IX International Youth Scientific Conference
Physics Technology Innovations
dedicated to the 100th anniversary of Professor S.P. Raspopin

Program

of the Ninth International Youth Scientific Conference Physics. Technologies. Innovation.

PTI-2022
May 16-20, 2022
Yekaterinburg

Программа

Девятой международной молодежной научной конференции Физика. Технологии. Инновации.

ФТИ-2022
16-20 мая 2022
г. Екатеринбург

Ural Federal University
named after the first President of Russia B.N.Yeltsin
Institute of Physics and Technology

PROGRAM OVERVIEW

Day 1 – Monday – May 16

Arrival of participants

15:00 – 18:00	**Registration**. *Foyer Ft-201*
16:00 – 19:00	**City tour**. *Foyer Ft-201*

Day 2 – Tuesday – May 17

08:00 – 09:00	**Registration** *Foyer Ft-201*	**Poster Session** Arrangement of display stands		
		Panel 1. Nuclear and radiation technologies *Foyer F-201*	**Panel 2. Condensed matter physics** *Main Foyer*	**Panel 3. Instrumentation and robotics** *PTI 2 floor*
09:00 – 09:20	**Opening.** Welcome and opening comments of top university officials including Dean of Institute of Physics and Technology. *F-201*			
09:20 – 10:00	**Plenary Talk.** Andrey Rempel (Institute of Metallurgy, Ural Branch of the Russian Academy of Sciences, Russia) «High entropy as the basis for the formation of innovative materials» *F-201*			
10:00 – 10:40	**Plenary Talk.** Igor Nekrasov (Institute of Electrophysics, Ural Branch of the Russian Academy of Sciences, Russia) «Dielectric Permittivity of Metal-Dielectric Nanocomposites» *F-201*			
10:40 – 11:20	**Plenary Talk.** Jianxin Tang (Institute of Functional Nano & Soft Materials (FUNSOM), Soochow University, China) «Interfacial "Anchoring Effect" Enables Efficient Blue Perovskite LEDs» *F-201*			
11:20 – 13:20	**Panel 5. Materials science** Oral reports 1-12 *F-201*	**Panel 4. Chemical technologies** Oral reports 1-12 *F-414*	**Panel 1. Nuclear and radiation technologies** Oral reports 1-12 *F-425*	
13:20 – 13:50	**Coffee Break** *F-416*			
13:50 – 15:50	**Panel 5. Materials science** Oral reports 13-24 *F-201*	**Panel 4. Chemical technologies** Oral reports 13-24 *F-414*	**Poster Session**	
15:45 – 16:00	**Break**		**Panel 1. Nuclear and radiation technologies** *Foyer F-201*	**Panel 2. Condensed matter physics** *Main Foyer*
16:00 – 17:40	**Panel 5. Materials science** Oral reports 25-34 *F-201*			**Panel 3. Instrumentation and robotics** *PTI 2 floor*
17:40 – 18:00	**Registration for intellectual game "What? Where? When?"** *Foyer F-201*			
18:00 – 21:00	**Intellectual game "What? Where? When?"** *F-201*			

Day 3 – Wednesday – May 18			
08:30 – 09:00	**Poster Session.** Arrangement of display stands		
	Panel 4. Chemical technologies *Main Foyer*	**Panel 6. Information systems and technologies** *PTI 2 floor*	
09:00 – 09:40	**Plenary Talk.** Boris Oksengendler (Institute of Ion-Plasma and Laser Technologies, Academy of Sciences of the Republic of Uzbekistan. Tashkent, Uzbekistan) «The concept of Complexity in the problems of radiation physics of condensed matter» *F-201*		
09:40 – 10:20	**Plenary Talk.** Alexey Ekidin (Institute of Industrial Ecology, Ural Branch of the Russian Academy of Sciences, Russia) «Development and implementation of an innovative complex of textile technologies for the production of nano-fibrous non-woven materials and technical means to protect the population, personnel, and the environment from man-made and biological impacts in the interests of the strategic security of the state» *F-201*		
10:20 – 11:00	**Plenary Talk.** Ivan Leonov (Institute of Physics of Metals named after M.N. Mikheev Ural Branch of the Russian Academy of Sciences, Russia) «Simulation of the electronic structure, magnetic state and lattice stability of strongly correlated electronic systems» *F-201*		
11:00 – 11:15	**Break**		
11:15 – 13:15	**Panel 2. Condensed matter physics** Oral reports 1-12 *F-419*	**Panel 3. Instrumentation and robotics** Oral reports 1-13 *F-414*	**Panel 6. Information systems and technologies** Oral reports 1-15 *F-425*
13:15 – 13:45	**Coffee Break** *F-416*		
13:45 – 17:30	**Panel 2. Condensed matter physics** Oral reports 13-29 *F-419*	**Poster Session**	
		Panel 4. Chemical technologies *Main Foyer*	**Panel 6. Information systems and technologies** *PTI 2 floor*
17:30 – 18:00	**Registration for intellectual sports game "Quest"** *Main Foyer*		
18:00 – 21:00	**Intellectual sports game "Quest"** *University campus*		

Day 4 – Thursday – May 19		
08:30 – 09:00	**Poster Session.** Arrangement of display stands	
	Panel 5. Materials science *Main Foyer*	**Panel 7. Bioengineering and biotechnologies** *PTI 2 floor*
09:00 – 11:00	**Panel 7. Bioengineering and biotechnologies** Oral reports 1-12 *F-201*	**Panel 8. Innovation and social technologies** Oral reports 1-12 *F-310b*
11:00 – 11:15	**Break**	
11:15 – 13:15	**Panel 7. Bioengineering and biotechnologies** Oral reports 13-25 *F-201*	**Panel 8. Innovation and social technologies** Oral reports 13-15 *F-310b*
13:15 – 13:45	**Coffee Break** *F-416*	
13:45 – 17:00	**Poster Session**	
	Panel 5. Materials science *Main Foyer*	**Panel 7. Bioengineering and biotechnologies** *PTI 2 floor*
17:00 – 17:40	**Plenary Talk.** Reza Javaherdashti (CEO of MICCOR in The Netherlands) «Two mathematical state-of-the-art models to explain microbiological corrosion in spacecrafts» *F-201*	
17:40 – 18:20	**Plenary Talk.** Arezoo Assarian (CEO of Eninco Engineering B.V., University of Zagreb) «Anti-soiling coatings to increase the efficiency of photovoltaic solar panels» *F-201*	
18:20 – 19:00	**Plenary Talk.** Roman Ryltsev (Institute of Metallurgy, Ural Branch of the Russian Academy of Sciences, Russia) «Machine learning methods for predicting structure and properties of materials» *F-201*	
19:00 – 20:00	**Closing.** Closing remarks, PTI-2023 announcement, Distribution of awards for “What? Where? When?” game, awarding for best reports, photo-shooting *F-201*	

Day 5 – Friday – May 20
Departure of participants

List of online reports							
Panel 1. Nuclear and radiation technologies	Panel 2. Condensed matter physics	Panel 3. Instrumentation and robotics	Panel 4. Chemical technologies	Panel 5. Materials science	Panel 6. Information systems and technologies	Panel 7. Bioengineering and biotechnologies	Panel 8. Innovation and social technologies

Plenary Talk

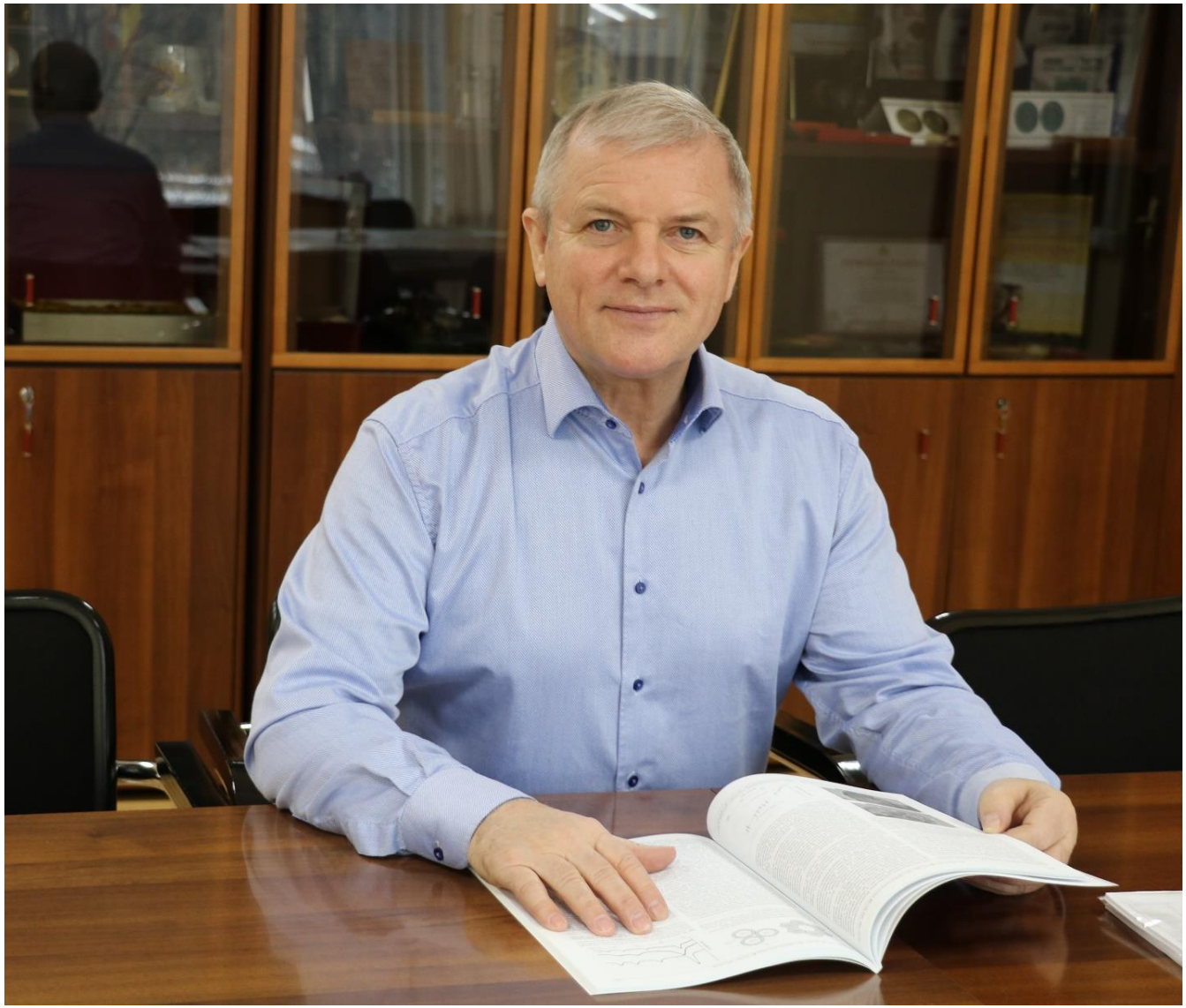
Return to Program overview

Andrey Rempel (Institute of Metallurgy, Ural Branch of the Russian Academy of Sciences, Russia)

«High entropy as the basis for the formation of innovative materials»

The plenary presentation will highlight the role of entropy in the formation of innovative materials and present detailed data on the disordered structure of high-entropy compounds of transition metals and magnetocaloric alloys based on rare earth metals. In addition, the properties of equiatomic high-entropy materials subjected to various thermal and temporal treatments will be considered. Such systems combine the unique properties of the original compound and entropy effects, which makes it possible to develop new materials with unique performance properties.

The work was carried out within the framework of the state task of IMET Ural Branch of the Russian Academy of Sciences and supported by the international project RSF-NSFC 21-43-00015.



Plenary Talk

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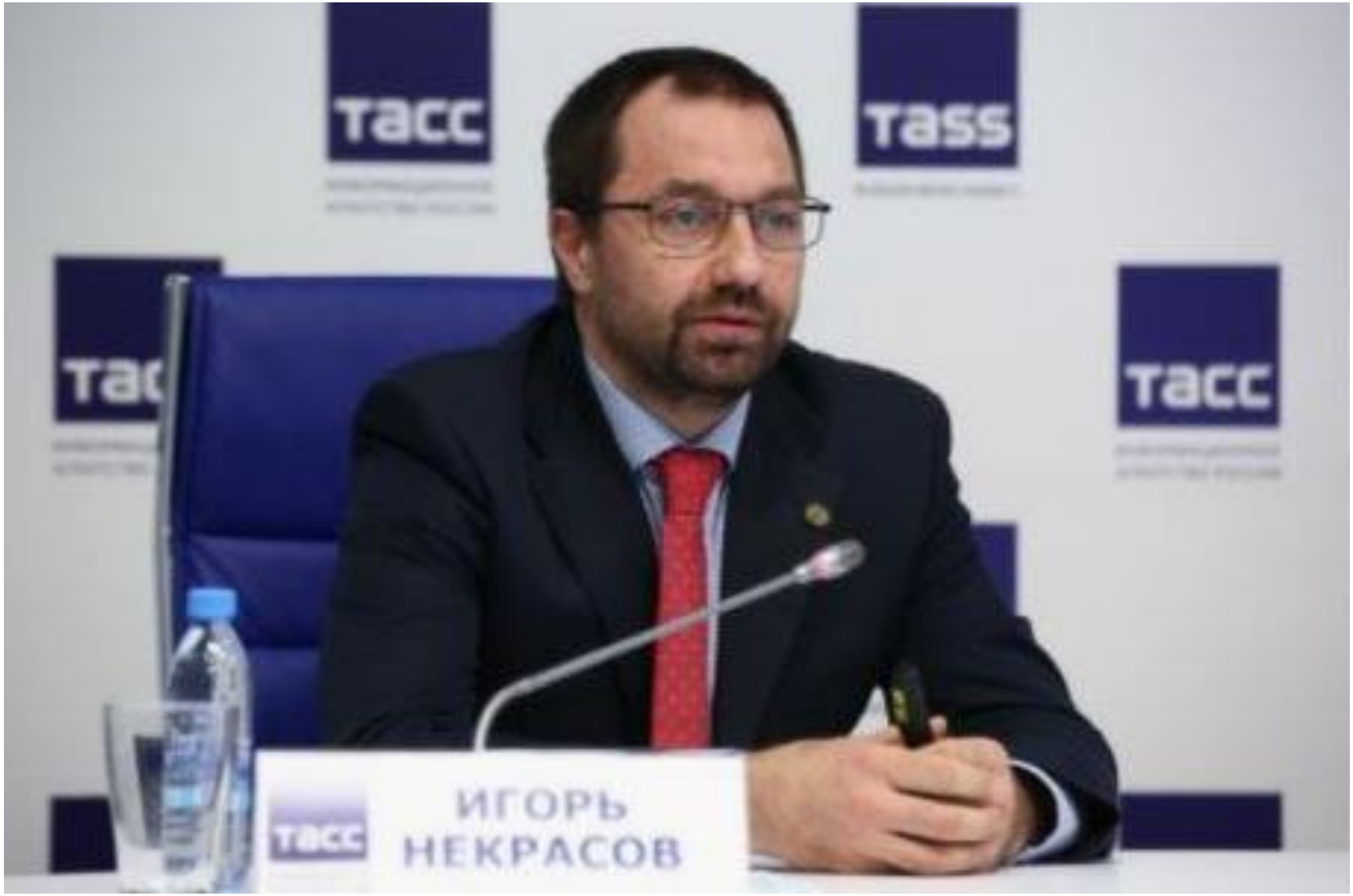
Igor Nekrasov (Institute of Electrophysics, Ural Branch of the Russian Academy of Sciences, Russia)

«Dielectric Permittivity of Metal-Dielectric Nanocomposites»

This report is not just a presentation of the final results, but a step-by-step description of the process of obtaining these results. Thus, the report will present an algorithm for working with "poorly defined problems", the ability to solve which has always been a competitive advantage for people who have received and mastered a university physics education.



