



Программа

**Одиннадцатой международной
молодежной научной конференции
Физика. Технологии. Инновации.**

ФТИ-2024

20-24 мая 2024

г. Екатеринбург

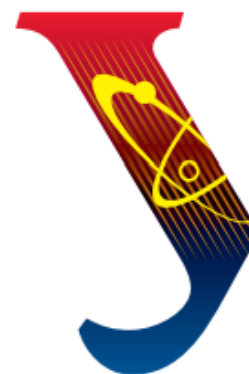
Program

**XI International Youth Scientific Conference
Physics. Technologies. Innovation. PTI-2024
dedicated to the
75th anniversary of the Institute of Physics
and Technology founding**

PTI-2024

May 20-24, 2024

Yekaterinburg



Ural Federal University

named after the first President
of Russia B.N.Yeltsin

**Institute of Physics
and Technology**

PROGRAM OVERVIEW

Day 1 – Monday – May 20

Arrival of participants

14:30 – 18:00 **Registration. Main Foyer**

Day 2 – Tuesday – May 21

09:00 – 10:00	Registration <i>Main Foyer</i>	Poster Session Arrangement of display stands	
		<u>Panel 2. Condensed matter physics</u> <i>Main Foyer</i>	<u>Panel 3. Instrumentation and robotics</u> <i>PTI 2 floor</i>
10:00 – 10:20	Opening. Welcome and opening comments of top university officials including Dean of Institute of Physics and Technology. <i>F-201</i>		
10:20 – 11:10	Plenary Talk. Stanislav Chaïkovsky (Director of the Institute of Electrophysics, Ural Branch of the Russian Academy of Sciences, Russia) «Immense electrophysics» <i>F-201</i>		
11:10 – 12:00	Plenary Talk. Walter Alberto Cañón Mancisidor (Leader of the Laboratory of Molecular Magnetism and Molecular Material, PhD in chemistry, associated Professor Universidad Bernardo O'Higgins) «Hybrid Inorganic-Organic Rare Earth Complexes. When two worlds collide » <i>F-201</i>		
12:00 – 14:30	<u>Panel 5. Material science</u> Oral reports 1-19 <i>F-201</i>	<u>Panel 4. Chemical technologies</u> Oral reports 1-17 <i>F-414</i>	
14:30 – 15:00	Coffee Break <i>F-416</i>		
15:00 – 17:00	Poster Session		<u>Panel 3. Instrumentation and robotics</u> <i>PTI 2 floor</i>
	<u>Panel 2. Condensed matter physics</u> <i>Main Foyer</i>		
17:00 – 17:20	Registration for intellectual game “What? Where? When?” <i>Foyer F-201</i>		
17:20 – 20:00	Intellectual game “What? Where? When?” <i>F-201</i>		

Day 3 – Wednesday – May 22

	Poster Session. Arrangement of display stands		
09:30 – 10:00	<u>Panel 4. Chemical technologies</u> <i>Main Foyer</i>	<u>Panel 6. Information systems and technologies</u> <i>PTI 2 floor</i>	<u>Panel 9. Young talents (schoolchildren section)</u> <i>Foyer F-201</i>
10:00 – 10:40	Plenary Talk. Sergey Gudin (Senior Researcher of the M.N. Mikheev Institute of Metal Physics of Ural Branch of Russian Academy of Sciences, Russia) «Sverdlovsk and the formation of the USSR nuclear project» <i>F-201</i>		
10:40 – 11:20	Plenary Talk. Kirill Maksimov (Head of Sector, IRZ TEST) «Experience in identifying non-original electronic component base» <i>F-201</i>		
11:30 – 13:30	<u>Panel 2. Condensed matter physics</u> Oral reports 1-12 <i>F-419</i>	<u>Panel 3. Instrumentation and robotics</u> Oral reports 1-5 <i>F-414</i>	<u>Panel 6. Information systems and technologies</u> Oral reports 1-13 <i>F-425</i>
13:30 – 14:00	Coffee Break F-416		
14:00 – 16:00	<u>Panel 2. Condensed matter physics</u> Oral reports 13-24 <i>F-419</i>		
14:00 – 16:30	Poster Session		
	<u>Panel 4. Chemical technologies</u> <i>Main Foyer</i>	<u>Panel 6. Information systems and technologies</u> <i>PTI 2 floor</i>	<u>Panel 9. Young talents (section of schoolchildren)</u> <i>Foyer F-201</i>
16:30 – 17:00	Registration for intellectual sports game “Quest” Main Foyer		Registration for Book club "The book was better". F-425
17:00 – 20:00	Intellectual sports game “Quest” University campus		Book club "The book was better". F-425

