NEURAL NETWORK FOR THE AUTOMATED ANALYSIS OF X-RAY PHOTOELECTRON SPECTRA**

13:00 - 13:10

*Ereshchenko A.V., Evteev S.A., Ivanenkov Y.A.*

**KINASE SELECTIVITY PROFILING USING 3D PHARMACOPHORES AND GRAPH NEURAL NETWORKS**

13:10 - 13:20

*Varlamova L.A., Erohin S.V., Larionov K.V., Sorokin P.B.*

**DIAMANE OXIDE. INVESTIGATION OF STRUCTURE, STABILITY AND ELECTRONIC PROPERTIES**

13:20 - 13:30

*Turyansky Y.M., Kudan P.V.*

**THE 3D MODEL OF THE MENDELEEV'S TABLE**

13:30 - 13:40

*Larionov K.V., Mochalova E.A., Pais Pereda J.J., Sorokin P.B.*

**THEORETICAL STUDY OF NEW MAGNETIC JUNCTIONS FOR SPINTRONICS APPLICATIONS**


13:40 - 13:50

*Kolchenko M.M., Makushin K.M., Fedorov A.K.*

**QUANTUM COMPUTING LIBRARY FOR QUANTUM CHEMISTRY APPLICATIONS**



- 
- 14:50 - 15:00 *Fedorov K.A., Galibin S.D*  
**VISCOSITY OF DEEP EUTECTIC SOLVENTS: LINEAR AND NONLINEAR MODELS**
- 15:00 - 15:10 *Starostin R.O., Freidzon A.Ya., Gromov S.P., Melnikov M.Ya.*  
**MODELING OF COORDINATION OF METAL AND AMMONIUM CATIONS IN COMPLEXES OF BIS-AZA-18-CROWN-6-CONTAINING DIENONES**
- 15:10 - 15:20 *Blinova A.R., Mulashkina T.I., Grigorenko B.L.*  
**PHOTOINDUCED DEGRADATION OF FLAVIN MONONUCLEOTIDE (FMN) IN MINISOG PROTEIN**
- 15:20 - 15:30 *Kuzmin A.V., Shainyan B.A.*  
**SILICON DOPED NITROGEN ANCHORED CARBON NANOTUBES FOR OXYGEN ELECTROREDUCTION REACTION. THEORETICAL STUDY**
- 15:30 - 15:40 *Krivoshchapov N.V., Medvedev M.G.*  
**ACCURATE AND EFFICIENT CONFORMER GENERATION OF DRUG MACROCYCLES WITH RING KINEMATICS INFORMED SAMPLING**
- 15:40 - 15:50 *Davydov N.A., Victorov A.I.*  
**MODELING ADSORPTION OF CONTAMINANTS FROM SOLUTION BY PARTICLES OF MICROPLASTICS**
- 15:50 - 16:00 *Pomogailo D.A., Selivantiev Yu.M., Spitsyn N.Yu., Raitman O.A.*  
**QUANTUM-CHEMICAL MODELING OF MAGNETIC RESONANCE PARAMETERS AND OPTICAL PROPERTIES OF COPPER COMPLEXES WITH SPIRONAPHTHOXAZINES**
- 16:00 - 16:10 *Dutta K., Kravtsov V., Oleynikova K., Ruzov A., Skorb E.V., Shityakov S.*  
**EFFECT OF SINGLE NUCLEOTIDE POLYMORPHISMS ON STABILITY AND FUNCTION OF HNRNPA2/B1**
- 16:10 - 16:20 *Ilin E.A., Filatov V.A*  
**PREDICTION OF PHOTOPHYSICAL PROPERTIES OF ORGANOMETALLIC COMPOUNDS USING MACHINE LEARNING ALGORITHMS**