Plenary Talk

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Jianxin Tang (Institute of Functional Nano & Soft Materials (FUNSOM), Soochow University, China)

«Interfacial "Anchoring Effect" Enables Efficient Blue Perovskite LEDs»

Perovskite light-emitting diodes (PeLEDs) with green and red emissions have made tremendous progress in recent years. However, the realization of efficient and stable blue-emission PeLEDs remains challenging, which greatly limits their potential applications in high-quality full-color displays and solid-state lighting. A delicate control over the entire electroluminescence process is indispensable to overcome the performance limitations of blue PeLEDs. Here, we demonstrate an efficient device architecture to synergistically reduce the energetic losses during electron-photon conversion and boost the extraction of trapped light in the device. A facile and reliable interface engineering scheme for manipulating the crystallization of perovskite films enabled by a multi-functional molecule-triggered anchoring effect at the grain-growth interface via the supplier of heterogeneous nucleation seeds. The crystallization process of highly emissive perovskite nanocrystals is controlled with the suppression of the trap-mediated non-radiative recombination losses due to interfacial hydrogen bonding interactions. This manipulation results in blue perovskite films with large-area uniformity and low trap-states. The synergistical boost in device performance is achieved for large-area sky-blue PeLED with a peak external quantum efficiency (EQE) of 9.2% and small-area device with an EQE of 12.8% emitting at 486 nm, along with the improved spectral stability and operation lifetime. In addition, the maximum EQE reaches 16.8% after combining an internal outcoupling structure without spectral distortion, which can be further raised to 27.5% when using a lens-based structure on top of the device.

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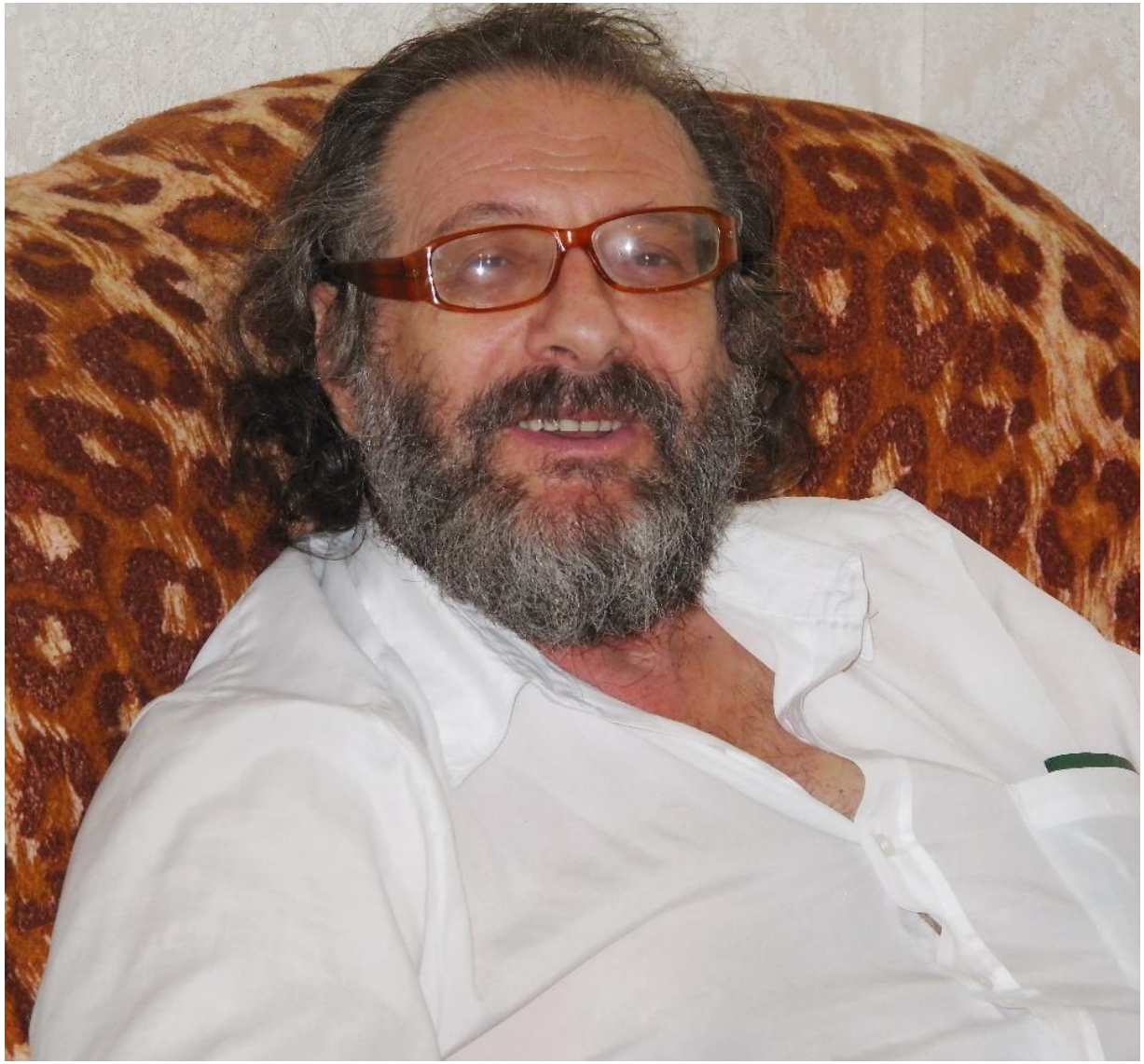
Plenary Talk

Boris Oksengendler (Institute of Ion-Plasma and Laser Technologies, Uzbekistan)

«The concept of Complexity in the problems of radiation physics of condensed matter»

The work contains the ideas of Complexity (complexity) in relation to radiation physics of the condensed state. Basic models are discussed. As an illustration, a number of effects from inanimate nature and wildlife are considered.



Plenary Talk

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Alexey Ekidin (Institute of Industrial Ecology, Russia)

«Development and implementation of an innovative complex of textile technologies for the production of nano-fibrous non-woven materials and technical means to protect the population, personnel, and the environment from man-made and biological impacts in the interests of the strategic security of the state»

The report describes the development of new textile technologies for electrospinning, which made it possible for the first time in domestic and world practice to obtain non-woven polymer materials with a fiber diameter of less than 100 nm. Such materials have found application as filtering materials at nuclear facilities, in particular, nuclear power plants, making it possible to significantly reduce the lower limit of detection of radioactive aerosols due to the greater efficiency of their capture.

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Plenary Talk

Ivan Leonov (Institute of Physics of Metals named after M.N. Mikheev, Russia)

«Simulation of the electronic structure, magnetic state and lattice stability of strongly correlated electronic systems»

Studies of the electronic state, magnetic and structural properties of functional materials based on transition metals are one of the most important and actively developing areas in the physics of condensed matter. Typically, these materials exhibit a wide variety of magnetic and structural phases, reflecting the complex relationship between electronic and lattice degrees of freedom at the microscopic level. The possibility of modeling the properties of such systems in the framework of the development of new functional materials with desired properties is one of the main problems of modern materials science. The latter is important both from the point of view of practical applications in micro-, nano- and optoelectronics, within the framework of the creation of highly sensitive sensors, ultrafast switches, the development of efficient catalysts and fuel cell elements, and in terms of generalization of fundamental knowledge in the field of materials science, physics and chemistry. This talk will present a modern method for modeling the electronic structure of real strongly correlated materials, combining density functional theory (DFT) and dynamic mean field theory (DMFT) of strongly correlated systems, DFT+DMFT. In particular, the results of studies of the electronic state, magnetic and lattice properties of a number of relevant transition metal compounds will be presented: iron oxides FeO, FeO2, Fe2O3, Fe4O5 and a series of compounds of layered superconductors nickelates RNiO2. The results obtained indicate the critical importance of electron-electron correlations for describing the properties of compounds near the Mott transition and quantum phase transitions.

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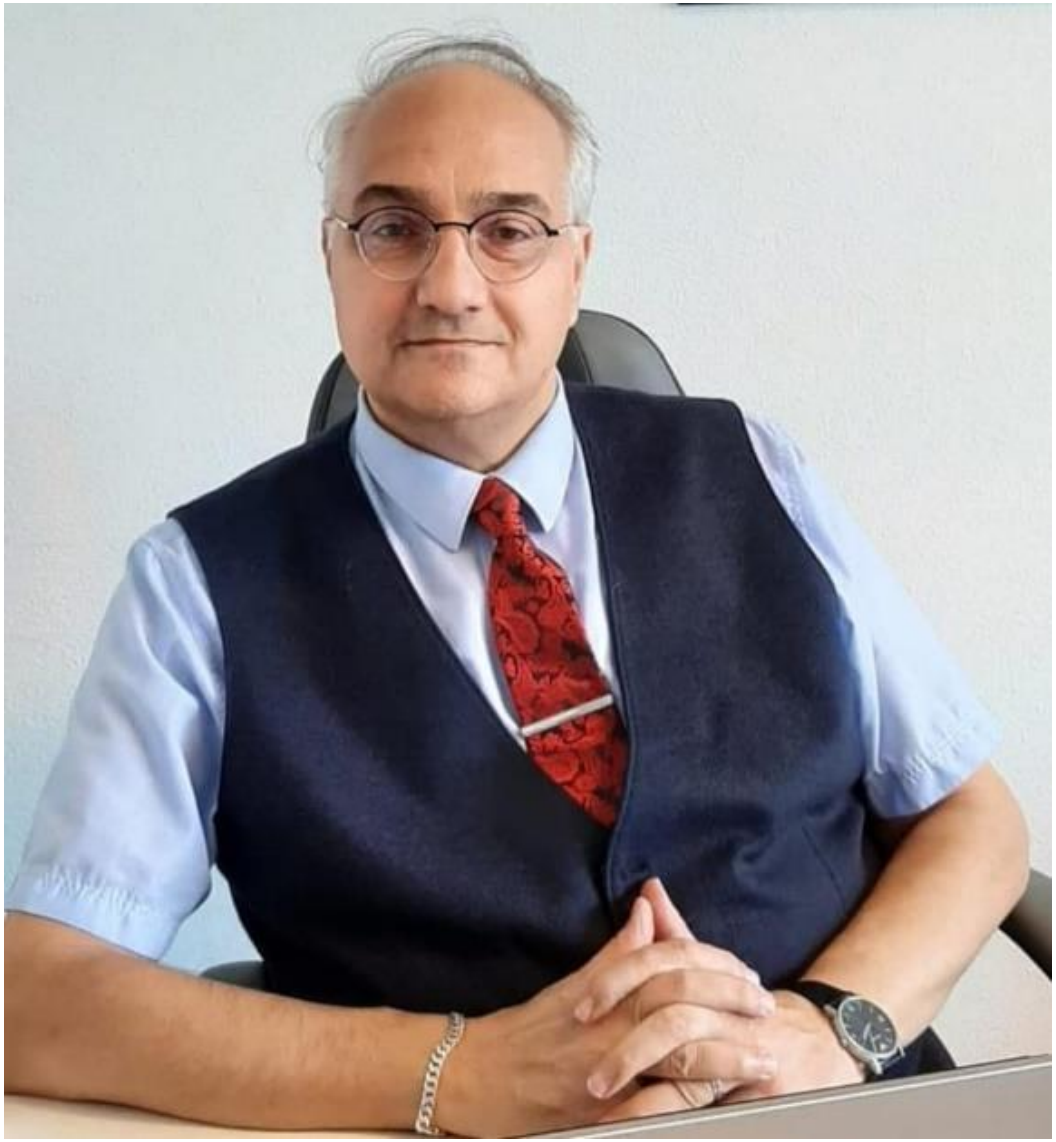
Plenary Talk

Reza Javaherdashti (CEO of MICCOR in The Netherlands)

«Two mathematical state-of-the-art models to explain microbiological corrosion in spacecrafts»



Spacecrafts like all man-made vehicles are made up of engineering materials (metals and non-metals). Due to the thermodynamics involved in manufacturing of metals, corrosion is an integral part of the life cycle of these materials. Certain microorganisms (bacteria, algae, fungi) are among factors that can affect corrosion, most of the time enhancing it and increasing the involved corrosion rates. Microbiologically influenced corrosion (MIC) has been referred to as “a major obstacle in spacecraft construction”. MIC has been observed in heat exchangers in the Internal Active Thermal Control System (IATCS) of the International Space Station. In fact, it appears that more than 100 species of microorganisms (bacteria and fungi) have been established to form bacterial establishments (Biofilms, or more correctly, Temenos). Seriousness of microbial contamination and consequent likelihood of MIC is so serious that NASA addresses their challenges in this regard as “Preventing "Sick" Spaceships”, a challenge that even today continues1.

Microbiologically influenced corrosion (MIC) is electrochemical corrosion in essence that, like all other electrochemical corrosion processes, needs an anode-cathode pair in addition to an electrolyte that in addition to allow ionic transfer, has enough nutrients to support growth and activity of micro-organisms as well as macro-organisms such as bacteria, archaea, algae and fungi. Almost all engineering materials except Titanium alloys are susceptible to MIC. When it comes to spacecrafts, metals such as Aluminum alloys and various composites are susceptible to MIC.

In this presentation, two mathematical models as state-of-the art will presented that one can be applied to assess the risk of corrosion (based on Schouten- Gellings approach) and another one to assess the risk of MIC based on Fuzzy calculus.

