# Science&Progress 2021
# Section A

## Tuesday 9 Nov
## 11:30-13:00, moderator Prof. R. Islamova

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|---|---|---|
| 11:30 - 11:39 | Khoroshilova Olesya | Synthesis of 1,3-Di(trifluoromethyl)indanes and α-(Trifluoromethyl)styrenes via Superelectrophilic Activation of (α-$Me_3SiO$-trifluoropropyl)(het)arenes |
| 11:39 - 11:48 | Levashova Ekaterina | Synthesis of Diastereomerically Pure 3-Cyanoazetidin-2-ones via Thermally Promoted Tandem Wolff Rearrangement–Staudinger [2+2] Cycloaddition |
| 11:48 - 11:57 | Misikov Georgii | The Investigation of The Liquid-Liquid Equilibria in The System Acetic Acid – N-amyl Alcohol – N-amyl Acetate – Water at Polythermal Conditions |
| 11:57 - 12:06 | Paramonova Polina | Diastereoselective Synthesis of *δ*-Lactams *via* Two-component Castagnoli-Cushman Reaction of Imines and Glutaric Acid Derivatives |
| 12:06 - 12:15 | Ketova Anna | Crystal-chemical design of gold(I) complexes with isocyanide ligands |
| 12:15 - 12:24 | Khramova Alina | Organo-inorganic Derivatives of Layered Perovskite-Like Oxide $HB_2Nb_3O_{10}$ (B = Ca, Sr) with Amino Alcohols |
| 12:24 - 12:33 | Kuznetsov Kirill | Molecular thermometers based on europium(II) complexes |
| 12:33 - 12:42 | Matsenko Roman | Gd-Doped Hydroxyapatite Nanoparticles |
| 12:42 - 12:51 | Nebalueva Anna | Supramolecular Structure for Creating Functional Materials |
| 12:51 - 13:00 | Novoselova Julia | Study of mass and charge transfer at low temperatures in Salen type nickel polymer complexes |

## 13:30-15:00, moderator Prof. A. Penkova

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|---|---|---|
| 13:30 - 13:39 | Anishchenko Dmitrii | Simulation of the Li-ion battery overcharge protected by voltage-switchable resistive polymer layer |
| 13:39 - 13:48 | Beletskii Evgenii | Microplasma-assisted Synthesis of Iron Oxide for Battery Application |
| 13:48 - 13:57 | Vereshchagin Anatoliy | Hybrid TEMPO-containing Redox-conductive Polymers for Organic Batteries |
| 13:57 - 14:06 | Myznikov Danila | Novel pervaporation and ultrafiltration membranes based on polyphenylenesulfone modified by titanium dioxide |
| 14:06 - 14:15 | Zolotarev Andrei | Novel Ultrafiltration Membranes Based On Polyvinylidene Fluoride Modified By Titanium Dioxide |
| 14:15 - 14:24 | Chepeleva Anastasia | Novel High-Performance Blend Hydroxyethyl Cellulose/Sodium Alginate Membranes with Fullerenol for Enhanced Pervaporation |
| 14:24 - 14:33 | Dmitrenko Mariia | Development and Study of Novel Blend Hydroxyethyl Cellulose (HEC)/Polyvinyl Alcohol (PVA) Membranes Modified with Fullerene Derivatives for Pervaporation Dehydration |
| 14:33 - 14:42 | Liamin Vladislav | Development and Study of Novel Pervaporation Membranes Based on Polyphenylene Oxide Modified with Graphene Oxide |
| 14:42 - 14:51 | Loginova Evgeniia | Novel membrane based on polyacrylonitrile modified by titanium dioxide for water/oil separation |
| 14:51 - 15:00 | Loschinina Julia | Novel Self-Cleaning Ultrafiltration Membranes Based on Poly(m-phenylene isophtalamide) Modified by $TiO_2$ |

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## 15:15-16:45, moderator Prof. D. Kirsanov