16:20 - 16:30

*Smirnov M.V., Karpov K.V., Mitrofanov A.A.*

**COMPUTATIONAL REDOX POTENTIAL PREDICTIONS:  
APPLICATION TO ORGANIC MOLECULES USED IN  
NUCLEAR REPROCESSING**

16:30 - 16:40

*Domnin A.V., Solovev Y.V., Evarestov R.A.*

**AB INITIO MODELING OF HELICAL PEPTIDES**

16:40 - 16:50

*Nosov V.G., Peshkova M.A.*

**PREDICTIVE THEORETICAL APPROACH TO THE  
DEVELOPMENT OF THE OPTICAL SENSORS FOR  
INDIVIDUAL IONIC ACTIVITIES**

## POSTER SESSION

**TUESDAY, 03.09, 15:00 - 16:45**

6-1. *Sharapova D.A., Zavgorodniy A.S.*

**INTERACTIONS OF IODINE WITH ACIDS OF THE ALRF3 TYPE (RF - BULKY  
PERFLUORINATED SUBSTITUENTS) IN VARIOUS SOLVENTS**

6-2. *Zolenko M.A., Porsev V.V.*

**QUANTUM CHEMICAL INVESTIGATION OF POLYTWISTANE-LIKE  
NANOSTRUCTURES**

6-3. *Stanislavchuk-Abovsky D.B., Domnin A.V., Bandura A.V.*

**DEVELOPMENT OF FORCE FIELDS OF METAL DICHALCOGENIDE NANOTUBES**

6-4. *Mikhailov I.E., Domnin A.V., Evarestov R.A.*

**QUANTUM CHEMICAL STUDY OF THE INFLUENCE OF TORSIONAL  
DEFORMATIONS ON THE PROPERTIES OF CHIRAL WXY (X, Y = S, SE) JANUS-  
NANOTUBES**