Plenary Talk

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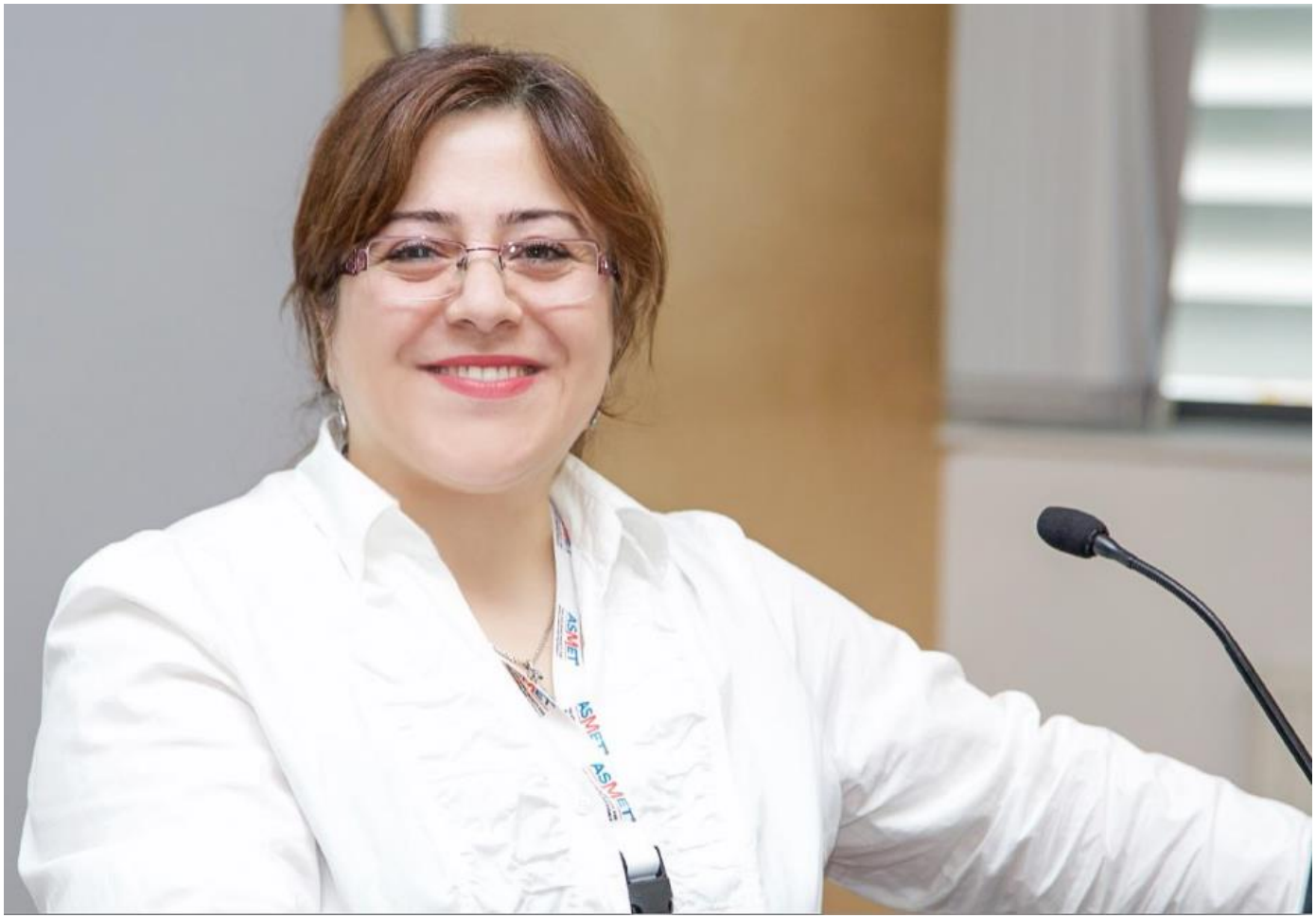
Arezoo Assarian (CEO of Eninco Engineering B.V., University of Zagreb)

«Anti-soiling coatings to increase the efficiency of photovoltaic solar panels»

In this presentation, after a quick review of the main issues involved in electrochemical corrosion and Temenos formation, one practical way to prevent soiling and thus control both corrosion and microbial adhesion will be explained. Of the five methods by which both corrosion and bacterial adhesion can be managed, the use of coatings is the most appropriate one from both economic and ecological points of view. Anti-soiling coating that will be briefly discussed in this presentation is an option that the PV solar panel industry must consider seriously to be able to manage the costs involved in both applying and maintenance of PV solar panels. In this presentation, the inventor of anti-soling coatings Dr. Arezoo Assarian will give a state-of-the-art lecture about the new generation of eco-friendly Smart coatings with an emphasis on anti-soiling coatings.



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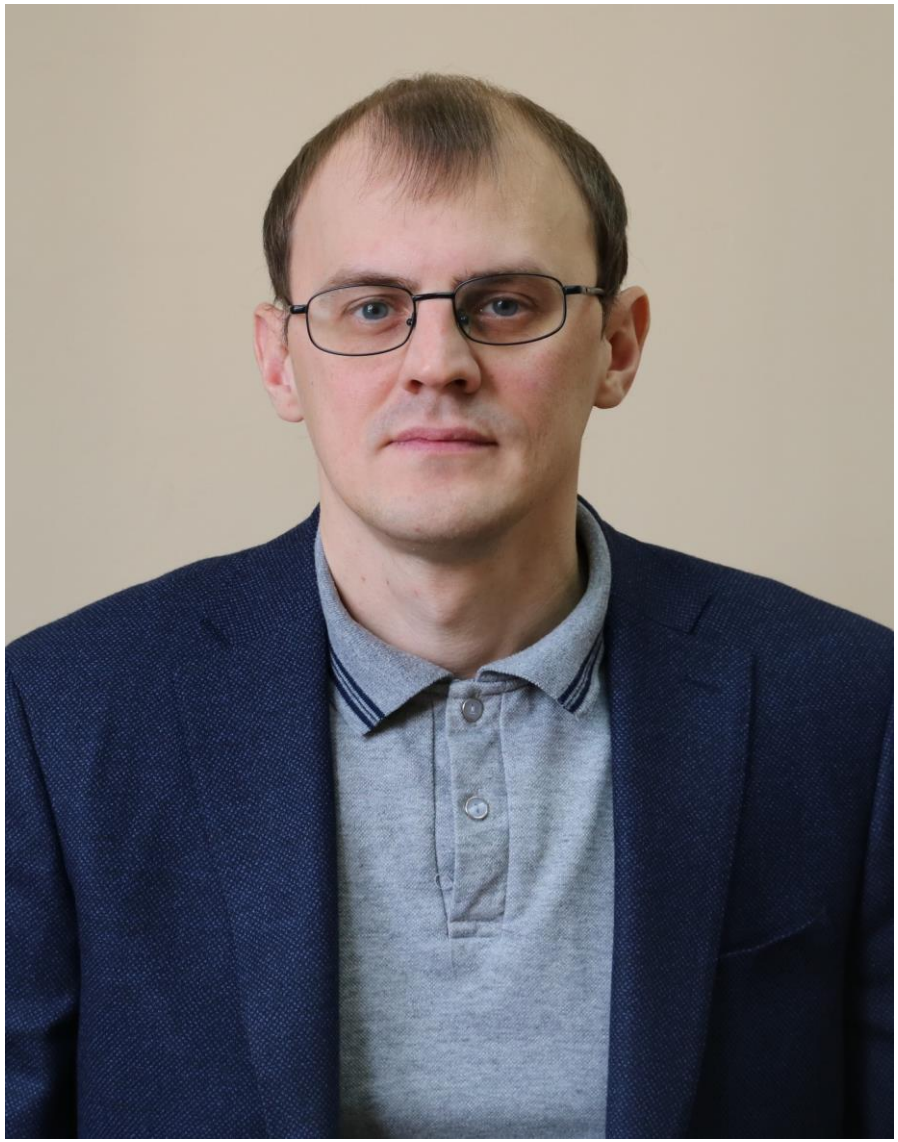
Plenary Talk

Roman Ryltsev (Institute of Metallurgy, Russia)

«Machine learning methods for predicting structure and properties of materials»

The report provides an overview of the most relevant applications of machine learning methods in condensed matter physics and materials sciences. The main machine learning models, such as neural networks, will be briefly reviewed and some methodological features of their construction and training will be outlined. Then, the application of these approaches to solving two topical problems in condensed matter physics, such as predicting the structure and properties of materials from the chemical composition and generating interparticle potentials for computer simulation, will be considered.



Panel 1. Nuclear and radiation technologies. Oral reports

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1. EFFECT OF THE CENTRIFUGAL BARRIER OF THE NUCLEAR FOR NEUTRON MODERATION, *Danil Ermakov*.
2. COMPUTATIONAL MODELING OF THE PROTECTIVE PROPERTIES OF CLAY, *Danil Korablev*.
3. INVESTIGATION OF RADIATION-PROTECTIVE PROPERTIES OF GLASSES WITH THE ADDITION OF NIOBIUM OXIDE, *Egor Strugov*.
4. THE ROLE OF VIRTUAL TECHNOLOGIES IN OPTIMIZATION OF RADIATION PROTECTION OF PERSONNEL, *Daniil Zavadskii*.
5. OPTIMIZATION OF THE ROUTE OF PERSONNEL MOVEMENT GIVEN SET OF POINTS IN INHOMOGENEOUS RADIATION FIELDS, *Aleksey Grigoryev*.
6. ASSESSMENT OF THE IMPACT OF SUPPORTIVE DEVICES IN RADIOTHERAPY, *Adel Abdullina*.
7. DYNAMICS INVESTIGATION OF NOBLE RADIOACTIVE GASES EMISSIONS DURING NORMAL OPERATION OF INDUSTRIAL NUCLEAR REACTOR, *Eugeniy Nikitenko*.
8. INVESTIGATION OF THE DISTRIBUTION OF URANIUM ISOTOPES AT THE BOUNDARY OF POLAR AND NONPOLAR ENVIRONMENTS, *Daria Rumyantseva*.
9. MONITORING OF RADIOACTIVE RELEASES IN THE MIDDLE URALS, *Ekaterina Kadochnikova*.
10. RADIATION IMPACT ASSESSMENT FROM TECHENSKY RESERVOIR CASCADE COASTLINE DUE TO RADIOACTIVE CONTAMINANTS WIND UPLIFT, *Aleksandra Nazarovich*.
11. ESTIMATED ESTIMATION OF THE RESIDUAL HEAT RELEASE OF SFAS IN THE HOLDING POOLS, *Stepan Glukhov*.
12. ON THE POSSIBILITY OF THE SEAWATER DESALINATION USING LOW-POTENTIAL NPP HEAT, *Ivan Shirmanov*.

Panel 2. Condensed matter physics. Oral reports

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1. CRYSTAL STRUCTURES AND MAGNETIC PROPERTIES OF THE A2MNTEO6 FAMILY (A = LI, NI, AG, TL), *Anna Susloparova*.
2. BENDING DEFORMATION AND MAGNETOELASTIC PROPERTIES OF A SPIN VALVE ON A POLYMER SUBSTRATE, *Artem Zakharov*.
3. FEATURES OF THE LAWS OF DISPERSION OF ELECTROMAGNETIC WAVES AND TRANSMISSION WINDOWS IN QUANTUM NANOWIRES, *Fedor Vasilevskiy*.
4. PLASMON SILVER NANOPARTICLES IN MGAL2O4 SPINEL, *Aleksandr Vagapov*.
5. NUMERICAL SIMULATION OF PICOSECOND MAGNETIC COMPRESSION LINES, *Vitaly Patrakov*.
6. MORPHOLOGY AND MICROSTRUCTURAL PROPERTIES OF MGAL2O4:GRAPHENE NANOCOMPOSITES, *Arseny Kiryakov*.
7. STRAIN-MAGNETO-OPTICS IN MAGNETOSTRICTIVE FERRITE-SPINEL COFE2O4, *Evgenii Surzhikov*.
8. THEORETICAL MODELING OF MAGNETORHEOLOGICAL EFFECTS IN DENSE MAGNETIC POLYMERS, *Anton Musikhin*.
9. THE INFLUENCE OF SHEAR STRESSES ON THE VELOCITY OF ISOTHERMAL FLOW OF VISCOUS TWO-LAYER FLUIDS, *Ekaterina Larina*.
10. APPLICATION OF BUFFER LAYERS FOR THE FORMATION OF CRYSTALLINE TEXTURE IN CR-MN/FE FILMS, *Anastasia Feshchenko*.
11. EXCHANGE BIAS EFFECT IN FENI/FEMN/FENI FILMS: EXPERIMENT AND MICROMAGNETIC SIMULATION, *Anastasia Bykova*.
12. APPLICATION OF METADYNAMICS TO ACCELERATE MODELING OF THE SYNTHESIS OF CHAIN STRUCTURES, *Kirill Arslanov*.
13. MAGNETIC PROPERTIES AND MAGNETOCALORIC EFFECT OF Y(CO1-XFEX)2 COMPOUNDS, *Maria Ragozina*.
14. MAGNETIC CHARACTERISTICS OF ND-FE-B 3D-PRINTED PERMANENT MAGNETS, *Viktoria Maltseva*.
15. INTRINSIC DEFECTS-RELATED THERMOLUMINESCENCE IN LI1-XNAXMGPO4 SOLID SOLUTIONS, *Dmitriy Akulov*.
16. BROADBAND MICROWAVE ABSORPTION IN CO-BASED AMORPHOUS RIBBONS, *Anastasia Timofeeva*.
17. EFFECT OF CATION MIXING IN MGAL2O4 THIN FILMS, *Stanislav Gaev*.
18. LUMINESCENT PROPERTIES OF THIN SENSITIVE LAYERS CREATED IN CORUNDUM BY IR LASER TREATMENT, *Artyom Voloshin*.
19. THE RELIABILITY ESTIMATION FOR MEMRISTOR STRUCTURES BASED ON NANOTUBULAR ZIRCONIA, *Ilya Petrenyov*.
20. SYNTHESIS AND CERTIFICATION OF G-C3N4/TIO2 NANOHETEROSTRUCTURE, *Irina Dorosheva*.
21. STUDY OF THE IRON STATE IN PHARMACEUTICAL PRODUCTS USING MÖSSBAUER SPECTROSCOPY, *Danil Belyaev*.
22. PROPERTIES AND BIOCOMPATIBILITY OF COLLOID CADMIUM SULFIDE NANOPARTICLES, *Ekaterina Vorontsova*.
23. EFFECT OF SHELL THICKNESS ON OPTICAL PROPERTIES OF SEMICONDUCTOR INP/ZNS NANOCRYSTALS, *Sergey Savchenko*.
24. MAGNETIC AND MAGNETOIMPEDANE IMPEDANCE PROPERTIES OF COBALT-BASED AMORPHOUS RIBBONS WITH DIFFERENT GEOMETRIES, *Anna Pasynkova*.
25. LUMINESCENT PROPERTIES OF NANOSTRUCTURED Al2O3 CERAMICS IRRADIATED WITH ELECTRON BEAMS, *Guzalliia Ramazanova*.

26. SYNTHESIS AND MAGNETIC PROPERTIES OF 3D TRANSITION METALS AND ALLOYS NANOWIRES IN THIN-FILM ALUMINUM OXIDE FILM, *Anastasiia Driagina*.
27. PRECESSION AND CORRELATION OF PULSATIONS IN A JET OF BOILING LIQUID, *Anton Akashev*.
28. MAGNETIZATION REVERSAL PROCESSES IN SINTERED PERMANENT MAGNETS SM(CO, FE, ZR, CU)Z, *Andrey Urzhumtsev*.
29. FEATURES OF OPTICAL PROPERTIES OF GRAPHITIC CARBON NITRIDE, *Nikolay Martemianov*.

Panel 3. Instrumentation and robotics. Oral reports

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1. APPLICATION OF MODERN METHODS AND TECHNIQUES FOR PHASE COMPOSITION EVALUATION OF AUSTENITIC-FERRITIC STEELS, *Alexander Kochnev*.
2. SIMULATION OF THE ACOUSTIC PATH IN THE ECHO-METHOD OF ULTRASONIC INSPECTION WITH A SLANTED TRANSDUCER, *Mikhail Ryabukhin*.
3. FIBER OPTIC PROBES FOR IR SPECTROSCOPY AND THERMOGRAPHY, *Ahmad Turabi*.
4. HCI BEAM DIAGNOSTICS SYSTEM, *Andrey Fofanov*.
5. HIGH-VOLTAGE PULSE GENERATOR FOR STARTING A GAS-DISCHARGE GENERATOR OF METAL PARTICLE FLOW, *Fedor Toropov*.
6. TWO-PHASE THERMAL CONTROL SYSTEM WITH CAPILLARY PUMP, *Vladislav Fomenko*.
7. SOFTWARE AND HARDWARE COMPLEX FOR INCREASING THE THROUGHPUT OF A GEOPHYSICAL CABLE, *Ramil Ziyadiev*.
8. REAL POWER TRANSFORMER LOSSES IN THE CORE. PROPOSAL FOR TCI OPTIMIZATION, BASED ON EXPERIENCE, *Aleksey Sukhanov*.
9. MULTIPURPOSE AUTOMATED SYSTEM FOR MONITORING AND EVALUATING THE CONDITION OF BATTERIES, *Vadim Sertakov*.
10. CREATION OF A LARGE VOLUME CRYOCHAMBER FOR STUDYING RADIO LEVEL GAUGES, *Mikhail Chupin*.
11. COMPARISON OF RELAY AND IMPULSE CONTROL OF MANIPULATOR, *Ilya Chupin*.
12. ANALYSIS OF VARIOUS DESIGNS OF WIDEBAND PRINTED ANTENNAS, *Mikhail Shishkin*.
13. A SIMPLE WAY OF DECREASING THE AMOUNT OF PHOTO/VIDEO DATA WHILE TRANSMITTING VIA UNDERWATER COMMUNICATION SYSTEMS, *Vladislav Kuznetsov*.