Day 4 – Thursday – May 23

09:30 – 10:00	Poster Session. Arrangement of display stands		
	<u>Panel 5. Material science</u> <i>Main Foyer</i>	<u>Panel 7. Bioengineering and biotechnologies</u> <i>PTI 2 floor</i>	<u>Panel 1. Nuclear and radiation technologies</u> <i>PTI 2 floor</i>
10:00 – 11:00	<u>Panel 7. Bioengineering and biotechnologies</u> Oral reports 1-17 <i>F-201</i>		
11:00 – 13:00	<u>Panel 7. Bioengineering and biotechnologies</u> Oral reports 1-17 <i>F-201</i>	<u>Panel 8. Innovation and social technologies</u> Oral reports 1-8 <i>F-310b</i>	<u>Panel 1. Nuclear and radiation technologies</u> Oral reports 1-6 <i>F-425</i>
13:00 – 15:00	Poster Session		
	<u>Panel 5. Material science</u> <i>Main Foyer</i>	<u>Panel 7. Bioengineering and biotechnologies</u> <i>PTI 2 floor</i>	<u>Panel 1. Nuclear and radiation technologies</u> <i>PTI 2 floor</i>
15:00 – 15:30	Coffee Break <i>F-416</i>		
15:30– 16:10	<u>Plenary Talk. Dr Richard Lane</u> (Acting Director (Director Interino) of the Centro de Investigación en Astronomía) «Challenges in telescope engineering and design throughout history» <i>F-201</i>		
16:10 – 16:50	<u>Plenary Talk. Sergey Zvonarev</u> (Deputy Head of the Department of Scientific Support of Megaclass Projects of the Kurchatov Synchrotron-Neutron Research Complex of the National Research Center "Kurchatov Institute", Ph.D. physics and mathematics sciences) «Unique scientific installations of the "megascience" class with sources of synchrotron radiation» <i>F-201</i>		
16:50 – 18:00	Closing. Closing remarks Distribution of awards for “What? Where? When?” game, awarding for best reports, photo-shooting <i>F-201</i>		

Day 5 – Friday – May 24

09:00 – 20:00	Scientific and educational forum “75 years of the Ural Phystech: the unity of science and education”
	<i>Departure of participants</i>

Panel 1. Nuclear and radiation technologies. Oral reports

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1. STUDY OF RADIOACTIVITY OF SOILS AND BOTTOM SEDIMENTS OF WATER BODIES ON THE TERRITORY OF YEKATERINBURG CITY, *Uliana Sultanova*
2. OPTIMIZATION OF DISMANTLING THE GRAPHITE STACK OF THE RBMK-1000 REACTOR, *Dmitriy Kaskov*
3. EXPERIMENTAL STAND OF THE PASSIVE RESIDUAL HEAT DISSIPATION SYSTEM OF THE SFAS STORAGE MINE, *Stepan Glukhov*
4. OPTIMIZATION OF INTERNAL RADIATION DOSIMETRY IN NUCLEAR MEDICINE: NEW COMPUTATIONAL APPROACHES, *Denis Barabanov*
5. COMPUTATIONAL AND EXPERIMENTAL STUDY OF RADIATION-PROTECTIVE PROPERTIES OF NATURAL MINERALS IN VIETNAM, *Daria Pyltsova*
6. COMPUTATIONAL AND EXPERIMENTAL STUDY OF THE MODIFICATION OF THE STRUCTURE OF GALLOISITE CLAY WITH FILLER FROM WASTE FROM THE METALLURGICAL INDUSTRY, *Sergei Bodulenko*