6-5. *Valiulina L.I.*

**MAGNETICALLY INDUCED RING-CURRENTS IN ODD-NUMBER CYCLO[N]  
CARBONS**

6-6. *Kruglov M.L., Kaplanskiy M.V., Tupikina E.Yu.*

**DYNAMIC OF NON-COVALENT INTERACTIONS DURING THE P-O BOND  
CLEAVAGE BY RIBONUCLEASE A**

6-7. *Kirillov M.V., Sizov V.V.*

**IN SILICO SCREENING OF AGGREGATIVE BEHAVIOR MODIFIERS FOR  
HYDROCARBON/WATER SYSTEMS IN HYDROPHOBIC CONFINEMENT**

6-8. *Evsyukov I.V., Sizova A.A.*

**MOLECULAR DYNAMICS STUDY OF CO<sub>2</sub> AND CH<sub>4</sub> GAS HYDRATE**

6-9. *Shulepov R.R., Sizov V.V., Sizova A.A.*

**SIMULATION OF ZEOLITE MEMBRANE GAS SEPARATION BY NONEQUILIBRIUM MOLECULAR DYNAMICS**

6-10. *Tatarinov I.A., Kalinin S.A., Dar'in D.V.*

**METHOD DEVELOPMENT IN TAAR1 AGONIST STRUCTURE-BASED DRUG DESIGN**

6-11. *Bunyaev V.A., Sinolits A.V., Badun G.A.*

**CARBON NANOTUBES ADSORPTION MODIFICATION WITH CHITOSAN ACCORDING TO SUPERCOMPUTER SIMULATION**

6-12. *Kissler T.Yu., Vanin A.A.*

**MOLECULAR DYNAMICS SIMULATION OF SURFACTANT ASSYMETRICAL ADSORPTION AND INTERFACIAL TENSION**

6-13. *Bondarev V.P., Demidov M.P., Arngold V.A., Selina V.A., Novikov A.N.*

**HEAT CAPACITY OF ALKALY METALS AND AMMONIUM IONS SOLUTIONS IN MIXED SOLVENTS N-METHYLPYRROLIDONE-WATER AT 298.15 K**

6-14. *Yadrincev A.V., Savchenkov A.V.*

**CORRELATION OF INTERMOLECULAR INTERACTIONS WITH SOLUBILITY OF SUCCINYLSULFATHIAZOLE POLYMORPHS**

**THURSDAY, 05.09, 17:00 - 18:30**

6-15. *Novosadov B.K.*

**ON A ZONE STRUCTURE OF ENERGY STATES OF LARGE POLYATOMIC SYSTEMS AND THE FEATURES OF CHEMICAL REACTIONS**

6-16. *Glushak A.A., Smirnov G.S.*

**CLASSICAL FORCEFIELD FOR SELENIUM OXYANIONS**

6-17. *Baranova S.A., Lilitsa D.S., Komornikov N. A.*

**STRUCTURAL MECHANISMS OF THE LIXNiO<sub>2</sub> LOW-SYMMETRY PHASES FORMATION**

6-18. *Blinova A.R., Kulakova A.M., Zakharova T.M., Grigorenko B.L.*

**BIOLUMINESCENCE OF THE FIREFLY: MODELING THE PREOXIDATION STAGE OF MECHANISM**



6-19. *Bespalov I.A., Krivoschchapov N. V., Chaliy V.A., Medvedev M.G.*

**A NOVEL APPROACH FOR CONFORMATION SPACE SAMPLING VIA BAYESIAN OPTIMIZATION**

6-20. *Stentsova V.V., Kuzmin A.V.*

**THE ACTIVITY AND STABILITY OF FEN4-DOPED CARBONS IN OXYGEN ELECTROREDUCTION. STRUCTURE – REACTIVITY RELATIONSHIP**

6-21. *Akulinin P.V., Savinkina E.V., Karavaev I.A., Polukhin M.*

**THEORETICAL APPROACH TO RARE-EARTH AND F-ELEMENTS NITRATE COMPLEXES WITH SIMPLEST AMIDES**

6-22. *Ostras A.S., Timoshenko V.V.*

**THEORETICAL STUDY OF DIBENZOCROWN ETHERS COMPLEXATION WITH ALKALINE AND ALKALINE-EARTH METALS IN FLUORINATED SOLVENTS**

6-23. *Anichkin A.A., Ivchenko A.V., Kalinin A.A., Barskaya E.S., Ananyev I.V.*

**MACHINE SEARCH AND ANALYSIS OF ZOEDRONIC ACID ANALOGUES WITH HIGH CYTOTOXICITY**

6-24. *Sibgatullina T.I., Afonina V.A., Gimadiev T.R.*

**MODELLING THE SOLUBILITY OF COMPOUNDS IN WATER USING OPEN DATA**

6-25. *Alyeva A.B., Ananicheva S.A., Krapivnitckaia T.O., Gerasimova E.V., Peskov N.Yu., Zelentsov S.V., Glyavin M.Yu.*

**THERMODYNAMIC CHARACTERISTICS OF HUMIC ACIDS**

6-26. *Donina M.V., Esefiyeva T.Yu., Magzhanov R.K., Yarovaya O.V.*

**KINETICS OF THE HYDROLYSIS REACTION OF SODIUM BOROHYDRIDE ON A HIGHLY DISPERSED NICKEL CATALYST**

6-27. *Lilitsa D.S., Baranova S.A., Komornikov N. A.*

**STRUCTURAL MECHANISMS AND THERMODYNAMICS OF PHASE TRANSITIONS IN LICOO<sub>2</sub>**

6-28. *Puzhel A.O., Borisov V.A.*

**CALCULATION OF KINETIC CHARACTERISTICS OF THE  $\gamma$ -AL<sub>2</sub>O<sub>3</sub> FLUORINATION PROCESS BY FITTING NONLINEAR REGRESSION MODELS**

## 7. ECONOMICS OF THE CHEMICAL INDUSTRY IN THE CONTEXT OF MODERN CHALLENGES

CHAIRMANS: Dr. **Vetrova Maria**, Dr. **Evgeniya Zhalskaya**, Faculty of Economics, SPbU  
SECRETARY: **Egor Manzhosov**, Faculty of Economics, SPbU

### ORAL REPORTS

**WEDNESDAY, 04.09, Room 1207**

9:00 - 9:15

**KEYNOTE  
SPEAKER**

*Dr. Evgeniya Zhalskaya*

**Organization of the Process of Import Substitution in the Pharmaceutical Market of Russia**

9:15 - 9:30

*Blagikh Ivan, Shcheglov Maksim*

**STRATEGIC ANALYSIS OF THE PHARMACEUTICAL MARKET IN THE CONTEXT OF IMPORT SUBSTITUTION AND SANCTIONS**

9:30 - 9:45

*Koshkin Andrey, Gorbunov Pavel, Pashkus Vadim*

**THE RUSSIAN PHARMACEUTICAL MARKET: IMPORT SUBSTITUTION AND BREAKTHROUGH POSITIONING STRATEGY**

9:45 - 10:00

*Lyulyukin Arseniy*

**SYNTHESIS AND INVESTIGATION OF CU-CONTAINING DEEP OXIDATION CATALYSTS FOR A FLUIDIZED BED BASED ON SPHERICAL  $\gamma$ - $Al_2O_3$  STRENGTHENED WITH MAGNESIUM**