Panel 4. Chemical technologies. Oral reports

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1. AS(III) SORPTION ON NANOSTRUCTURED RUTILE, PREPARED BY HIGH-ENERGY MILLING, *Anastasia Belozerova*.
2. DETERMINATION OF ALUMINUM AND ZIRCONIUM CHLORIDES IN POTASSIUM CHLORALUMINATE MELT, *Tatiana Palaeva*.
3. DETERMINATION OF CS-137 IN NATURAL WATERS IN THE SVERDLOVSK AND CHELYABINSK REGIONS, *Anna Suetina*.
4. FORMAL STANDARD POTENTIAL OF PALLADIUM IN LICL-KCL-CSCL EUTECTIC MELT, *Anastasia Osipenko*.
5. HYDROCHEMICAL SYNTHESIS OF HIGH-PURITY SOLID SOLUTIONS OF METAL HALIDES, *Dmitrii Salimgareev*.
6. INFLUENCE OF THE PH VALUE ON THE PROPERTIES OF ZIRCONIUM HYDROXIDE DURING CONTROLLED DOUBLE-JET PRECIPITATION FROM CHLORIDE SOLUTIONS, *Sergei Buinachev*.
7. INVESTIGATION OF THE OPTICAL PROPERTIES OF OXYSULPHATES AND HYBRIDS BASED ON Y-EU, *Egor Gordeev*.
8. INVESTIGATION OF THE USEFUL TEMPERATURE DIFFERENCE EFFECT ON THE CHANGE IN ABSOLUTE PRESSURE IN THE HEAT EXCHANGE TUBE OF THE FALLING-FILM EVAPORATOR, *Viktoria Gushshamova*.
9. MONITORING THE OXYGEN OF ALKALI METAL FLUORIDES BY THE CARRIER GAS HOT EXTRACTION, *Elena Kartashova*.
10. OPTICAL SPECTRA OF LITHIUM BORATE MELTS, *Khokhryakov Alexander*.
11. PREPARATION OF STANDARD REFERENCE MATERIALS OF THE EUTECTIC MIXTURE OF LITHIUM, SODIUM, AND POTASSIUM FLUORIDES FOR MULTI-ELEMENT ANALYSIS BY XRF, *Ilya Pechishchev*.
12. DEVELOPMENT OF A METHOD FOR DETERMINATION AND MONITORING OF SR-90 IN NATURAL WATERS, *Nadezhda Belokonova*.
13. REDUCTION OF GOLD AND PLATINUM CONTENT INTO SLAG DURING THE MELTING OF SULFIDE MATERIALS, *Sergei Fedorov*.
14. SEPARATION OF MOLYBDENUM AND RHENIUM ON MECHANICALLY ACTIVATED CARBONACEOUS SORBENTS, *Mariya Skrylnik*.
15. SIMULATION OF A HYDROGEN PRODUCTION PLANT FOR METHANE STEAM REFORMING IN THE DWSIM PROGRAM, *Timofey Goldobin*.
16. STUDY OF SILVER HALIDES PHASE DIAGRAMS FOR THE DEVELOPMENT OF NEW OPTICAL MATERIALS, *Anastasia Yuzhakova*.
17. THE EFFECT OF PHOSPHORUS OXIDE ON THE PHYSICOCHEMICAL CHARACTERISTICS OF NIOBIUM-CONTAINING CONCENTRATES., *Mikhail Tolmachev*.
18. THE EFFECT OF SYNTHESIS CONDITIONS OF LAYERED GADOLINIUM-TERBIUM HYDROXIDES ON THE PROPERTIES OF HYBRID PHOSPHOR POWDERS, *Anastasiya Kosykh*.
19. THE STAGE OF SEPARATION OF STRONTIUM-90 AND YTTRIUM-90 IN THE METHOD OF EXPRESS DETERMINATION OF STRONTIUM-90 IN AQUEOUS SAMPLES, *Taisiya Vasilievna*.
20. URANIUM SORPTION BY ANION-EXCHANGERS FROM SULFATE-CHLORIDE SOLUTIONS, *Anastasia Konkova*.
21. USE OF MULTILINEAR CALIBRATION IN ATOMIC EMISSION SPECTRAL ANALYSIS OF FERROBORON, *Spevak Roman*.
22. USING OF BIOMICROGELS® FOR PALM OIL EXTRACTION, *Arina Kosenkova*.
23. WASTELESS EAF AND LF SLAG UTILIZATION, *Danill Lobanov*.

Panel 5. Materials science. Oral reports

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1. MODIFICATION OF SILUMINS WITH COMPLEX ADDITIVES OF CU WITH ZR AND CU WITH TI., *Egor Podkin*.
2. METHOD FOR PREPARING SAMPLES OF BEARING STEEL GRADE SHKH15SG FOR METALLOGRAPHIC STUDIES, *Leonid Mikhaylov*.
3. DEVELOPMENT OF HIGH-ENTROPY EUTECTIC ALLOYS FOR STRUCTURAL APPLICATIONS, *Pavel Kotenkov*.
4. INVESTIGATION OF THE EFFECT OF DISPERSION STRENGTHENING OF IRON-CARBON MELTS ON THEIR RESISTANCE TO LOCAL IMPACT, *Vadim Sedukhin*.
5. SYNTHESIS METHOD OF HIGH ENTROPY TRANSITION METAL CARBIDE IN SALT MELT, *Alexander Varaksin*.
6. FEATURES OF THE GRAIN BOUNDARY NETWORK FORMATION IN TI-6AL-4V ALLOY, *Inna Naschetnikova*.
7. INFLUENCE OF ALN NANOPARTICLES ON THE STRUCTURE AND MECHANICAL PROPERTIES OF ML5 ALLOY, *Anastasia Akhmadieva*.
8. USE OF BEAM-PLASMA TECHNOLOGIES TO INCREASE THE FUNCTIONAL PROPERTIES OF OIL AND GAS EQUIPMENT PARTS, *Sergey Leukhin*.
9. THE EFFECT OF COMPLEX ALLOYING OF A BIOCOMPATIBLE TITANIUM ALLOY BASED ON THE TI-NB SYSTEM ON THE STRUCTURE AND PROPERTIES FORMED DURING ANNEALING, *Raisa Lishtvan*.
10. LAYERED SYNTHESIS OF WORKPIECES BY THE METHOD OF MIG-PULSE SURFACE WITH THE USE OF AUSTENITIC METAL-CORE WIRE WITH NITROGEN, *Alexey Smolentsev*.
11. ON THE ISSUE OF NITROGEN SOLUBILITY IN CHROMIUM-NICKEL GRADES OF STEELS, *Vadim Sedukhin*.
12. OBTAINING A LOW-TEMPERATURE PASTE FOR SOLDERING WAVEGUIDE PATHS, *Dmitry Bazan*.
13. STUDY OF PHASE COMPOSITION HOMOGENEITY IN DEPTH OF TUNGSTEN CARBIDE CERAMICS PRODUCED BY SPARK PLASMA SINTERING, *Ksenia Smetanina*.
14. PREPARATION OF SILICON OXYNITRIDE-BASED CERAMICS BY SPARK PLASMA SINTERING, *Pavel Drozhilkin*.
15. THE EFFECT OF CARBON «CONTAMINATION» AND TEMPERATURE GRADIENT ON THE PHASE COMPOSITION OF CERAMICS PRODUCED BY ELECTRIC PULSE PLASMA SINTERING, *Pavel Andreev*.
16. INFLUENCE OF DEFORMATION TREATMENT ON THE MECHANICAL PROPERTIES OF AN ALLOY OF THE AL-MG-ER SYSTEM OBTAINED USING A HYDRIDE MASTER-ALLOY, *Nikolai Kakhidze*.
17. NUMERICAL MODELING OF THE DISPERSED PARTICLES DISTRIBUTION AND FIXATION DURING THE CENTRIFUGAL CASTING WITH VERTICAL AND HORIZONTAL ROTATION AXES, *Ivan Alekseev*.
18. NEW GLASS-CERAMICS MATERIAL: SYNTHESIS AND OPTICAL PROPERTIES, *Yulia Kuznetsova*.
19. RESEARCH OF PHYSICAL, OPTICAL AND RADIATION SHIELDING ABILITIES OF ZINC OXIDE (ZNO) FILLED POLYDIMETHYLSILOXANE, *Mutaz Walid*.
20. RADIATION SHIELDING ABILITIES OF POLYDIMETHYLSILOXANE, POLYURETHANE WITH ZNO/ TIO2 NANOPOWDERS ADDITIVES, *Timofey Volozheninov*.

21. INVESTIGATION OF THE RADIATION RESISTANCE OF INFRARED FIBER OF THE AGBR – AGI SYSTEM, *Polina Pestereva*.
22. SYNTHESIS AND STUDY BY ELECTRON MICROSCOPY OF INVERSE OPALS FROM ZIRCONIUM OXIDE, *Ksenia Shabanova*.
23. SYNTHESIS OF THIN FILMS FROM MONODISPERSED POLYMETHYLMETHACRYLATE MICROSPHERES, *Dieter Kokh*.
24. INFLUENCE OF THE HIGH MECHANICAL LOADING ON THE CRYSTAL STRUCTURE OF TITANIUM OXIDE TI3O5, *Anna Sushnikova*.
25. SYNTHESIS AND RESEARCH PHASE CHANGE MATERIALS BASED ON A HYDRATE SALT ZN(NO3)2·6H2O COMPOSITE, *Dmitry Testov*.
26. FRAGILITY OF ALKALI-BORON MELTS XLI2O-(100-X)B2O3, *Maria Samoylova*.
27. STUDY OF THE PROCESS OF INTERACTION OF GD2-XMGXZR2O7-Δ CERAMICS WITH LICL-LI2O AND LIF-NAF-KF MELTS, *Irina Anokhina*.
28. FEATURES OF SYNTHESIS OF COMPLEX OXIDES WITH MAGNETOPLUMBITE AND PEROVSKITE STRUCTURE IN COMBUSTION REACTIONS OF NITRATE-ORGANIC PRECURSORS, *Anastasia Permiakova*.
29. SYNTHESIS, ELECTRICAL CONDUCTIVITY AND ELECTROCHEMICAL PROPERTIES OF SOLID SOLUTIONS LA1.4CA0.6NI1-YFEYO4+D (Y=0.2, 0.3, 0.4), *Kirill Sukhanov*.
30. STRUCTURE AND PROPERTIES OF INDIVIDUAL PHASES IN THE PR2O3-SRO-COO SYSTEM, *Maria Vlasova*.
31. ELECTROCHEMICAL IMPEDANCE SPECTROSCOPY ANALYSIS OF LA3NI2O7-D IN THE (CE, SM)O2-D BASED SYMMETRIC CELL, *Maksim Ozhiganov*.
32. STRUCTURE AND PROPERTIES OF INDIVIDUAL PHASES IN THE EU2O3-(BA, CO)O-FE2O3 SYSTEMS, *Alina Alkhamova*.
33. ELECTRICAL PROPERTIES OF SOLID SOLUTIONS LA0.9SR0.1IN1-XMGXO2.95-0.5X, *Svetlana Pachina*.

Panel 6. Information systems and technologies. Oral reports

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1. THE CONCEPTUAL MODEL OF AN AUTOMATED SYSTEM FOR THE IDENTIFICATION OF EXPORT CONTROL OBJECTS, *Anatoly Skripov*.
2. SOFTWARE DEVELOPMENT FOR DESCRIPTION OF PATTERNS IN TWO-DIMENSIONAL SPACE IN AUTOIT BY THE METHOD OF COORDINATES ON THE PLANE, *Roman Tikhomirov*.
3. METHODS AND MODELS FOR OPTIMIZING THE PROCESS OF EXPERIMENTAL TESTING ON TEST BENCHES OF SOFTWARE AND HARDWARE COMPLEXES OF CONTROL SYSTEMS, *Andrey Zhuravlev*.
4. THE ALGORITHM DEVELOPMENT FOR THE DAMAGE LOCATION SEARCH ON THE ELECTRIC LINE USING AN AMPLITUDE-PHASE COORDINATE CHARACTERISTIC, *Andrey Logunov*.
5. DETERMINATION OF THE WORKING POSITION OF THE ROBOTIC ARM TOOL USING CAMERAS AND MACHINE VISION, *Elena Rubleva*.
6. SIMULATION OF A THREE-DIMENSIONAL CRYSTAL LATTICE OF URANIUM DIOXIDE, *Gleb Kostarev*.
7. A VARIABLE-CHARGE MOLECULAR DYNAMICS MODEL OF UC, U2C3 И UC2 CRYSTALS, *Sergey Pitskhelaury*.
8. ANALYSIS OF THE SURVIVAL RATE OF CANCER DISPENSARY PATIENTS AFTER RADICAL CYSTECTOMY, *Svetlana Ogorodnikova*.
9. FUNCTIONAL ANALYSIS OF ACTIVE ENERGY COMPLEX CONTROL SYSTEMS - MICROGRID, *Alexander Zhavoronkov*.
10. DEVELOPMENT OF A TEXT ANALYSIS AGENT FOR THE SUBJECT AREA TRAIN SCHEDULE, *Polina Ziomkovskaya*.
11. APPLYING THE METHODS OF NLP TO THE RESULTS OF DIFFERENTIAL GENE EXPRESSION ANALYSIS, *Vladislav Dordiuk*.
12. AUTOMATIC APPLE LEAF DISEASES DETECTION AND CLASSIFICATION USING MULTILAYER CONVOLUTION NEURAL NETWORK, *Rizu Md Rakib Ul Islam*.
13. THE CONCEPT OF A MODEL FOR PREDICTING THE PATIENT'S CONDITION BASED ON THE AGENT-BASED MODELING METHOD, *Anton Lisovenko*.
14. DEVELOPMENT OF A WEB APPLICATION TO PREDICT BIOLOGICAL AGE BASED ON FUNCTIONAL DATA, *Anton Zotov*.