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|---|---|---|
| 15:15 - 15:24 | Aliev Timur | Supramolecular Assemblies Analysis Using Machine Learning Image Processing |
| 15:24 - 15:33 | Lavrentev Filipp | Soft Hydrogel Actuator for Machine-Learning-Assisted Bacteria Detection |
| 15:33 - 15:42 | Evdokimov Aleksei | Nanostructuring of screen-printed electrodes by Prussian blue and polyelectrolytes layers for biosensoring |
| 15:42 - 15:51 | Fedotov Igor | Electrochemical sensor for detection of Staphylococcus aureus |
| 15:51 - 16:00 | Stekolshchikova Anna | Electrochemical sensor platform to detect of viruses and bacterial pathogens in biological fluids |
| 16:00 - 16:09 | Chakalov Edem | Topology of an Electron Density and Electrostatic Potential Distribution Along the Bond Path for Evaluation of Halogen Bond's Strength |
| 16:09 - 16:18 | Korostelev Vladislav | Evolution of arsinic acids hydrogen-bonded complexes properties in media with different dielectric permittivity |
| 16:18 - 16:27 | Korovkina Olga | Histidine containing polypeptide nanoparticles for siRNA Delivery |
| 16:27 - 16:36 | Luginin Maksim | Novel organogold stilbene photoswitchers: synthesis and photochromic properties |
| 16:36 - 16:45 | Maltseva Taisia | Express Extraction-Photometric Determination of Boron in Aqueous and Organic Phases |

## 16:57-18:00, moderator D. Mamonova

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|---|---|---|
| 16:57 - 17:06 | Medvedev Vassily | Synthesis of weakly-agglomerated oxide phosphors for non-contact thermometry |
| 17:06 - 17:15 | Shubina Irina | Luminescent Nanomarker Based on $Gd_2O_3$: $Nd^{3+}$, $Er^{3+}$, $Tm^{3+}$ Particles: Synthesis and Characterization |
| 17:15 - 17:24 | Bulatova Tatyana | Synthesis of Luminescent $NaYF_4$:$Sm^{3+}$, $NaYF_4$:$Yb^{3+}$, $Ho^{3+}$, $NaYF_4$:$Tb^{3+}$ Small-Sized Particles |
| 17:24 - 17:33 | Zheltova Victoria | Multifunctional MRI and Luminescence Agent Based on Magnetite Nanoparticles: Correlation between Shell Parameters and Signals Intensity |
| 17:33 - 17:42 | Kochetkova Maria | «Green» extraction technique for the determination of formaldehyde in milk |
| 17:42 - 17:51 | Kolesnik Stefaniia | Luminescent Micro- and Nanocrystalline Europium(III) Terephthalates as Luminescent Probes for Heavy Metal Ions |
| 17:51 - 18:00 | Kuznetsova Anastasiia | Structure and electrokinetic potential of nanoporous glasses doped with silver halides |

# Science&Progress 2021
# Section A

## Wednesday 10 Nov
## 11:00-12:30, moderator Prof. E. Grachova

| | | |
|---|---|---|
| 11:00 - 11:09 | Pavlova Kseniya | Hydrophobic Deep Eutectic Solvents for the Separation of Zearalenone from Bread Followed by Liquid Chromatographic Determination |
| 11:09 - 11:18 | Badretdinova Vlada | Local Delivery of Antibiotics in the Surgical Treatment of Bone Infections |
| 11:18 - 11:27 | Svinko Vasilisa | SERS detection of proteins on substrates basing on hydroxyapatite doped with silver nanoparticles |
| 11:27 - 11:36 | Pomytkina Anastasia | Multielectrode electrochemical system for antibiotics detection in raw milk |
| 11:36 - 11:45 | Chernysheva Anna | Computational Study of Synthetic Routes Towards $PH_2BH_2EH_2$ (E = C, Si, Ge, Sn) Complexes |
| 11:45 - 11:54 | Kalinin Nikita | Synthesis and Structures of $SnCl_4$ Complexes with 4,4'-bipyridine |
| 11:54 - 12:03 | Parfeniuk Tatiana | Synthesis of NHC-stabilized triphosphanylborane |
| 12:03 - 12:12 | Shcherbina Nadezhda | Features of the Complexes of $Al(C_6F_5)_3$ with Pyridine-type Ligands: Pyrazine, 2-Aminopyridine and 4,4'- Bipyridine |
| 12:12 - 12:21 | Zavgorodnii Artem | Donor-Acceptor Complexes of Lewis Acid $Ga\{N(C_6F_5)_2\}_3$ with Acetonitrile and Pyridine |
| 12:21 - 12:30 | Derouiche Abdennour | Features of the dependence of retention indices on the content of methanol in an eluent in reversed phase HPLC |