Panel 2. Condensed matter physics. Oral reports

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1. THE DETERMINATION OF PARAMETERS OF GRAINBOUNDARY DIFFUSION OF COBALT-57 IN POLYCRYSTALLINE TITANIUM, *Anastasiya Istomina*
2. THERMALLY INDUCED RESISTIVE SWITCHING IN SECOND-ORDER MEMRISTIVE STRUCTURE BASED ON NANOTUBULAR ZIRCONIA, *Ilya Petrenyov*
3. NEW FERHALMN AND MNALFERH QUATERNARY ALLOYS WITH HIGH SPIN POLARIZATION, *Ilya Dedov*
4. OPTICAL PROPERTIES OF YB DOPED TRANSPARENT ALUMINUM OXYNITRIDE CERAMICS, *Dmitrii Pastukhov*
5. OPTICAL PROPERTIES OF POLYURETHANE PLASTIC SCINTILLATOR WITH PPO AND POPOP, *Shevelev Vladimir*
6. MAGNETIC PROPERTIES AND ELECTRONIC STRUCTURE OF THE B-MN STRUCTURE HEUSLER $MN_2(Fe,Co,Ni)Al$ ALLOYS, *Evgenii Chernov*
7. TRANSPORT PROPERTIES OF SEMICONDUCTOR COMPOUNDS BASED ON BENZOTHIENOACENE, *Kristina Trofimova*
8. TEMPERATURE EFFECT ON THE SPECTRAL PARAMETERS OF PHOTOLUMINESCENCE IN HAFNIUM DIOXIDE NANOTUBES, *Artem Shilov*
9. MAGNETIC PROPERTIES AND MAGNETOCALORIC EFFECT OF $Gd((Co_{1-y}Ni_y)_{0.84}Fe_{0.16})_2$ COMPOUNDS, *Sultanov Anton*
10. ANALYTICAL SOLUTIONS OF THE OBERBECK–BOUSSINESQ EQUATIONS FOR DESCRIBING THERMAL FORCE FIELDS IN STATIONARY CONVECTIVE FLUID FLOW, *Anastasia Dyachkova*
11. POTENTIALS OF DEEP MACHINE LEARNING FOR ATOMISTIC MODELING OF METALLURGICAL ALLOYS: THE EXAMPLE OF FE-CR-C SYSTEM, *Ekaterina Khazieva*
12. THE EFFECT OF REFLUXING ON PARTICLE SIZE AND OPTICAL PROPERTIES OF ZNS NANOPARTICLES, *Alfina Gasimova*
13. MANGANESE SUBSTITUTION ALLOYS BASED ON GDMNSI, *Sergey Platonov*
14. SPONTANEOUS EXCHANGE BIAS EFFECT IN THE SYSTEM $Fe_3-xCr_xSe_4$, *Valeriya Komarova*
15. TO THE THEORY OF CURVILINEAR FRONTS SHIFTING IN CRYSTALLIZATION OF UNDERCOOLED MELTS, *Titova Ekaterina*
16. APPLICATION OF MACHINE LEARNING ALGORITHMS IN POLARIZED NEUTRON REFLECTOMETRY, *Artem Popov*
17. SIMULATION OF THE ANOMALOUS EFFECT OF THERMOLUMINESCENCE ISOTHERMAL DECAY, *Maxim Gerasimov*
18. DEVELOPMENT AND DOSIMETRIC PROPERTIES OF DETECTOR MATERIALS BASED ON ANION-DEFICIENT CORUNDUM FOR NEUTRON DOSIMETRY, *Andrei Petrakovich*
19. MULTICOMPONENT ALLOYS OF NB-NI-TI-ZR-CO SYSTEM AS HYDROGEN SEPARATION MEMBRANES: STRUCTURE, PHASE COMPOSITION AND FUNCTIONAL PROPERTIES, *Kirill Gusev*
20. MAGNETIC AND MAGNETORESISTIVE PROPERTIES OF FENI NANOWIRES IN ALUMINUM OXIDE MATRIX, *Anastasia Dryagina*
21. PHASE DIAGRAM OF URANIUM ON MTP POTENTIAL CALCULATED USING THERMODYNAMIC INTEGRATION METHOD, *Maksim Fadeev*
22. INFLUENCE DOPING OF THE ANTIFERROMAGNETIC LAYER CR MN WITH W AND CU ELEMENTS ON THE MICROSTRUCTURE AND HYSTERESIS PROPERTIES OF CRMN/FENI TYPE FILMS, *Svetlana Severova*
23. INVESTIGATION OF THE EFFECT OF THE HYDROGEN SUPPLY RATE AT THE HD-STEP AND PRE-GRINDING ON THE MAGNETIC PROPERTIES OF ND-FE-B HDDR-POWDERS, *Ilya Ivanov*