Panel 7. Bioengineering and biotechnologies. Oral reports

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1. OPPORTUNITIES IN PROCESSING OF TRANSMEMBRANE POTENTIAL DATA WITH CONVOLUTIONAL NEURAL NETWORKS, *Konstantin Ushenin*.
2. BIOCHIPS: FUTURE AND PRESENT, *Jonas Kambele*.
3. USING RADIOBIOLOGICAL MODELS FOR PLANNING FRACTIONATION OF RADIATION THERAPY COURSES, *Alina Safronova*.
4. BIOFUELS: PRESENT AND FUTURE, *Richard Vincent Asase*.
5. USING NEURAL NETWORKS TO DIAGNOSE PULMONARY PNEUMONIA IN PATIENTS WITH COVID-19, *Timofey Chernobrovkin*.
6. CHARACTERIZATION OF MINE WASTES AS A POTENTIAL SOURCE OF HEAVY METALS PROPAGATION TO NEARBY SOILS (CASE OF THE FORMER KIPUSHI CONCENTRATOR), *Charles Lwamba*.
7. SDS-PAGE FOR MYOSIN HEAVY CHAINS: FAST AND FURIOUS, *Yuliya Permyakova*.
8. EDIBLE VACCINES: PROBLEMS AND PROSPECTS, *Emmanuel Ofosu Mensah*.
9. MODELING OPTICAL PROPERTIES OF BIOLOGICAL STRUCTURES, *Eugene Bukhanov*.
10. EXTRACTION OF RESVERATROL FROM FALLOPIA JAPONICA ROOTS, *Mustapha Kamel*.
11. FLUORESCENT SENSOR HYDROGEL FOR PESTICIDE DETECTION, *Kira Izmojerova*.
12. RADIOMETRIC TOPOMETRY OF RADIOPHARMACEUTICAL BIOKINETICS IN HUMANS, *Artem Sidorov*.
13. COMPARATIVE ANALYSIS OF DIFFERENTIAL GENE EXPRESSION ON PATIENTS WITH ISCHEMIC AND IDIOPHATIC CARDIOMYOPATHY IN R PROGRAMMING LANGUAGE, *Polanco Espino Fernando*.
14. MACHINE LEARNING AND DEEP LEARNING METHODS OF MICROORGANISMS' SEGMENTATION SURVEY, *Maria Chechulina*.
15. FUNCTIONAL PROPERTIES OF CORN STARCH EXTRACTED FROM FOUR VARIETIES OF MAIZE (ZEA MAYS), *Feyisayo Adepoju*.
16. INVESTIGATION OF THE RADIATION-INDUCED EPR SIGNAL IN COMPOUND FEED AFTER RADIATION PROCESSING, *Anastasia Narkhova*.
17. PROXIMATE, FUNCTIONAL AND SENSORY PROPERTIES OF BREAD FROM WHEAT - PLANTAIN (MUSA SPP) FLOUR BLENDS, *Queency Okechukwu*.
18. MECHANICAL CHARACTERISTICS OF MYOSIN IN DIFFERENT HEART CHAMBERS OF RATS, *Anastasiya Grebenshchikova*.
19. THE POSSIBILITY OF USING MAST CELLS AS INDICATORS OF THE ACCUMULATION OF AGE-RELATED CHANGES IN DIFFERENT TISSUES, *Ali Sadek*.
20. VOICE DISORDER IDENTIFICATION USING RECURRENT NEURAL NETWORKS, *Anastasia Tselishcheva*.
21. THE ROLE OF ANTIOXIDANTS FROM FRUITS IN DISEASE PREVENTION, *Emmanuel Kormla Danyo*.
22. THE POSSIBILITY OF USING A FERROSULFATE DOSIMETER TO MEASURE THE EFFECTIVENESS OF RADIOMODIFICATION, *Andrey Gerasimov*.
23. ANALYSIS OF MECHANICAL ALTERNANS IN SINGLE CARDIOMYOCYTES IN ATRIAL FIBRILLATION, *Polina Mikhryakova*.

24. IMPROVEMENTS IN INFRARED THERMOGRAPHY-BASED DIAGNOSTICS OF SKIN ABNORMALITIES, *Aleksandr Boyarkin*.

Panel 8. Innovation and social technologies. Oral reports

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1. STARTUP PRACTICE DIPLOMAS IN RUSSIAN UNIVERSITIES, *Daniil Philippov*.
2. CONFLICT MANAGEMENT: THE MAIN FACTORS OF THEIR OCCURRENCE IN THE COMMERCIALIZATION OF INTELLECTUAL PROPERTY, *Olga Svetlova*.
3. INNOVATIVE APPROACH TO THE TEACHER-STUDENT COMMUNICATION PROCESS VIA SPECIALIZED TELEGRAM BOTS, *Leonid Krokhin*.
4. UNDERESTIMATION OF INNOVATIVE COMPANIES AT THE INITIAL PUBLIC OFFERING OF SHARES AND FACTORS AFFECTING IT, *Andrey Solovyev*.
5. QUALITY OF URBAN ENVIRONMENT IN RUSSIAN CITIES: ANALYSIS, DYNAMICS, DEVELOPMENT TRENDS, *Yuliya Koryukova*.
6. SOCIAL IMPACTS AND OPPORTUNITIES OF RELOCATING INDUSTRIAL AREAS OUTSIDE THE CITY, *Egor Sergeev*.
7. ANALYSIS OF THE ACCURACY AND INFORMATION OF BIOHACKING OF «SMARTWATCH» DATA IN ASSESSING THE ACTIVITY OF A SWIMMER, *Ekaterina Tarkhanova*.
8. A MODEL FOR ASSESSING THE MATURITY OF PROJECT ORGANIZATIONS IN THE FIELD OF INFORMATION TECHNOLOGIES, *Dmitrii Khokhlov*.
9. ANALYSIS OF THE APPLICABILITY OF AGILE PROJECT MANAGEMENT MODELS UNDER ECONOMY DIGITALIZATION, *Stanislav Ozornin*.
10. ADAPTATION OF YOUNG SPECIALISTS IN TECHNOLOGY COMPANIES: STATEMENT AND POSSIBLE SOLUTIONS TO THE PROBLEM, *Dmitry Prokhorov*.
11. ANALYSIS OF THE CMM APPLICATION POSSIBILITY FOR PRODUCT CONTROL, *Vladimir Shklyaev*.
12. ASSESSMENT OF INNOVATIVE POTENTIAL IN THE FIELD OF TELECOMMUNICATION TECHNOLOGIES, *Tatiana Tiunova*.
13. COMPLEX FOR REMOTE EXECUTION OF LABORATORY WORK ON RADIO ELECTRONICS, *Yuriy Davydov*.
14. DECISION MAKING TOOL TO DETERMINE IMPLEMENTATION INNOVATIONS IN THE TIMBER PROCESSING SECTOR OF RUSSIA, *Victor Smirnov*.
15. OPPORTUNITIES FOR THE USE OF FLEXIBLE MANAGEMENT AT DEFENSE INDUSTRY ENTERPRISES, *Andrey Mironov*.

Panel 1. Nuclear and radiation technologies. Poster reports

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1. ELECTROCHEMICAL STUDY OF REACTION OF OXYGEN WITH SAMARIUM CHLORIDE IN MOLTEN SALT MEDIA, *Darya Doroshenko*.
2. NEUTRON-TOMOGRAPHIC STUDY OF THE INTERNAL STRUCTURE OF KNIFE PRODUCTS FOUND IN THE UZUNDARA FORTRESS, *Jalilbek Khakimov*.
3. NON-DESTRUCTIVE APPROACH FOR DETERMINING THE ACTIVITY OF DIFFICULT-TO-MEASURE RADIONUCLIDES IN SRW, *Denis Desyatov*.
4. QUALITY CONTROL OF RADIOTHERAPY FOR DETERMINING THE ABSORBED DOSE RATE IN VARIOUS ENVIRONMENTS FOR THE GAMMA THERAPEUTIC DEVICE TERABALT, *Azambek Kalonov*.

Panel 2. Condensed matter physics. Poster reports

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1. ACTIVATION ENERGY OF THE JAHN-TELLER COMPLEXES IN CAF2:CU2+ CRYSTAL, *Wessam Hosseny*.
2. APPLICATION OF PEDD FOR CHAOTIC SYSTEM'S SIMULATION, *Vladislav Klimenko*.
3. COMPOSITE EFFECT IN NONSTICHIOMETRIC IRON SELENIDE, *Stepan Mozgovykh*.
4. CRYSTAL LATTICE DISTORTIONS AND CHEMICAL COMPOSITION OF NONSTOICHIOMETRIC COMPOUNDS TBFE2MNX ($0 \leq X \leq 0.4$), *Alexander Bartashevich*.
5. DETERMINATION OF THE CRYSTAL STRUCTURE OF WMNB2 COMPOUND BY X-RAY DIFFRACTION, *Vsevolod Shchanov*.
6. DIAGNOSTICS OF PICOSECOND ELECTRON BEAMS PARAMETERS, *Elizaveta Osipenko*.
7. EFFECT OF THE REACTIVE GAS ACTIVATION METHOD ON THE DEGREE OF DISSOCIATION AND PLASMA PARAMETERS OF AN ARC DISCHARGE WITH A HOLLOW CATHODE AND ANODE, *Yuliya Bryukhanova*.
8. EFFECT OF THE THICKNESS OF THE ANTIFERROMAGNETIC CR20MN80 LAYER ON THE PROPERTIES OF CR80MN20/FE20NI80 FILMS, *Svetlana Severova*.
9. ENERGY DISTRIBUTION OF TRAPS IN AL2O3-BEO CERAMICS, *Maxim Gerasimov*.
10. EPR SIGNALS IN MELANOPROTEIN FIBER AT LOW TEMPERATURE AND UNDER THE INFLUENCE OF IONIZING RADIATION, *Alexey Podshivalov*.
11. FEATURES OF THE RESISTIVITY OF MNBI2TE4 SINGLE CRYSTALS AND POLYCRYSTALS, *Andrey Borbolin*.
12. FERRO-ANTIFERROMAGNETIC TRANSFORMATION IN LA0.2TB0.8MN2SI2 AT LOW TEMPERATURES, *Haneen Alsafi*.
13. HIGHLY SENSITIVE COFENI/CU SUPERLATTICES WITH MAGNETIC FLUX CONCENTRATORS, *Ivan Naydanov*.
14. IMPROVING CONVERGENCE OF THE MONTE CARLO METHOD FOR THE ISING MODEL USING PEDD, *Dmitriy Kukushkin*.
15. INDUCED BY LASER RADIATION DEGRADATION OF LI3.95MN0.05TI5O12, *Alexey Nikiforov*.
16. INVESTIGATION OF DZYALOSHINSKII-MORIYA INTERACTIONS IN CONDUCTIVE MANGANESE MONOSILICIDE, BASED ON AB INITIO MODELING, *Anton Kilmetov*.
17. KINETIC PARAMETERS OF THERMALLY STIMULATED LUMINESCENCE IN NANOTUBULAR HAFNIA, *Artem Shilov*.
18. KINETIC PARAMETERS OF THERMOLUMINESCENCE IN TRANSITIONAL PHASES OF ALUMINUM OXIDE, *Mikhail Tsepilov*.
19. LOCAL SWITCHING POLARIZATION ON THE NON-POLAR CUT OF LITHIUM NIOBATE WITH CONTROLLED INHOMOGENEOUS STOICHIOMETRY DEVIATION, *Evgeny Greshnyakov*.
20. LOW-TEMPERATURE LUMINESCENT SPECTROSCOPY AND CHARGE TRANSFER PROCESSES IN NANOMETER DIELECTRIC FILMS OF HAFNIUM-ZIRCONIUM-OXYGEN, *Anton Mamonov*.
21. LUMINESCENCE SPECTROSCOPY OF QUATERNARY GARNETS DOPED WITH TRIVALENT RARE-EARTH IONS, *Dmitry Tavrunov*.
22. MAGNETIC CHARACTERISTICS OF TOROIDAL SAMPLES PRODUCED BY 3D-PRINTING TECHNOLOGY FROM IRON POWDERS AFTER ANNEALING, *Daria Razueva*.

23. MAGNETIC PROPERTIES OF FENI FILMS DEPOSITED BY OBLIQUE SPUTTERING AT DIFFERENT GROWTH CONDITIONS, *Ilya Makarochkin*.
24. MAGNETOCALORIC EFFECT OF MAGNETICALLY ORDERED FE3-XNIXSE4 COMPOUNDS, *Valeria Komarova*.
25. MODELING OF FEGE COLLECTIVE MAGNETIC EXCITATIONS USING QUANTUM PERTURBATION THEORY, *Elena Maibakh*.
26. MODELING THE ELECTRICAL ACTIVITY OF NERVE CELLS USING THE PREDETERMINED EQUILIBRIUM DRIVEN DYNAMICS METHOD, *Adelina Khasanova*.
27. MULTICOLOR EMISSION IN GD2O3 FILMS IMPLANTED WITH BI IONS, *Andrey Mamonov*.
28. NANOSTRUCTURES CREATED IN COBALT-BASED AMORPHOUS MICROWIRES FOR MAGNETIC SENSORS, *Ilya Kozlov*.
29. NUMERICAL SIMULATION OF GAS MICROFLOWS, *Vera Miheeva*.
30. OBSERVATION OF BRIGHT YELLOW LUMINESCENCE IN LEAD BROMIDE PEROVSKITE SINGLE CRYSTALS, *Maxim Akhatov*.
31. OPTICAL PROPERTIES OF BENZOTHIENOACENES, *Kristina Trofimova*.
32. OPTICAL PROPERTIES OF INTRINSIC AND IMPURITY DEFECTS IN TRANSPARENT NANOCERAMICS MGAL2O4:CR3+, *Valeriy Dutov*.
33. PARAMAGNETIC SPIN FLUCTUATIONS AND THERMOELECTRIC POWER OF FE1-XCOXSI SOLID SOLUTIONS, *Tatyana Nogovitcyna*.
34. PARTICLE VOLUME GROWTH RATE IN ONE-COMPONENT AND BINARY MELTS, *Margarita Nikishina*.
35. PHASE TRANSITION BOUNDARY DYNAMICS IN THE PRESENCE OF CRYSTALS NUCLEATION, *Liubov Toropova*.
36. POLYMER MAGNETOOPTICAL COMPOSITES FOR THE IR RANGE, *Valentina Bessonova*.
37. QUANTUM-CLASSICAL MOLECULAR SIMULATION OF THE LINEAR-CHAINED CARBON SYNTHESIS ON SILICON SUBSTRATE, *Alexander Matitsev*.
38. WIND EFFECT ON THE CONVECTIVE FLOW OF A VISCOUS INCOMPRESSIBLE VERTICALLY SWIRLING FLUID, *Anastasia Dyachkova*.
39. REFINEMENT OF THE CRYSTAL STRUCTURE LINI0.1CO0.9PO4, *Polina Romashko*.
40. RESIDUAL ELECTRICAL RESISTANCE OF METALS AND ALLOYS WITH VACANCIES, *Kirill Borodin*.
41. SHAPE ANISOTROPY EFFECT IN MICROSTRIPED SPIN VALVES WITH SYNTHETIC ANTIFERROMAGNET, *Anastasia Germizina*.
42. SHAPE TRANSFORMATION OF COPPER NANOPARTICLES IN WATER COLLOID DURING AGING, *Boris Lisjikh*.
43. SMOOTH OPERATION CONTROL OF THE CRYSTALLIZER WITH CONTINUOUS IMPURITY SUPPLY, *Eugenya Makoveeva*.
44. SPECIAL GRAIN BOUNDARY SELF-DIFFUSION IN BCC-TUNGSTEN, *Maksim Stupak*.
45. SPECIAL GRAIN BOUNDARY SELF-DIFFUSION IN NIKEL, *Mikhail Urazaliev*.
46. STRUCTURAL AND ELECTRONIC PROPERTIES OF MOS2/WS2 HETEROSTRUCTURE, *Nikita Muksunov*.
47. STRUCTURAL PARAMETERS OF GRAPHITIC CARBON NITRIDE SYNTHESIZED AT DIFFERENT TEMPERATURES, *Ivan Ilyashenko*.
48. STRUCTURE AND PROPERTIES OF COXTE COMPOUND NEAR THE EQUIMOLAR COMPOSITION, *Danil Akramov*.
49. SYNTHESIS AND STUDY OF 2D MAGNETS BASED ON COMPOUND FE5GETE2, *Anastasiia Paltseva*.