10:00- 10:15

*Trukhin Ivan*

**APPLICATION OF THE CLUSTER ANALYSIS TO DETERMINE THE RATIO OF COMPONENTS IN COMPLEX MIXTURES FOR REVERSE ENGINEERING PROBLEMS**

10:15 - 10:30

*Manzhosau Yahor*

**APPLICATION OF LEAN PRODUCTION IN THE CHEMICAL INDUSTRY AS A TOOL TO COMBAT TECHNOGENIC DISASTERS**

**THURSDAY, 05.09, Room 1207**

10:00 - 10:15

*Voronin Vsevolod*

**RUSSIA'S CHEMICAL INDUSTRY DURING THE PERIOD OF SANCTIONS PRESSURE: A COMPREHENSIVE REVIEW**



10:15 - 10:30

Temnikov Alexander

**ECONOMIC ASPECTS OF RUSSIAN PATENT ACTIVITY IN THE ELECTRIC ACCUMULATOR INDUSTRY**

10:30 - 10:45

Dmitrieva Maria

**TECHNOLOGY FOR EXTRACTING LITHIUM IONS FROM BRINES USING POLYMER MEMBRANES**

10:45 - 11:00

Maksimova Bogdana

**CHOLESTEROL OXIDASE FROM STREPTOMYCES LAVENDULAE AS A PROSPECTIVE BIOCATALYST FOR BUTTER ANALYSIS**

11:00 - 11:15

Nechaeva Sofya

**RATIONAL USAGE OF NON-TARGET PETROCHEMICAL FLOWS TO REDUCE THE RISK OF ECOCATASTROPHES**

12:00 - 12:15

Amdur A.M., Fedorov S.A., Kurmacheva V.S.

**PHYSICO-CHEMICAL FEATURES OF PULVERIZED COAL FUEL FOR BLAST FURNACES**

12:15 - 12:30

Dolgopolova Alesia

**STRATEGIES OF PERSONNEL MANAGEMENT IN THE CHEMICAL INDUSTRY IN THE CONTEXT OF MODERN CHALLENGES**

12:30 - 12:45

Koriakova Polina

**TALENT MANAGEMENT IN THE CHEMICAL INDUSTRY**

12:45 - 13:00

Laptenko Vladimir, Pashkus Natalia

**LONG-TERM STRATEGIES FOR THE FORMATION OF REGIONAL PHARMACEUTICAL CLUSTERS AND THE IMPLEMENTATION OF THE PHARMACEUTICAL INDUSTRY'S PRODUCT POLICY IN THE FACE OF SANCTIONS USING A BREAKTHROUGH POSITIONING TOOL**

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## ЭЛЕМЕНТНЫЙ И ИЗОТОПНЫЙ АНАЛИЗ

(ИСП-АЭС, ИСП-МС, РФА, ТИМС,  
 Пламенные фотометры)

## ГАЗОАДСОРБЦИОННОЕ ОБОРУДОВАНИЕ

(Анализаторы удельной поверхности и размеров пор,  
 Анализаторы хемосорбции, Гелиевые пикнометры)

## МОЛЕКУЛЯРНЫЙ АНАЛИЗ

(ИК-Фурье, Раман, УФ-вид, КД)

## ПРОБОПОДГОТОВКА

(Системы очистки воды и кислот, Измельчение, Прессование,  
 Микроволновое разложение, Кислотное разложение и др.)

ХИМИЧЕСКАЯ  
 ПРОМЫШЛЕННОСТЬ



АТОМНАЯ  
 ПРОМЫШЛЕННОСТЬ



НЕФТЕХИМИЯ И  
 НЕФТЕПЕРЕРАБОТКА



ГЕОЛОГИЯ И  
 ГЕОХИМИЯ



МЕТАЛЛУРГИЯ



КРИМИНАЛИСТИКА



АНАЛИЗ ВАШИХ ОБРАЗЦОВ В СОБСТВЕННОЙ ДЕМОНСТРАЦИОННОЙ ЛАБОРАТОРИИ ЛАБТЕСТ

ПОСТАВКА  
 ОБОРУДОВАНИЯ

ПОДБОР  
 КОМПЛЕКТУЮЩИХ

МЕТОДИЧЕСКАЯ  
 ПОДДЕРЖКА

ТЕХНИЧЕСКОЕ  
 ОБСЛУЖИВАНИЕ