Panel 3. Instrumentation and robotics. Oral reports

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1. NEW METHODS IN THE DESIGN OF WIDEBAND AND ULTRAWIDEBAND SMALL-SIZED DIRECTIONAL ANTENNAS, *Mikhail Shishkin*
2. ROLE OF OXYGEN VACANCIES IN PROCESSES OF POTENTIATION AND DEPRESSION FOR MEMRISTORS BASED ON TITANIUM DIOXIDE NANOTUBES, *Danil Fedorov*
3. QUASI-RESONANT HIGH VOLTAGE POWER SUPPLY FOR X-RAY TUBE, *Egor Katkov*
4. SETUP FOR INVESTIGATING OF FREE RADICAL SOLUTIONS BY DYNAMIC NUCLEAR POLARIZATION METHOD, *Vyacheslav Ushakov*
5. AUTOMATIZATION AND TESTING OF THE IMPEDANCE SPECTROSCOPY SYSTEM FOR MEMRISTIVE STRUCTURE STUDY, *Ilya Panyavin*

Panel 4. Chemical technologies. Oral reports

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1. INFLUENCE OF RAW MATERIALS COMPOSITION ON THE THERMAL STABILITY AND STABILITY AND SPECIFIC SURFACE AREA OF ALUMINUM OXIDE MODIFIED WITH LANTHANUM OXID, *Polina Solodovnikova*
2. MONITORING OF SR-90 IN THE WATERS OF CONTROL AND OBSERVATION WELLS OF RADIOACTIVE WASTE STORAGE AND DISPOSAL SITES, *Nadezhda Belokonova*
3. STUDY OF SR-90 SORPTION BY MODIFIED CLINOPTILOLITE, *Maksim Averianov*
4. REMOVAL OF ANTIMONY ISOTOPES FROM RADIOACTIVE WASTE OF NUCLEAR POWER PLANTS, *Anna Suetina*
5. SEPARATION OF SR, Y AND TH TRACE AMOUNTS USING PAPER CHROMATOGRAPHY, *Mukhammed Gurbanov*
6. SYNTHESIS OF SINGLE CRYSTALS AND OPTICAL CERAMICS BASED ON SOLID SOLUTIONS OF THE AGCL0.25BR0.75 - TLI SYSTEM, *Polina Pestereva*
7. INCREASING PECTINASE ENZYME ACTIVITY BY INCORPORATING A SURFACE ACTIVE MICROGEL, *Ibrahim YAMA Almudhhi*
8. FORMULATION OF AN ANALYSIS TECHNIQUE FOR FUEL COMPOSITIONS BASED ON LITHIUM, SODIUM, AND POTASSIUM FLUORIDE, *Karina Grubtsova*
9. TO STUDY THE POSSIBILITY OF DETERMINING FLUORINE BY THE MS-ISP METHOD USING THE POLYATOMIC ION BAF+, *Shatunov Dmitry*
10. EXPERIMENTAL STUDY OF HYDRODYNAMICS IN A COLD MODEL OF A CONICAL REACTOR FOR SAWDUST GASIFICATION USING THE THEORY OF STOCHASTIC PROCESSES, *Mikhail Ershov*
11. IMPROVEMENT OF ATOMIC EMISSION TECHNIQUES TANTALUM ANALYSIS, *Elizaveta Susloparova*
12. STRIPPING OF URANIUM WITH SODIUM CARBONATE FROM A SATURATED MIXTURE OF HDEHP+TBP, *Michael Nechkin*
13. TECHNOLOGY FOR THE PRODUCTION OF CRYSTALLINE AMMONIUM SULFATE IN A CONTINUOUS PROCESS IN A DTB APPARATUS WITH A SETTLING CHAMBER, *Mariia Rudakova*
14. ASSESSMENT OF THE ECOGEOCHEMICAL STATUS OF THE RIVERS FLOWING THROUGH THE TERRITORY OF THE DENEZHKIN KAMEN RESERVE, *Anastasia Voronova*
15. ANALYSIS OF LIQUIDS FOR ELECTRONICS NICOTINE DELIVERY SYSTEMS BY THE GC-MS METHOD, *Daniya Khaydarova*
16. EXPERIMENTAL RESEARCH OF THE TERMINAL VELOCITY OF SAWDUST PARTICLES, PRODUCTS OF ITS PYROLYSIS AND MODEL PARTICLES IN TUBES OF DIFFERENT DIAMETERS, *Igor Suvorin*