50. SYNTHESIS AND XRF STUDY OF NANOPOWDERS BASED ON Nd:(YXGd1-X)2O3 SOLID SOLUTION FOR OBTAINING ACTIVE LASER MEDIA, *Danil Vasin*.
51. THE COMPUTATION OF CRYSTALLINITY INDEX BASED ON XRD DATA FOR SAMPLES PROTECTED BY KAPTON THIN-FILM, *Anastasia Adamova*.
52. THE EFFECT OF THE SYNTHESIS METHOD ON THE LUMINESCENT AND DOSIMETRIC PROPERTIES OF ZINC ALUMINATE, *George Starostin*.
53. THE HIGH-SPIN STATE OF FE IONS IN S SRFE12O19 HEXAFERRITES, *Ilya Kantur*.
54. THE STRUCTURE OF THIN-FILM COMPOSITES (COFEZR)-(MGF), *Tatyana Tregubova*.
55. THERMOLUMINESCENCE OF MAGNESIUM OXIDE CERAMICS OBTAINED BY THE METHOD OF ELECTRON BEAM SYNTHESIS, *Yana Kasatkina*.
56. THIN-FILM COATINGS OF MG-AL SPINEL ON DIELECTRIC SUBSTRATES: SYNTHESIS, STRUCTURE AND LATTICE DYNAMICS, *Lev Sushanek*.
57. RECIPROCAL SPACE STUDY OF HEISENBERG EXCHANGE INTERACTIONS IN FERROMAGNETIC METALS, *Ilya Kashin*.
58. NON-TRIVIAL ELECTRONIC CONFIGURATIONS OF TWO-DIMENSIONAL FERROMAGNETIC CRYSTALS OF STANDARD GEOMETRIES, *Ilya Kashin*.

Panel 3. Instrumentation and robotics. Poster reports

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1. APPLICATION OF RESONANT CONVERTERS FOR CHARGING CAPACITIVE ENERGY STORAGES BY THE EXAMPLE OF THE HIGH VOLTAGE PULSE GENERATOR «RADAN 303», *Danila Lisovsky*.
2. APPLICATION OF LAMB WAVES TO EVALUATE THE QUALITY OF BUTT WELDS IN THIN PLATES, *Alexey Vasiliev*.
3. RESEARCH THE POSSIBILITIES OF MAGNETIC FLAW DETECTION IN TERMS OF DETECTING DEFECTS IN THE SURFACE OF A PIPE BILLET, *Andrey Pastukhov*.
4. RECOMMENDATIONS FOR INCREASING THE DETECTION OF LONGITUDINAL DEFECTS OF THE INNER SURFACE OF PIPES WITH THE MAGNETIC CONTROL METHOD, *Yaroslav Gubanov*.
5. THE PROGRAM CONTROLLED ELECTRONIC LOAD, *Gleb Ungvitskii*.
6. ELECTRICAL ENERGY CONVERTER WITH HIGH INPUT VOLTAGE RANGE, *Anna Kuzovleva*.
7. DEVELOPMENT OF A MEASURING COMPLEX TO MONITOR THE CONCENTRATION OF ATMOSPHERIC AEROSOL AND METEOROLOGICAL PARAMETERS IN THE SURFACE AIR, *Daria Vasileva*.
8. RESEARCH FACILITY FOR MEASURING SPECTRA OF PHOTO-, RADIO-, THERMO- AND OPTICALLY STIMULATED LUMINESCENCE IN LUMINESCENT ACTIVE MATERIALS, *Nikolay Gorev*.
9. STAND FOR RESEARCH OF FUNCTIONING AND TESTING OF ELECTRONIC CIRCUITS, *Nikita Simonov*.
10. USING THE CURIE POINT TO MEASURE (REGULATE) TEMPERATURE, *Ilya Ivanov*.
11. PRACTICAL COMPARISON OF GPS RECEIVERS PROMISING FOR MAGNETOMETRIC MAPPING, *Artur Lotfullin*.

Panel 4. Chemical technologies. Poster reports

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1. A NOVEL FUEL REACTOR WITH A RETURN VALVES CASCADE FOR THE CHEMICAL LOOPING WITH OXYGEN UNCOUPLING PROCESS, *Roman Shishkin*.
2. ASSESSMENT OF HEAVY METAL CONTAMINATION OF SURFACE WATERS, SOILS AND PLANTS IN THE ORENBURG REGION, *Tatyana Okuneva*.
3. ATOMIC EMISSION ANALYSIS OF A COMPOSITION BASED ON A LiF-BeF2 MELT IN AN ARC DISCHARGE, *Liana Bekmansurova*.
4. CATION NONSTICHIOMETRY, CRYSTAL STRUCTURE, AND MAGNETIC PROPERTIES OF EU2-XMNXO3, *Liubov Cherepanpva*.
5. CO-PRECIPITATION OF STRONTIUM, BARIUM, AND GADOLINIUM PHOSPHATES FROM ALKALI CHLORIDE BASED MELTS, *Elena Pavlova*.
6. COMPOSITION OF CHEMICALLY DEPOSITIONED CDPBS FILMS, *Darya Dyomina*.
7. DEPENDENCE OF ALUMINUM OXIDE SORPTION PROPERTIES ON DEPOSITION PH VALUE AND COHERENT SCATTERING REGION SIZES, *Polina Solodovnikova*.
8. DETERMINATION OF COMPONENT CONTENT IN STEELS BY XRF, TAKING INTO ACCOUNT MATRIX EFFECTS AND SPECTRAL OVERLAPS, *Marina Shikhaleeva*.
9. DETERMINATION OF RADIONUCLIDES IN NATURAL WATERS OF YEKATERINBURG AND SVERDLOVSK REGION, *Yuliya Nasonova*.
10. DETERMINATION OF THE ANTIOXIDANT CAPACITY OF COMPOUNDS OF DIFFERENT HYDROPHILICITY IN THE COMBINED PRESENCE ON THE EXAMPLE OF VITAMINS C AND E, *Elena Gazizullina*.
11. DETERMINATION OF THE DIFFUSION COEFFICIENTS OF CERIUM IONS IN (LI-K-CS)CL MELT, *Anastasia Tatarinova*.
12. DETERMINATION OF WATER IN TECHNOLOGICAL GASES, *Arina Khorkova*.
13. DEVELOPMENT OF A TECHNIQUE FOR THE ANALYSIS OF A FUEL COMPOSITION BASED ON LITHIUM AND BERYLLIUM FLUORIDES BY THE ATOMIC EMISSION METHOD WITH INDUCTIV, *Elina Zotova*.
14. DEVELOPMENT OF THE PORTABLE DEVICE PLATFORM FOR DETERMINING THE ANTIOXIDANTS CONTENT OF THE POTENTIOMETRIC METHOD, *Elena Yarkova*.
15. DOPING OF LEAD SULFIDE FILMS WITH MANGANESE MN2+, *Anastasia Beltseva*.
16. ELECTROCHEMICAL BEHAVIOR OF CHLORAMPHENICOL ON CARBON-CONTAINING ELECTRODES IN A MICROCELL, *Margarita Medvedeva*.
17. ELECTROCHEMICAL STUDY OF 2-METHYLTHIO-6-NITRO-7-HYDROXY-4H-1,2,4-TRIAZOLO-4,7-DIHYDRO[5,1-C]-1,2,4-TRIAZINIDE MONOHYDRATE SODIUM SALT, *Polina Mozharovskaia*.
18. ELECTRODE POTENTIALS OF SILVER IN NACL–KCL–CSCL EUTECTIC MELT, *Daria Bessonova*.
19. ELECTRODE POTENTIALS OF ZIRCONIUM AND ZIRCONIUM-GALLIUM ALLOYS IN MELTS BASED ON LICL-KCL-CSCL EUTECTIC MIXTURE, *Alexandr Yakovlev*.
20. EXTRACTION OF MO FROM MODEL SOLUTIONS FOR PROCESSING NICKEL-ALUMINUM-COBALT CATALYSTS, *Ksenia Merkucheva*.

21. HISTORICAL DEVELOPMENT OF TECHNOLOGIES FOR THE INDUSTRIAL PRODUCTION OF POLYOLEFINS, *Maria Ivantsova*.
22. INFLUENCE OF PRECIPITATION PARAMETERS ON PARTICLE SIZE OF NEODYMIUM FLUORIDE DURING CONTROLLED DOUBLE-JET PRECIPITATION, *Alfina Gasimova*.
23. INFLUENCE OF THE PH VALUE ON THE PROPERTIES OF ZIRCONIA POWDERS AND CERAMIC IN THE PROCESS OF HYDROLYSIS OF BASIC ZIRCONIUM SULFATE, *Dmitry Polivoda*.
24. INFLUENCE OF ZIRCONIUM OXIDE SULFATIZATION ON THE PROPERTIES OF CERAMICS, *Nina Zhirenkina*.
25. INVESTIGATION OF THE INFLUENCE OF SLIP PREPARATION CONDITIONS ON THE MECHANICAL PROPERTIES OF 5Y-ZRO2 CERAMICS, *Alyona Zhesteva*.
26. INVESTIGATION OF THE INFLUENCE OF SUSPENSION STIRRING RATE ON THE PROPERTIES OF ZIRCONIUM DIOXIDE PARTICLES BY CONTROLLED DOUBLE-JET PRECEPITATION, *Elizaveta Bazhenova*.
27. INVESTIGATION OF TRANSFORMATIONS OF MODEL PETROLEUM RAW MATERIALS ON A SPENT HYDROTREATING CATALYST, *Igor Dokuchaev*.
28. KINETIC OF SORPTION OF SCANDIUM AND IMPURITIES FROM HYDROLISIS SULFURIC ACID BY CATION-EXCHANGER PUROLITE S957, *Angelina Pikulo*.
29. KINETICS OF MUNICIPAL SOLID WASTE FLY ASHOF FLOW ASH CARBONATION FOR CO2 SEQESTRATION, *Georgy Maslennikov*.
30. LIPOSOMES LOADED WITH A NEW ANTITUBERCULAR COMPOUND; OPTIMIZATION AND CHARACTERIZATION STUDIES, *Manar Obiedallah*.
31. OXIDATIVE DESTRUCTION OF ION EXCHANGE RESINS BY AQUEOUS SOLUTION OF HYDROGEN PEROXIDE, *Marina Kozlova*.
32. POTENTIOMETRIC STUDY OF GALLIUM CONTAINING CHLORIDE MELTS, *Oleg Tokarev*.
33. QUANTUM CHEMISTRY INVESTIGATION OF THE MECHANICAL PROPERTIES OF COMPOSITES OF SINGLE-WALLED CARBON NANOTUBES WITH INORGANIC INTERCALANTS, *Nikolai Anuchin*.
34. REDOX PROPERTIES OF FERRUM IN MOLTEN EUTECTIC MIXTURE OF LITHIUM, SODIUM AND POTASSIUM FLUORIDES, *Viktoria Smirnova*.
35. SOLUBILITY OF SCANDIUM - CAESIUM DOUBLE SULFATE IN SULFURIC ACID SOLUTIONS, *Ekaterina Varmakhovskaya*.
36. SORPTION OF NEPTUNIUM-237 ON THIN-LAYER SORBENTS, *Vitaly Rogozhnikov*.
37. STUDY OF FLUORIDE IONS ADDITION EFFECT ON ZIRCONIUM ELECTROCHEMICAL BEHAVIOUR IN CHLORIDE MELTS, *Mariya Zhikina*.
38. STUDY OF SORPTION AND DIFFUSION OF TRACE AMOUNTS OF RADIUM-224 BY THIN-LAYER SORBENTS BASED ON MANGANESE DIOXIDE, *Elena Kulyashova*.
39. STUDY OF THE BEHAVIOR OF GALLIUM AND GERMANIUM ON SORBENTS OF THE BRAND «TERMOXID», *Anastasiya Spitsina*.
40. STUDY OF THE EFFECT OF VALUE PH PRECIPITATION ON THE PROPERTIES OF ZIRCONIUM DIOXIDE, *Dzhafar Ismagulov*.
41. STUDY OF THE ELECTROCHEMICAL BEHAVIOR OF VANADIUM IONS IN CHLORIDE MELTS USING VOLTAMMETRY METHODS, *Mikhail Chernyshov*.

42. STUDY OF THE INFLUENCE OF EXTRACTION PARAMETERS ON THE PROCESS OF EXTRACTION OF LANTHANUM AND ACTINIUM FROM A COLLECTIVE REE SOLUTION, *Maria Gordeeva*.
43. STUDY OF THE SORPTION OF ARSENIC(III) BY MONTMORILLONITE, *Irina Kholmanskikh*.
44. SYNTHESIS AND INVESTIGATION OF THE BIOLOGICAL ACTIVITY OF NANOCRYSTALLINE CERIUM DIOXIDE MODIFIED WITH REE, *Maria Pronina*.
45. SYNTHESIS AND STUDY OF COMPLEX OXIDE SYSTEMS BASED ON CE AND SN MODIFIED WITH TRANSITION METALS FOR APPLICATION IN THREE-WAY CATALYSTS, *Evgeniy Baksheev*.
46. SYNTHESIS AND STUDY OF SORPTION PROPERTIES OF THIN-LAYER SORBENTS BASED ON CADMIUM SULFIDE, *Valeria Ermolaeva*.
47. SYNTHESIS OF LANTHANUM AND GADOLINIUM STABILIZED ZIRCONIUM DIOXIDE BY CONTROLLED DOUBLE-JET PRECIPITATION, *Maxsim Tyushnyakov*.
48. SYNTHESIS OF SOLID SOLUTIONS CEO2 –ZRO2 –Y2O3– LA2O3 WITH THE USE OF LAURIC ACID, *Maria Galiaskarova*.
49. TEMPERATURE DEPENDENCE OF THE POTENTIAL U-PD ALLOYS IN 3LICL–2KCL–UCL3 MELTS, *Dmitry Nikitin*.
50. THE DETERMINATION OF THERMODYNAMIC CHARACTERISTICS OF NICKEL-TELLURIUM ALLOYS BY POLARIZATION AND CHRONOPOTENTIOMETRY METHODS, *Vladislav Markelov*.
51. THE EFFECT OF CHROMIUM DOPING ON THE MORPHOLOGY OF PBS FILMS, *Andrei Pozdin*.
52. THE PROBLEMS OF SOLID RADIOACTIVE WASTE KEEPING IN NEAR-SURFACE STORAGE FACILITIES, *Ksenia Nalivaiko*.
53. THERMODYNAMIC ANALYSIS OF THE SILICON GAS-PHASE SYNTHESIS PROCESS, *Valeriya Kudyakova*.
54. URANIUM ALLOY ELECTROREFINING IN 3LICL-2KCL BASED MELTS, *Artur Mukhametdyanov*.