## 13:00-14:30, moderator Prof. E. Grachova

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|---|---|---|
| 13:00 - 13:09 | Kamenskii Mikhail | Enhancement of the Electrochemical Performance of $\delta$-$MnO_2$ Electrodes by Introducing Conducting Polymer |
| 13:09 - 13:18 | Timralieva Aleksandra | Supramolecular Assemblies for Biomolecules Encapsulation |
| 13:18 - 13:27 | Kalnin Arseniy | Synthesis and Electrocatalytic Activity of Nitrogen- and Transition Metal-doped Carbon-based Materials |
| 13:27 - 13:36 | Markova Ulayna | Spectrophotometric Method for The Determination of Urea in Milk Based on Microextraction in Deep Eutectic Solvent |
| 13:36 - 13:45 | Melesova Maria | Microextraction of Sulfonamides from Food Samples in Deep Eutectic Solvent |
| 13:45 - 13:54 | Nizov Egor | Microextraction of Melamine from Dairy Products in Deep Eutectic Solvent Prior to HPLC-UV Analysis |
| 13:54 - 14:03 | Zhdanova Marina | Deep Eutectic Solvents as a Medium for Chemiluminescent Reactions Based on Luminol |
| 14:03 - 14:12 | Smirnov Alexander | Peculiarities of Phase Behavior of Chemically Equilibrium Mixtures in the Critical Region under Isothermal Conditions |
| 14:12 - 14:21 | Smirnov Alexander | Methods of phase equilibrium research |
| 14:21 - 14:30 | Zolotovsky Konstantin | The accuracy of the critical point prediction in binary and multicomponent systems by NRTL model based on liquid-liquid equilibrium data |

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## 14:45-16:15, moderator Prof. D. Kirsanov

| | | |
|---|---|---|
| 14:45 - 14:54 | Mukhin Kirill | Electrochemical Stability of Aqueous System Containing Lithium and Cesium Acetates |
| 14:54 - 15:03 | Ostrokhishko Anastasiya | Influence of the microelements on anticancer metabolites biosynthesis in basidiomycetes |
| 15:03 - 15:12 | Paderina Aleksandra | Pyridyl-functionalized Phosphinine As a Ligand for Novel Cu(I) Complexes |
| 15:12 - 15:21 | Pershina Liubov | Polyelectrolyte multilayers for robust carbon fiber-based potentiometric ion sensing and correlation between elemental constituent in blood and urine |
| 15:21 - 15:30 | Shevchuk Alisa | Plasmon Nanoparticles Dimers Obtained by Molecular Crosslinking with Diaminotolane |
| 15:30 - 15:39 | Pikalova Tatyana | New Thermo- and Potentioresistive Organometallic Polymers |
| 15:39 - 15:48 | Popov Roman | Polynuclear Metal Complexes Formed by Coupling of Azahetero-cyclic Thiones with Coordinated Aryl Isocyanides |
| 15:48 - 15:57 | Rostovtseva Valeriia | Perovskite-like Oxide Doped into Polyetherimide Mixed Matrix Membranes for Liquid and Gas Separation |
| 15:57 - 16:06 | Serykh Tatyana | Creation of synthetic hydroxyapatite in the presence of optically active substances |
| 16:06 - 16:15 | | Might be changed soon |