1. FUNCTIONAL PROPERTIES OF CATHODE MATERIALS BASED ON LN₂MO₄ (LN=LA, PR; M=NI, CU), *Kirill Sukhanov*
2. DEVELOPMENT OF LAYERED COMPOSITES FROM TANTALUM FOILS AND PRECERAMIC PAPERS BASED ON Ti₃Al(Si)C₂ MAX-PHASE, *Anastasia Abdulmenova*
3. ELECTRICAL PROPERTIES OF SOLID SOLUTION LA₂-XSRXSCZNO_{5.5-0.5X}, *Svetlana Pachina*
4. NOVEL MATERIALS GDMN1-XRUXSI WITH MAGNETOCALORIC PROPERTIES, PROMISING FOR THE LIQUEFICATION OF NITROGEN AND OTHER GASES, *Roman Mukhachev*
5. MAGNETIC CHARACTERISTICS OF MATERIALS BASED ON LANTHANUM MANGANITE SYNTHESIZED IN COMBUSTION REACTIONS, *Anastasia Permiakova*
6. APPLICATION OF MACHINE LEARNING FOR SOLVING PROBLEMS OF MAGNETIC STRUCTURE ANALYSIS, *Andrey Besprozvanniy*
7. THE STRUCTURE OF KHN63MB ALLOY PRODUCTS MANUFACTURED BY ELECTRON BEAM ADDITIVE MANUFACTURING, *Daniil Vadimovich*
8. INFILTRATION OF NANO- AND MICROCRYSTALLINE ALLOYS BASED ON ND₂FE₁₄B COMPOUND, *Golubiatnikova Aleksandra*
9. DISPERSION-HARDENED ALLOYS OF THE AL-4%CU SYSTEM WITH SMALL ADDITIVES SC, ZR, HF, *Egor Podkin*
10. SYNTHESIS OF ANATASE/BROOKITE/CARBON COMPOSITES BY LOW-TEMPERATURE THERMOLYSIS OF TITANIUM GLYCOLATE. STRUCTURE AND PHOTOELECTROCHEMICAL PROPERTIES, *Ekaterina Ulyanova*
11. THE EFFECT OF HIGH HYDROSTATIC PRESSURE ON SEALING MECHANISMS AT THE INITIAL STAGE OF SINTERING A COMPOSITE MIXTURE OF METASTABLE ALUMINUM OXIDE, *Aleksander Maletskii*
12. DEVELOPMENT AND RESEARCH OF A MATERIAL FOR STEREOLITHOGRAPHIC 3D PRINTING BASED ON AL[ΠOД]2O[ΠOД]3, *Verkhoshanskiy Yanis*
13. RESIDUAL STRESS IN AN ORTHOPEDIC CANNULATED SCREW AFTER EXTREME LOAD, *Igor Ezhov*
14. SYNTHESIS OF GRAPHENE COATING ON NANOPARTICLES OF METALS AND DIELECTRICS, *Vladimir Matyukhov*
15. ANALYSIS OF QUARTZ ROUNDNESS IN URBANIZED MODERN SURFACE-DEPOSITED SEDIMENTS (ON THE EXAMPLE OF ROSTOV-ON-DON, MURMANSK, TYUMEN), *Vitaliy Glukhov*
16. THE EFFECT OF PH VALUE ON THE STABILITY AND OPTICAL PROPERTIES OF SILVER SULPHIDE QUANTUM DOTS IN AQUEOUS SOLUTION, *Viktoria Putilova*
17. CALCULATION OF GLOBULE FORMATION PROCESS AND RADIUS OF GYRATION OF PMMA BY MOLECULAR DYNAMICS STUDY, *Dieter Kokh*