Panel 5. Materials science. Poster reports

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1. OBTAINING AND PHOTOCATALYTIC PROPERTIES OF NI-DOPED NANOTUBULAR TITANIUM OXIDE, *Fedor Zykov*.
2. COBALT DOPED NANOTUBULAR TITANIUM OXIDE, *Fedor Zykov*.
3. PRODUCTION OF POWDERS AND CERAMICS BASED ON ZIRCONIUM DIOXIDE, *Natalya Khoroshavtseva*.
4. INFLUENCE OF OXIDATION ON THE SYNTHESIS OF CARBON NANOTUBES ON THE EXTRATERRESTRIAL MATTER, *Anastasia Begunova*.
5. INVESTIGATION OF MAGNETIC NANOPARTICLES FE0.6CO0.4@C BY NMR METHOD, *Dmitriy Prokopyev*.
6. INDUCING SUPERCONDUCTIVITY OF NON–SUPERCONDUCTING FE1.1TE COMPOUND BY DOPING WITH TITANIUM CHALCOGENIDES, *Evgeny Kislov*.
7. RESEARCH OF THE PROPERTIES OF CERAMICS FROM MICROSIZED ZIRCONIUM DIOXIDE PARTICLES MODIFIED WITH NANOPARTICLES, *Olga Pilyugina*.
8. SYNTHESIS, STRUCTURE AND CONDUCTIVITY OF SOLID SOLUTIONS BASED ON LA2ZNALO5.5 DOPED WITH CAO, *Evgenia Verinkina*.
9. ELECTRIC CONDUCTIVITY OF COMPOSITIONS BA5IN1.9CA0.1AL2ZRO12.95 AND BA5IN1.9ZR0.1AL2ZRO13.05, *Roman Andreev*.
10. MORPHOLOGY AND MECHANICAL PROPERTIES OF LI-IN ALLOY AS A PROMISING ANODE MATERIAL IN FULLY SOLID-STATE LITHIUM BATTERIES, *Ilya Talankin*.
11. MANUFACTURE OF EXPERIMENTAL SAMPLES OF SOLID OXIDE ELECTROLYZER HALF-ELEMENTS BY CALANDRATING METHOD, *Anastasia Zebzeeva*.
12. INVESTIGATION OF THE INFLUENCE OF PARTICLE SIZE DISTRIBUTION OF POWDER MATERIALS ON THE PROPERTIES OF SOEC CERMET CATHODE, *Ksenia Kharisova*.
13. SYNTHESIS AND STUDY OF THE ELECTRICAL PROPERTIES OF BaLaIn1–xYxO4 ($0 \leq x \leq 0.5$), *Ekaterina Abakumova*.
14. SYNTHESIS AND TRANSPORT PROPERTIES OF NEW STRONTIUM-SUBSTITUTED LAYERED PEROVSKITES BASED ON BALA2IN2O7, *Polina Cheremisina*.
15. SYNTHESIS AND TRANSPORT PROPERTIES OF DOPED COMPLEX OXIDES BASED ON BAND2IN2O7 WITH A RADDLESDEN-POPPER STRUCTURE, *Irina Fedorova*.
16. CRYSTAL STRUCTURE AND PROPERTIES OF COMPLEX OXIDES IN THE SYSTEM GD2O3-BAO-FE2O3, *Elena Shulaeva*.
17. AB INITIO ESTIMATIONS OF TRANSPORT PROPERTIES OF SOLID OXIDE MOLYBDATES, *Boris Politov*.
18. STRUCTURE AND ELECTRIC CONDUCTIVITY OF ZIRCONATE BARIUM YTTRIUM-DOPED, *Petr Zakiryanov*.
19. PHYSICOCHEMICAL PROPERTIES AND ELECTROCHEMICAL PERFORMANCE OF THE LA1.7CA0.3NI1-YCUYO4+Δ CATHODES, *Tatiana Maksimchuk*.
20. METAMATERIALS, AUXETIC MATERIALS. CLASSIFICATION, ANALYSIS OF DEVELOPMENT AND APPLICATION POSSIBILITIES, *Ivan Manko*.

21. OPTIMIZATION OF CONDITIONS FOR X-RAY PHASE ANALYSIS FOR QUALITATIVE AND QUANTITATIVE DETERMINATION OF THE COMPOSITION OF HYGROSCOPIC CRYSTAL SALTS, *Anna Ivshina*.
22. SIMULATION OF THE STRESS-STRAIN STATE OF PRELOADED GUIDE VANES OF AXIAL COMPRESSORS, *Igor Melikhov*.
23. CO-CONTAINING COMPOSITES BASED ON AMORPHOUS SIO2, *Ksenia Svetlakova*.
24. INFLUENCE OF THE CATIONIC DISTRIBUTION OF THE B-SITE OF LA(MNFECONICU)O3–Δ HIGH-ENTROPY OXIDES ON THE CRYSTAL STRUCTURE AND PROPERTIES, *Anastasia Shalamova*.
25. MODIFICATION OF THE POLYMER TRACK ETCHED MEMBRANES SURFACE BY ARC PVD SPUTTERED TIN THIN FILMS, *Ilya Kuklin*.
26. INFLUENCE OF IRRADIATION SEMICONDUCTORS OF IN2SE3 BY 10 MEV ELECTRONS ON ELECTRONIC STRUCTURE AND OPTICAL PROPERTIES, *Alexey Lobanov*.
27. THE EFFECT OF SYNTHESIS CONDITIONS ON CADMIUM SULFIDE NANOPARTICLES STABILITY AND LUMINESCENCE IN AQUEOUS SOLUTION, *Ivan Popov*.
28. PHASE EQUILIBRIUM IN THE PrOx–BaO–CoO SYSTEM, *Maria Belyaeva*.
29. MODIFICATION OF THE HEAT-SHIELDING COATINGS BASED ON ZRO2 BY THE SPREADING METHOD, *Ilsur Zakirov*.
30. HYDRODYNAMICS OF THE MOTION OF THE LIQUID DROPLET OF ELECTRODE METAL IN THE MOLTEN SLAG, *Dmitry Sergeev*.
31. THE METHOD FOR DETERMINING THE THERMOPHYSICAL PROPERTIES OF HSLA PIPELINE STEEL, *Sergei Danilov*.
32. INVESTIGATION OF KHN62M ALLOY CORROSION RESISTANCE IN MOLTEN SALT BASED ON LICL, *Ruslan Alimgulov*.
33. STUDY OF A MATERIAL BASED ON A NANOSTRUCTURED COPPER-NIOBIUM ALLOY FOR THE DEVELOPMENT OF MAGNETIC PULSE TOOLS, *Evgeny Zaytsev*.
34. PREDICTION OF THERMODYNAMIC AND ELECTRONIC PROPERTIES OF DOUBLE HALF HEUSLER ALLOYS BASED ON MACHINE LEARNING METHODS, *Anton Filanovich*.
35. CORROSION, MECHANICAL AND THERMOPHYSICAL PROPERTIES OF NM20 TYPE ALLOYS IN MOLTEN SALTS BASED ON FLINAK, *Polina Troshina*.
36. THE INFLUENCE OF POST WELD HEAT TREATMENT ON THE STRUCTURE AND MECHANICAL PROPERTIES, *Alfiya Gibadullina*.
37. THE INFLUENCE OF POROSITY OF SAMPLES OF AUSTENITIC STEEL MANUFACTURED BY LASER 3D PRINTING ON THE PROCESS OF DYNAMIC DEFORMATION AGEING, *Igor Ezhov*.
38. A SOLID-STATE SYNTHESIS ROUTE ALLOWS THE PREPARATION OF DENSE CERAMIC MATERIALS BASED ON ALKALINE EARTH STANNATES, *Mariam Akopyan*.
39. THE MECHANICAL PROPERTIES OF CHONDRITES WITH STRUCTURE CHANGED BY IMPACT, *Razilia Muftakhetdinova*.
40. FINDING THE SET OF STAGNANT POINTS FOR DYNAMIC EQUILIBRIUM, *Alexey Sokolov*.
41. RESEARCH ON THE DYNAMICS OF THE LIQUID MELT SPLASHING DURING THE ABLATION OF YTTRIUM OXIDE WITH THE RADIATION OF A FIBRE YTTERBIUM LASER, *Mikhail Kremenetskii*.

42. EFFECT OF BASICITY ON THE PHYSICAL PROPERTIES OF THE CAO–SIO2–CR2O3–B2O3–AL2O3–MGO SLAG SYSTEM WITH A HIGH CONTENT OF CHROMIUM OXIDE, *Ruslan Shartdinov*.

43. INFLUENCE OF FACTORS ON THE TENSORESISTIVE PROPERTIES OF POLYMER NANOCOMPOSITES, *Oksana Semenukha*.

Panel 6. Information systems and technologies. Poster reports

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1. SOLVING THE INVERSE HEAT CONDUCTIVITY PROBLEM IN SIMULATION OF TECHNOLOGICAL PROCESSES, *Viktoriya Petukhova*.
2. TECHNOLOGICAL LOAD INFLUENCE ON THE DYNAMICS OF SPATIAL GEARS WITH UNIVERSAL JOINTS, *Andrey Konyushevskiy*.
3. ABOUT USING THE SMART ANALYZER WHEN ENGRAVING DECORATIVE PANELS, *Ilya Bannikov*.
4. MODELING OF ROAD TRAFFIC USING THE ALGORITHM PEDD, *Alexander Kovalev*.
5. SPATIAL PATTERNS IN POPULATION DYNAMICS MODELS: MULTISTABILITY, BASINS OF ATTRACTION, STOCHASTIC TRANSITIONS, *Alexander Kolinichenko*.
6. STOCHASTIC PHENOMENA IN A METAPOPULATION MODEL CONNECTING EQUILIBRIUM AND CHAOTIC SUBSYSTEMS, *Alexander Belyaev*.
7. MACHINE LEARNING FOR THE ANALYSIS OF DYNAMIC ELECTRON PARAMAGNETIC RESONANCE SPECTRA OF PH-SENSITIVE NITROXIDE RADICALS, *Danil Davydov*.
8. A MACHINE LEARNING MODEL BASED ON ELEMENTARY HARMONICS WITH MULTIPLE EMBEDDINGS, *Artem Klimov*.
9. SOLUTION OF A NON-ISOTHERMAL PROBLEM DURING RADIAL DISPLACEMENT OF FLUID IN THE HELE-SHOW CELL, *Alexander Chernoskutov*.
10. VORTEX THERMAL STRUCTURES ON THE SURFACE OF A THIN LAYER OF WATER. NUMERICAL EXPERIMENT, *Ivan Kerekelitsa*.
11. ANALYSIS OF WORD LENGTHS ON THE EXAMPLE OF INAUGURAL SPEECHES OF USA PRESIDENTS, *Natalia Tsizhmovska*.
12. DEVELOPMENT OF AN AUTOMATED COMPLEX FOR GENERATING RANDOM VARIANTS OF QUESTIONS FOR A COLLOQUIUM, *Vladislav Alexandrovich*.
13. ON THE INTERACTION OF INFORMATION PRODUCTS OF THE IT SPECIALIST AND HIS MANAGER, *Oleg Dontsov*.
14. VISUAL METAPHORS OF MATHEMATICAL OBJECTS AND AUGMENTED REALITY TECHNOLOGY IN HIGH EDUCATION, *Savely Spitsin*.
15. APPLICATION OF STRESS-STRAIN MODELS TO THE BRONCHIAL ANASTOMOSIS BY SECTION, *Svetlana Andreeva*.
16. COMPUTER DIFFERENTIATION OF A RECURRENT GLIAL TUMOR FROM NECROSIS BY MRI IMAGES, *Elizaveta Askarova*.
17. THE PROBLEMS OF APPLIED MODELS OF CLASSIFICATION OF OBJECTS ON MAMMOGRAMS IN BREAST CANCER SCREENING TECHNOLOGIES, *Darya Sabitova*.

Panel 7. Bioengineering and biotechnologies. Poster reports

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1. NOISE-INDUCED SELF-ORGANIZATION IN A GLYCOLYSIS DIFFUSION MODEL, *Alexandr Pankratov*.
2. APPLICATION OF X-RAY DIFFRACTION METHODS TO STUDY CRYSTALLIZATION OF SOLID DOSAGE FORMS, *Anastasiya Chukina*.
3. MODELING OF CELL MOVEMENT BASED ON ACTIVE TRANSPORT OF SUBSTANCES THROUGH THE MEMBRANE, *Vyacheslav Bondar*.
4. THE RESEARCH ON THE HETEROGENEITY OF CARBON PLASMA FLOW OF THE FACILITY UVNIPA-1-001, *Olga Prokopeva*.
5. THE POSSIBILITY OF USING IONIZING RADIATION IN COSMETOLOGY ON THE EXAMPLE OF SCRUBS, *Valeria Uzhneva*.
6. APPLICATION OF RADIATION TECHNOLOGIES TO SAUSAGE PROCESSING, *Alexandra Pustotina*.
7. EFFECT OF CERIUM DIOXIDE NANOPARTICLES DOPING WITH RARE EARTH METAL IONS ON THE BIOCATALYTIC ACTIVITY, *Natalia Ofitserova*.
8. INVESTIGATION OF ENZYMATIC ACTIVITY OF CEO2 NANOPARTICLES IN MEDIA OF DIFFERENT ACIDITY, *Polina Lapina*.
9. DEVELOPMENT OF THE FUNCTIONAL FERMENTED MILK PRODUCT ENRICHED IN PREBIOTIC AND VEGETABLE INGREDIENTS, *Maksim Panin*.
10. THEORETICAL ANALYSIS OF CLUSTERS LIKE-DENSE FERROPARTICLES IN MAGNETIC HYPERTHERMIA THERAPY, *Ali Abu-Bakr*.
11. MEDICAL ULTRASOUND AS A TOOL FOR THE EVALUATION OF MAGNETO-DEFORMATION EFFECT IN FERROGELS, *Ilya Yaryshev*.
12. STUDY OF THE BIOTISSUE HISTOTRIPSY BASED ON MICROBUBBLE DYNAMICS IN HYDROGELS, *Ali Abu-Bakr*.
13. EFFECT OF HYDROSTATIC PRESSURE ON SUBSEQUENT DEVELOPMENT OF SEEDLINGS OF MEDICINAL PLANTS, *Azambek Kalonov*.
14. MACHINE LEARNING APPLICATION FOR DIABETES PREDICTION, *Ali Alzuabi*.
15. BIOMEDICAL IMAGES GENERATION FOR DATA AUGMENTATION USING GENERATIVE ADVERSARIAL NETWORKS, *Ivan Novoselov*.
16. SEGMENTATION OF MICROSCOPE IMAGES OF YEAST CELLS USING U-NET ARCHITECTURE NEURAL NETWORK, *Kate Aristova*.
17. MOBILE RADIOMETRIC MONITORING SYSTEM FOR RADIOPHARMACEUTICALS, *Yurii Bochkarev*.
18. STUDYING THE OPTICAL ABSORPTION EDGE OF ETHYLENE-TETRAFLUOROETHYLENE (ETFE), *Ekaterina Vazirova*.
19. STOCHASTIC ANALYSIS OF TUMOR DYNAMICS UNDER CHEMOTHERAPY, *Anna Chukhareva*.

Panel 1. Nuclear and radiation technologies. Online reports

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1. ECONOMIC ESTIMATE OF THE USE OF AMERICIUM 241, *Aleksandr Mikhalev*.
2. ISOTOPIC KINETIC SIMULATION IN MBIR REACTOR LOOP CHANNEL WITH CIRCULATING FUEL, *Daria Kuzenkova*.
3. RADIOLOGICAL ANALYSIS OF ROADSIDE MELTWATER IN URBAN ENVIRONMENTS, *Nikita Krivopolenov*.