## 16:30-18:00, moderator Prof. E. Grachova

| | | |
|---|---|---|
| 16:30 - 16:39 | Potapenkov Vasilii | Synthesis of polythiophene doped sulfonated polycatechol |
| 16:39 - 16:48 | Zyryanova Polina | Studying the cell-cell communication via ion channels |
| 16:48 - 16:57 | Zharskaia Nina | Photophysical Properties of C^N*N^C-cyclometalated Platinum(II) Complexes |
| 16:57 - 17:06 | Verkhov Valeriy | Theoretical and Experimental Investigation of the Peculiarities of the Interaction of Pyridines with Organolithium Reagents |
| 17:06 - 17:15 | Strelnikov Aleksei | Silver and Gold Nanoparticles Modified with Cyclene and Tetraxetane Chelators: Preparation and Optical Properties |
| 17:15 - 17:24 | Titov Gleb | Reactions of diazo compounds with 2H-azirine-2-carboxylic acids under metal catalysis and photolysis |
| 17:24 - 17:33 | Yuskina Ekaterina | Multipurpose detector based on high frequency inductor |
| 17:33 - 17:42 | Volkov Alexey | Synthesis and Electrochemical Properties of Conducting Polymer-Coated Molybdenum Disulfide |
| 17:42 - 17:51 | Strizhneva Varvara | Electroanalytical detection of zinc in running water |
| 17:51 - 18:00 | Sabbouh Mirna | Sonochemical nanostructuring of Cu-Zn alloy |

# Science&Progress 2021
# Section A

## Thursday 11 Nov
## 11:00-12:57, moderator A. Gubal

| | | |
|---|---|---|
| 11:00 - 11:09 | Gruzdeva Ekaterina | Study of Photocatalytic Activity of Butylamine-intercalated Perovskite-like Layered Oxide $H_2La_2Ti_3O_{10}$ |
| 11:09 - 11:18 | Kurnosenko Sergei | Stability of Hybrid Inorganic-Organic Photocatalysts Based on the Layered Perovskite-Like Titanate $H_2La_2Ti_3O_{10}$ in the Reaction of Hydrogen Generation from Aqueous Methanol |
| 11:18 - 11:27 | Kurnosenko Sergei | Organic Modification of Layered Perovskite-Like Titanates $HLnTiO_4$ (Ln = La, Nd) as an Efficient Approach to the Enhancement of Their Photocatalytic Performance towards Hydrogen Production |
| 11:27 - 11:36 | Podurets Anastasiia | Rational Design of Ni-doped $SnO_2$ Nanoparticles for Organic Dyes and Bacterial Water Remediation: Synthesis and Photocatalytic Procedure |
| 11:36 - 11:45 | Skripkin Eugene | Correlation Between Structural Parameters and Photocatalytic Activity of V or Ti-Doped $SnO_2$ Spherical Nanoparticles |
| 11:45 - 11:54 | Voytovich Vladimir | Investigation of Perovskite-like Niobate $HCa_2Nb_3O_{10}$ Exfoliated into Nanolayers as a Photocatalyst for Hydrogen Production from Aqueous Methanol |
| 11:54 - 12:03 | Smirnov Egor | Increased plasticity of chalcogenide glasses while maintaining a high glass transition temperature |
| 12:03 - 12:12 | Markarian Artur | Correlation Between Structural Parameters and Photoluminescent Characteristics of Eu-Doped Boehmite Nanoparticles |
| 12:12 - 12:21 | Vaishlia Elena | Co-Doped $LuVO_4$:$Nd^{3+}$,$Yb^{3+}$ Nanoparticles as Ratiometric Luminescent Thermometers |
| 12:21 - 12:30 | Shershnev Ivan | Synthesis of Indenes via the Reaction of Trihalomethyl-substituted Enones with Arenes in $CF_3SO_3H$ |