Panel 6. Information systems and technologies. Oral reports

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1. APPLICATION OF NEURAL NETWORK TECHNOLOGIES IN MODELING THE OPERATION OF OBJECT SECURITY SYSTEMS, *Evgeniy Sukhanov*
2. MODELING THE PROPAGATION OF STRONG DISTURBANCES IN A GAS OF ARBITRARY RAREFACTION, *Anton Kutishenko*
3. BASIC CONCEPT HIERARCHY FOR THE IISIMS TERM IN THE CHILDREN' MAXILLOFACIAL PATHOLOGY REHABILITATION, *Ivan Novoselov*
4. METHODS FOR DETERMINATION OF ACTING FACTORS IMPORTANCE ON THE EXAMPLE OF ASSESSMENT OF METALLURGICAL WORKERS HEALTH STATUS, *Elizaveta Kabakova*
5. AN ADOPTATION OF OBJECT-ORIENTED APPROACH TO MANAGE MATRICES ON A GPU, *Ustiuzhanin Danil*
6. PERSONAL DENTIST'S ACCOUNT TO DETERMINE THE NEED FOR CHILDREN IN EARLY ORTHODONTIC TREATMENT FOR THE PREVENTION OF SEVERE VIOLATIONS, *Anton Lisovenko*
7. MIGRATION OF VACANCIES IN URANIUM DIOXIDE. A MOLECULAR DYNAMIC SIMULATION, *Gleb Kostarev*
8. REAL-TIME MONITORING SYSTEM FOR THE SF6 CIRCUIT BREAKERS LIFE CYCLE, *Natalia Bushueva*
9. DESIGNING A DIGITAL PLATFORM FOR ASSESSING THE PHYSICAL DEVELOPMENT OF CHILDREN IN THE EUROPEAN NORTH OF RUSSIA, *Uliana Zakharchenko*
10. INVESTIGATION OF THE PROCESSES OCCURRING IN THE SODIUM EQUIPMENT OF NUCLEAR POWER PLANTS, *Revyakina Polina*
11. SOLVING ROUTE OPTIMIZATION PROBLEMS FOR RADIATION-HAZARDOUS AREAS USING THREE-DIMENSIONAL MODELING, *Daniil Zavadskii*