Panel 2. Condensed matter physics. Online reports

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1. THE INELASTIC ELECTRON SCATTERING CROSS SECTION SPECTRA OF ALUMINIUM THIN FILMS SEPARATION INTO BULK AND SURFACE ORIGIN CONTRIBUTIONS, *Tatyana Andryushchenko*.
2. SILICON SUBOXIDE METAL-INDUCED CRYSTALLIZATION MECHANISMS STUDIES BY TRANSMISSION ELECTRON MICROSCOPY, *Stepan Batsanov*.
3. THEORETICAL SIMULATION OF THE EMISSION EFFICIENCY OF MESOGENIC EUROPIUM(III) COMPLEXES IN OPTOELECTRONIC MATERIALS, *Ksenia Romanova*.
4. STUDY OF HEAT TRANSFER BY PARTIALLY-MISCIBLE MIXTURE WITH LCST IN PULSE HEATING EXPERIMENTS, *Alexander Igolnikov*.
5. PLD GROWTH OF STRAINED THIN FILMS INGAASN ON GAAS AND SI SUBSTRATE, *Oleg Devitsky*.
6. LUMINESCENT DOWNSHIFTING COLLOIDAL QUANTUM DOTS FOR LARGE-AREA SOLAR CELLS, *Aigerim Ospanova*.
7. DENSITY FUCTIONAL THEORY STUDY OF GRAPHENE-LIKE ZNO NANOCLUSTERS-ADSORBED SI (111) SURFACE, *Aliya Alzhanova*.
8. STUDY OF THE LUMINESCENT CHARACTERISTICS OF K2SO4 CRYSTALS WITH IMPURITIES GROWN FROM AN AQUEOUS SOLUTION, *Raushan Shamiyeva*.
9. TUNGSTEN ACTIVATED CERAMICS BASED ON METAL FLUORIDES, *Assel Strelkova*.
10. MODELING OF PHOSPHORENE WITH CLASSICAL MOLECULAR DYNAMICS USING DEEP LEARNING, *Danila Shein*.
11. PHOTOLUMINESCENCE OF CD'S BEFORE AND AFTER UV IRRADIATION, *Alexander Tyutrin*.
12. ELECTRICAL EXPLOSIVE TIO2/AG COMPOSITE NANOPARTICLES WITH PHOTOCHEMICAL AND ANTIBACTERIAL ACTIVITY, *Valeriya Chzhou*.
13. TUNNELING RELAXATION IN THE SYSTEM OF JAHN-TELLER COMPLEXES IN FLUORITE CRYSTAL DOPED WITH COPPER IONS, *Anna Bondarevskaya*.
14. EFFECT OF THE PARTICLE SIZE OF STRONTIUM TITANATE AND THE CONDITIONS FOR THEIR PRODUCTION ON THE PROPERTIES OF NANOSTRUCTURED MATERIALS BASED ON THEM, *Elena Ievleva*.
15. CARBON NANOPARTICLE COATING INTENDED FOR REPRODUCING THE SALVINIA EFFECT AND LOTUS EFFECT, *Sergey Kapustin*.
16. CONDUCTION MECHANISMS IN THE THIN FILM STRUCTURE [(CO40FE40B20)34(SIO2)66/ZNO]1120)34(SIO2)6, *Sergei Pankov*.
17. PHASE TRANSITIONS IN TERBIUM OXIDE NANOPOWDERS SYNTHESIZED BY LASER ABLATION UNDER VARIOUS BUFFER GASES, *Roman Maksimov*.
18. EFFECTIVE LIGHT CONVERTERS BASED ON MESOGENIC B-DIKETONATE COMPLEXES OF EUROPIUM, *Alina Leshcheva*.
19. MAGNETIC PROPERTIES OF TOPOLOGICAL INSULATORS BI{2-X}CR{X}SE{3} WITH X=0.1, 0.3 И 0.6, *Andranik Khachatryan*.
20. DETECTION OF DEFECTS IN SYNTHETIC DIAMOND PLATES BY POSITRON ANNIHILATION SPECTROSCOPY, *Ivan Kuziv*.
21. SIMPLE EXPRESSIONS FOR THE QUANTUM ENTANGLEMENT OF NON-MONOCHROMATIC PHOTONS, *Yuliana Tsykareva*.
22. CHANGING THE POTENTIAL ENERGY AND THE INTERACTION FORCE OF A DIATOMIC MOLECULE, *Bunyod Oqilov*.

23. DEVELOPING A NEW EFFECTIVE MAGNETIC MODEL OF FE3GETE2 BASED ON AB-INITIO CALCULATIONS, *Georgy Pushkarev*.
24. MAGNETOELASTIC INTERACTIONS IN PYROCHLORE PR2ZR2O7, *Vera Klekovkina*.
25. PREPARATION OF MULTILAYER MG/C NANOSTRUCTURES, *Andrei Smirnov*.
26. INVESTIGATION OF THE COMPETITION EFFECTS FOR DIFFERENT TYPES OF ANISOTROPY ON THE MAGNETIC PROPERTIES OF MULTILAYER STRUCTURES, *Alexandra Minkova*.
27. THEORETICAL STUDIES OF THE MAGNETIC ANISOTROPY OF COBALT FILMS SEPARATED BY A COPPER PLATE., *Ruslan Sukhachev*.
28. SCATTERING OF ATTOSECOND PULSES ON MULTI-ATOMIC MOLECULES, *Ksenia Makarova*.
29. INVESTIGATION OF THE EFFECT OF DEFECTS AND ARTIFICIAL STRUCTURES ON HYSTERESIS IN MULTILAYER NANOSTRUCTURES, *Roman Shakirov*.
30. STUDY OF THE NONEQUILIBRIUM BEHAVIOR OF COMPLICATED SPIN-VALVE STRUCTURE DESCRIBED OF ANISOTROPIC HEISENBERG MODEL, *Anastasia Egorina*.
31. CALCULATION OF FREQUENCY AND ENERGY DEPENDENCIES IN RADIATION TRANSMISSION FOR NANOCOMPOSITES USING THE MAXWELL-HARNETT AND BRUEGGEMANN MODELS, *Irina Potapova*.
32. RESEARCH OF HETEROANNIHILATION DYNAMICS IN MATRICES WITH DIFFERENT TOPOLOGY, *Aliya Baratova*.
33. INFLUENCE OF HIGH-CURRENT PULSED ELECTRON BEAM SURFACE TREATMENT ON TRIBOLOGICAL CHARACTERISTICS OF NON-EQUIMOLAR AL-CO-CR-FE-NI HIGH-ENTROPY ALLOY, *Kirill Osintsev*.

Panel 3. Instrumentation and robotics. Online reports

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1. APPLICATION OF VIRTUAL ANTENNA ARRAY TECHNOLOGY TO INCREASE THE EFFICIENCY OF DETERMINING THE DIRECTION OF ARRIVAL OF ELECTROMAGNETIC WAVES, *Evgeniy Ishchenko*.
2. RESEARCH ON VIBRATION PARAMETERS IN STAINLESS STEEL TURNING, *Vladislav Voronin*.
3. DEVELOPMENT OF AN ANALOG BANDPASS FILTER FOR A SURFACE COLOR DETECTION DEVICE, *Sevara Murodova*.
4. STUDY OF THERMOELECTRIC PROPERTIES OF INTEGRATED POWER AMPLIFIERS, *Andrey Gavrikov*.
5. DIRECT STATISTICAL SIMULATION OF RAREFIED GAS FLOW IN CHANNELS OF VARIABLE CROSS-SECTION, *Artem Sazhin*.
6. DEVELOPMENT OF A WATER BATH ELECTRONIC CONTROL UNIT BASED ON THE ARDUINO UNO R3, *Elizaveta Chichigina*.
7. DEVELOPMENT OF A NAVIGATION SYSTEM FOR A GROUP OF ROBOTS TO PASS AN UNFAMILIAR OBJECT SUCH AS A LABYRINTH, *Nikolay Subbotin*.
8. PLASMA BASED RECONFIGURABLE PLANE REFLECTOR ANTENNA, *Ilya Barannikov*.
9. DEVICE FOR MONITORING RESEARCH OBJECT'S POSITION, *Dmitrii Poletaev*.

Panel 4. Chemical technologies. Online reports

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1. SYNTHESIS AND INVESTIGATION OF THE ACTIVITY IN PHOTOCATALYSIS OF ZINC OXIDE PARTICLES ON A POROUS SUBSTRATE, *Dmitry Radaykin*.
2. EVALUATION OF THE EFFECTIVENESS OF FIELD GAS PREPARATION BASED ON MULTI-PERIOD CALCULATIONS USING A PROCESS MODELING SYSTEM, *Anna Savina*.
3. PLASMA-CHEMICAL SYNTHESIS OF NANOSTRUCTURED COMPLEX OXIDE MATERIALS, *Igor Prokhorov*.
4. ADAPT AND MAKE ACCESSIBLE THE TRI-N-OCTYLPHOSPHINE-ASSISTED SILAR METHOD, *Aygerim Eralieva*.
5. SYNTHESIS OF THIN FILMS OF CADMIUM CHALCOGENIDES BY THE PLASMA-CHEMICAL METHOD FOR THE CREATION OF TANDEM SOLAR CELLS, *Maksim Vshivtsev*.
6. X-RAY STRUCTURAL PROPERTIES OF THE NI–IN SYSTEM, *Alevtina Samofalova*.
7. ICP-OES ELEMENTAL VARIATION ON BOTTLED DRINKING WATER, *Awad Hamdy*.
8. STOCHASTIC GENERATION OF LARGE-AMPLITUDE OSCILLATIONS IN A THREE-DIMENSIONAL MODEL OF COLD-FLAME COMBUSTION OF A HYDROCARBON MIXTURE, *Evdokia Slepukhina*.
9. PERSISTENCE OF THE EFFECT OF CHANGING PH DURING INFRASONIC IMPACT ON WATER, *Egor Pentyukhin*.
10. DEVELOPMENT OF A METHODOLOGY FOR CONTROLLING THE GAS COMPOSITION OF FERMENTED PRODUCTS USING A QUADRUPOLE MASS-SPECTROMETER, *Gubina Evgeniya*.
11. RESEARCH OF THE EFFECT OF SYNTHESIS TEMPERATURE ON THE FORMATION OF THE MOS2 STRUCTURE ON THE SURFACE OF ACTIVATED CARBON, *Vladislava Kalinina*.
12. DEEP EUTECTIC SOLVENTS BASED ON CHOLINE CHLORIDE AND POLYOLS AS ‘GREEN’ EXTRACTANT FOR AZEOTROPIC MIXTURES, *Dmitrii Liubichev*.

Panel 5. Materials science. Online reports

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1. STRUCTURE AND PHYSICO-MECHANICAL PROPERTIES OF PHB/MAGNETITE SCAFFOLDS AFTER BIODEGRADATION IN VITRO, *Lada Shlapakova*.
2. INVESTIGATION OF THE STRUCTURE AND MECHANICAL PROPERTIES OF ALUMINUM ALLOY A7, REINFORCED BASALT FIBER, *Vladimir Valikhov*.
3. STRUCTURE AND MICROHARDNESS OF COATINGS FABRICATED BY NON-VACUUM ELECTRON BEAM SURFACING OF WC POWDER ON ALUMINUM ALLOY AMG6, *Marianna Vasilyeva*.
4. EFFECT OF DIAMOND NANOPARTICLES ON THE STRUCTURE AND STRENGTH PROPERTIES OF MAGNESIUM ALLOY MG-CA-ZN, *Mikhail Selikhovkin*.
5. POSSIBILITY OF IMPLEMENTING CONTROL OF THE MECHANICAL PROPERTIES OF STEEL BY THE PARAMETERS OF THE LIMITING REMAGNETIZATION CURVE, *Roman Sokolov*.
6. THE MECHANISM OF IONIC AND MOLECULAR TRANSPORT IN THE NAFION MEMBRANE ACCORDING TO NMR DATA, *Nikita Slesarenko*.
7. INVESTIGATION OF PACKAGING FILMS WITH ELECTRET EFFECT, *Daria Lavrova*.
8. STUDY OF THE FOUR-COMPONENT SALT SYSTEM KI-KBR-K2CO3-K2SO4, *Anton Finogenov*.
9. PARTICLES' DEFORMATION DURING DETONATION SPRAYING ON SOFT AND HARD SUBSTRATE: COMPARISON OF EXPERIMENTAL DATA AND SPH-SIMULATION, *Polina Riabinkina*.
10. IDENTIFICATION OF THE CAUSES OF THE DESTRUCTION OF THE BODY OF THE SHUT-OFF VALVE, *Danil Novgorodov*.
11. IR SPECTROSCOPIC STUDY OF PHOTOSTIMULATED PROCESSES ON THE TITANIUM DIOXIDE SURFACE WITH ADSORBED CO MOLECULES, *Alena Mikheleva*.
12. DEVELOPMENT OF METHODOLOGY FOR THE SYNTHESIS OF HETHEROGENEOUS STRUCTURES ZNO/H-BN, *Danil Barilyuk*.
13. STRUCTURAL CHARACTERISTICS OF TROILITE FROM ORDINARY CHONDRITES OF DIFFERENT TYPES, *Svetlana Dyundik*.

Panel 6. Information systems and technologies. Online reports

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1. SCALING CAPABILITIES OF THE AUTOMATED FUEL CONSUMPTION MONITORING AND CONTROL SYSTEM, *Anton Serogodskiy*.
2. INSTABILITY CONTROL IN AIRCRAFT AUTOMATIC CONTROL SYSTEMS, *Aiman Kaliyeva*.
3. DEVELOPMENT OF A CONVERTER FOR TRANSFORMING A RAW VIDEO STREAM FROM A VISIBLE RANGE CAMERA INTO A STANDARD COLORIMETRIC COLOR SPACE, *Aleksei Fateev*.
4. A MODEL FOR MONITORING AURORAL ACTIVITY BASED ON GNSS DATA, BUILT ON THE BASIS OF RANDOM FOREST MACHINE LEARNING, *Sofia Serebrennikova*.
5. SOFTWARE FOR AUTOMATED GENERATION OF PROJECT TEMPLATES FOR MICROCONTROLLERS PRODUCED BY MILANDR GROUP, *Karina Shalapanova*.
6. REALIZATION OF A MODIFICATION OF A SEQUENTIAL STATISTICAL SELECTION PROCEDURE BASED ON MAP REDUCE TECHNIQUES, *Anastasia Alekseeva*.
7. DEVELOPMENT OF THE METHODOLOGY FOR OPTIMIZING DURABILITY SPECS AND MUTUAL ARRANGEMENT OF THREE-DIMENSIONAL OBJECTS BASED ON MACHINE LEARNING METHODS, *Andrey Tsykarev*.
8. DEVELOPMENT OF A CHATBOT INTEGRATION MODULE WITH CORPORATE KNOWLEDGE BASES AND EXTERNAL SYSTEMS, *Vladislav Bazarov*.
9. ALGORITHM FOR DATA AGGREGATION ON GRAPHS, *Evgeniy Khalmakshinov*.

Panel 7. Bioengineering and biotechnologies. Online reports

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1. A STUDY OF THE TOXIC SUBSTANCES COMPRISING DAPHNE MEZEREUM L, *Andrey Nazarenko*.
2. MODELING THE STRUCTURE OF GRAPHENE NANOPARTICLES WITH TOPOLOGICAL DEFECTS TO MAKE CHIRAL MEMBRANES ON THE EXAMPLE OF TETRACYCLINE MOLECULES, *Anna Shabieva*.
3. DEVELOPMENT OF AN INTELLIGENT RANKING SYSTEM AND EVALUATION OF THE IONIC COMPOSITION OF BREAST MILK, *Maria Guzenko*.
4. MAGNETICALLY CONTROLLED NANOCOMPOSITES BASED ON MAGNETITE AND CATIONIC COPOLYMERS OF ACRYLAMIDE FOR SELECTIVE SEPARATION OF DISPERSED BIOSYSTEMS, *Anastasia Gavrilova*.
5. INSTALLATION FOR DETERMINING THE TACTILE FORCE OF THE DISTAL PHALANX OF THE PROSTHESIS WHEN INTERACTION WITH THE SUPPORT, *Vladislav Nikitin*.
6. THE RESEARCH OF POSSIBILITY OF THE EVALUATING LASER EXPOSURE BY METHODS OF OPTICAL SPECTROSCOPY DURING MINIMALLY INVASIVE ENDOSCOPIC OPERATIONS, *Olga Tereshenkova*.
7. APPLICATION OF THE GOMPERTZ FUNCTION FOR NUCLEIC ACID ANALYZERS FLUORESCENT SIGNALS PROCESSING, *Daria Klimenko*.

Panel 8. Innovation and social technologies. Online reports

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1. DEVELOPMENT OF GEOMETRIC 3D MODEL OF UNDERWATER TRANSPORT AQUACAR IN THE COMPUTER PROGRAM LIGROGAME, *Alena Molodnyakova*.
2. DEVELOPMENT OF THE INNOVATION MANAGEMENT SYSTEM AT AN INDUSTRIAL ENTERPRISE, *Ekaterina Astakhova*.
3. LEGAL REGULATIONS OF TECHNICAL SUPPORT AND LEVEL OF ELECTROMAGNETIC ENERGY, INCLUDING SAR, FOR 5G NETWORKS: PROTECTION OF HUMAN LIFE AND HEALTH IN RF, *Vladislav Tselikovskiy*.