Panel 7. Bioengineering and biotechnologies. Oral reports

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1. EFFECT OF SELF-HYDROLYZED AND FERMENTED OKARA HYDROLYSATE ON XANTHAN GUM PRODUCTION, *Richard Vincent Asase*
2. RESEARCH OF NEW NUTRIENT MEDIUM ON CORYNEBACTERIUM GLUTAMICUM, *Albina Nechaeva*
3. MOLECULAR DETECTION OF INFECTION BY ENTEROBACTER SPP IN SOME PROCESSED AND FRESH MEATS, *Baheig Atef Abdelazim A'laa*
4. THE INFLUENCE OF LOW AND HIGH DOSES OF IONIZING RADIATION ON FERMENTATION ACTIVITY OF SACCHAROMYCES CEREVISIAE SAFALE S-33, *Emmanuel Danyo*
5. EFFECTS OF VITAMIN PRODUCING LACTIC ACID BACTERIA STRAINS ON THE NUTRITIONAL AND FUNCTIONAL PROPERTIES OF YOGURT, *Anosike Glory Chinaza*
6. COMPARATIVE STUDY OF THE COMPOSITION AND PREPARATION OF NON-TRADITIONAL PASTA WITH A VEGETABLE ADDITIVES, *Eric Osei*
7. DEVELOPMENT OF AN EXPRESS TEST-SYSTEM FOR STUDYING ANTIBIOTIC RESISTANCE, *Pavel Vedeneev*
8. INFLUENCE OF ALBUMIN CONCENTRATION ON THE CRYSTALLIZATION OF SPHERICAL VATERITE, *Anastasia Stepanova*
9. OBTAINING FERMENTED OAT BEVERAGE ENRICHED WITH PLANT ISOFLAVONES EXTRACT, *Anastasia Kulikova*
10. PRODUCTION OF SEMI-HARD CHEESES WITH NATURAL ANTIOXIDANTS IN NANOEMULSION AND ENCAPSULATED FORMS, *Julia Danekina*
11. ASSESSMENT OF ANTIOXIDANT ACTIVITY OF YOGURT ENRICHED WITH IODINE AND SELENIUM, *Iuliia Savlukova*
12. INFLUENCE OF CHRONIC INTOXICATION BY COPPER NANOPARTICLES ON THE MECHANICAL FUNCTION OF THE HEART AT THE MOLECULAR LEVEL, *Alyona Tzybina*
13. DIRECT INFLUENCE OF LEAD IONS ON THE MECHANICAL FUNCTION OF MYOSIN, *Natalya Spiridonova*
14. BIOELECTRIC MEDIUM POWER FACTOR AMPLIFIER FOR PORTABLE NEURAL HEADSET, *Vladislav Nikitin*
15. TEST SYSTEM FOR DIAGNOSIS USING METABOLOMICS, *Polanco Espino, Fernando*
16. HOW IMMIGRATION CHANGES THE REGULAR AND CHAOTIC MODES OF POPULATION DYNAMICS, *Nina Prokopova*
17. THE INFLUENCE OF RANDOM DISTURBANCES ON A SYSTEM OF INTERACTING POPULATIONS WITH COMPETITION FOR RESOURCES, *Otman Anna*

Panel 8. Innovation and social technologies. Oral reports

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1. MEDIA PROJECT “PRONAS” AS AN INNOVATIVE WAY TO PROMOTE VOLUNTEERING IN MODERN SOCIETY, *Elena Medvedeva*
2. INTERVIEWING VOLUNTEER CANDIDATES AS A WAY TO RETAIN VOLUNTEERS, *Anastasia Bondareva*
3. THE EXPERIENCE OF PATRIOTIC ASSOCIATIONS IN THE HIGHER EDUCATION SYSTEM, *Kolmogorova Alice Vyacheslavovna*
4. PATRIOTISM THROUGH INNOVATION: HOW TECHNOLOGY CAN CONTRIBUTE TO NATIONAL IDENTITY AND CULTURAL IDENTITY, *Denis Ferderer*
5. GAME-THEORETIC APPROACH TO IP RIGHTS MANAGEMENT IN COOPERATION PROJECTS OF UNIVERSITIES WITH INDUSTRIAL PARTNERS, *Alina Aleksandrova*
6. REDESIGN OF THE COMPUTATIONAL MODELING OF DISORDER AND TRANSPORT PHENOMENA IN REACTOR MATERIALS COURSE USING DISTANCE LEARNING, *Sergey Pitskhelaury*

Panel 1. Nuclear and radiation technologies. Poster reports

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1. THE POSSIBILITIES OF USING GAS CENTRIFUGES FOR THE SEPARATION OF MULTICOMPONENT GAS MIXTURES ON THE EXAMPLE OF URANIUM HEXAFLUORIDE, *Kiselyov Sviatoslav*
2. ASSESSMENT OF THE POTENTIAL USE OF HALLOYSITE AS A MATERIAL FOR RADIATION PROTECTION, *Alexandra Shironina*
3. TECHNICAL IMPLEMENTATION OF THE METHODOLOGY FOR DETERMINING THE KINETICS OF GASEOUS FISSION PRODUCTS RELEASE FROM NUCLEAR FUEL DURING IRRADIATION, *Dmitry Rotman*
4. THE EFFECT OF LITHIUM CHLORIDE ADDITIVE ON THE PHYSICO-CHEMICAL PROPERTIES OF BOROPHOSPHATE GLASS, *Elizaveta Vedernikova*
5. INFLUENCE OF THE ADDITION OF ALKALI METAL FLUORIDES ON THE THERMOPHYSICAL PROPERTIES OF PHOSPHATE GLASSES, *Matvey Kisel*

Panel 2. Condensed matter physics. Poster reports

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1. APPLICATION OF GREEN'S FUNCTIONS WITH SPATIAL RESOLUTION TO CALCULATE THE ENERGY OF SINGLE-ION MAGNETIC ANISOTROPY IN CONDUCTING MATERIALS, *Ilya Kashin*
2. RELAXATION OF THE JAHN-TELLER SUBSYSTEM IN BAF2: CU CRYSTAL, *Natalia Ofitserova*
3. EFFECT OF ARGON ION IRRADIATION ON ELECTRO- AND MAGNETOTRANSPORT PROPERTIES OF TOPOLOGICAL INSULATOR BI₂SE₃, *Bogdan Fominykh*
4. DFT-CALCULATED IR-SPECTRA OF GRAPHITIC CARBON NITRIDE WITH DIFFERENT STRUCTURAL FEATURES, *Nikolay Martemianov*
5. NUMERICAL INVESTIGATION OF PARALLEL-PLATE MAGNETIC COMPRESSION LINE, *Vitaly Patrakov*
6. SYNTHESIS OF THIN FILMS OF GRAPHITIC CARBON NITRIDE BY CHEMICAL VAPOR DEPOSITION, *Ivan Ilyashenko*
7. ELECTRICAL RESISTIVITY OF BINARY ANTIFERROMAGNETIC ALLOYS, *Kirill Borodin*
8. THE INFLUENCE OF COMPRESSIVE OR TENSILE LOAD ON THE FORMATION OF THE ORDERED STRUCTURE OF THE EQUIATOMIC ALLOY CU-50AU(AT.%), *Alena Gavrilova*
9. PHYSICAL AND MECHANICAL PROPERTIES OF MODERATELY DEFORMED ORDERED ALLOY CU-56AT.%AU, *Polina Podgorbunskaya*
10. LUMINESCENCE-OPTICAL CHARACTERISTICS OF IMPLANTED GAN FILMS ON AN AL₂O₃ SUBSTRATE, *Chashchina V.V.*
11. ELECTRON EMISSION SPECTROSCOPY OF GAN THIN FILMS SUBJECTED TO ION-BEAM TREATMENT, *Ilya Kokusov*
12. RESEARCH OF MAGNETIC ANISOTROPY IN MONOLAYER CR₁₃ WITH USING THE FORMALISM OF GREEN'S FUNCTIONS, *Alexander Yakovlev*
13. MAGNETOELASTIC MECHANISM OF AFM-FM TRANSITION IN FeRh, *Ilya Kozvonin*
14. MAGNETORESISTIVE EFFECT OF NANOGRANULAR COMPOSITES (CO₄₅FE₄₅ZR₁₀)X(MGF₂)(100-X) AND (COFE)X(MGF₂)100-X IN THE INITIAL STATE, *Tatyana Tregubova*
15. EVOLUTION OF COMPOSITION OF HEMATITE THIN FILMS UNDER THE ACTION OF LASER RADIATION, *Kristina Merencova*
16. COMPREHENSIVE STUDY OF PHENAKITE RAMAN SPECTRA: EXPERIMENT AND AB INITIO CALCULATION, *Mikhail Pechurin*
17. THE COMPARISON OF EXCHANGE-CORRELATION FUNCTIONALS FOR PREDICTING ELASTIC PROPERTIES OF HIGH-ENTROPY ALLOYS COCRFEMNNI, COCRZRMNNI AND COCRNBMNNI, *Valentina Kuznetsova*
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