MSN-2024 program

August 27, Tuesday

Time zone: GMT+5 (Moscow time +2 hours)

Youth Conference
"Functional Imaging of Nanomaterials"

11.00-17.00	*Registration, Kuibysheva str. 48, 7th floor*
10.00-12.00	*Visit to Ural Center for Shared Use "Modern Nanotechnology" UrFU, Kuibysheva str. 48, 2nd floor*
13.00	**L1. Pyatakov Alexander,** *Lomonosov Moscow State University, Moscow, Russia* Geometric ideas in condensed matter physics
13.40	**L2. Alikin Denis,** *Ural Federal University, Ekaterinburg, Russia* Towards quantitative piezoresponse force microscopy measurements: theory and experiment
14.20	*Tea break*
14.40	**L3. Yaminsky Igor,** *Lomonosov Moscow State University, Moscow, Russia* Rational data processing in scanning probe microscopy
15.20 online	**L4. Zelenovskii Pavel,** *University of Aveiro, Aveiro, Portugal* Construction of functional nanomaterials from amino acids and peptides
16.15-18.00	*Excursion*
19.00-21.00	*Welcome party* *Onegin restaurant, Rozy Luxemburg str. 49, 15th floor*

August 28, Wednesday

Time zone: GMT+5 (Moscow time +2 hours)

08.30	***Registration, Kuibysheva str. 48, 7th floor***
09.00	*Opening, Kuibysheva str. 48, 7th floor*
	Session 1. Characterization of micro- and nano-materials I **Chair: Igor Yaminsky**
09.30	**I1. Kudryashov Sergey,** *Lebedev Physical Institute, Moscow, Russia* Ultrafast laser technologies in bulk nano- and micro-characterization of doped semiconductors
09.55	**I2. Krylov Alexander**, *Kirensky Institute of Physics*, *Krasnoyarsk, Russia* The structural transformation of DUT-4 metal-organic framework
10.20 online	**I3. Korotkov Leonid,** *Voronezh State Technical University, Russia* The structure, thermal, elastic and dielectric properties of nanocrystalline Rb_2ZnCl_4, embedded in nanosize porous matrices
10.45	**O1. Shandarov Stanislav**, *Tomsk State University of Control Systems and Radioelectronics, Tomsk, Russia* Optical method for the study of the pyroelectric phenomena in lithium niobate
11.00	*Tea break*
	Session 2. Characterization of micro- and nano-materials II **Chair: Alexander Vtyurin**
11.15	**O2. Krylova Svetlana**, *Kirensky Institute of Physics, Krasnoyarsk, Russia* Electronic and optical properties of LKGT crystal: DFT calculations
11.30	**O3. Kamanina Natalia**, *Vavilov State Optical Institute, St. Petersburg, Russia* Characterization of the PVA-based polarizers doped with carbon nanostructures
11.45	**O4. Akhkiamova Azaliia,** *MISIS, Moscow, Russia* Coupling lab-based AFMs with ultrafast in-situ Nanocalorimetry in view of building a lab-on-a-chip platform for characterization of nanogram-sized samples
12.00	**O5. Morozov Ilya,** *Institute of Continuous Media Mechanics, Perm, Russia* The onset of tip-surface contact in AFM force curve measurements
12.15	**O6. Andreeva Natalia,** *St. Petersburg Electrotechnical University "LETI", Russia* Correlation of local ferroelectric and resistive properties in BaTiO3-films studied by scanning tunneling microscopy
12.30	**O7. Prusakov Ivan**, *Ostec, Moscow, Russia* Research equipment from Nanometric and Ostec companies

12.45	**O8. Obraztsova Ekaterina,** *Moscow Institute of Physics and Technology, Moscow, Russia* Synthesis of silver nanoparticles with controllable sizes on dielectric surfaces in a plasma-chemical process initiated by gyrotron radiation
13.00	*Group photo and lunch* *Onegin restaurant, Rozy Luxemburg str. 49, 15th floor*
	Session 3. Bioinspired materials **Chair: Sergey Kudryashov**
14.30	**I4. Yaminsky Igor,** *Lomonosov Moscow State University, Moscow, Russia* Scanning probe microscopy of living neurons and nervous tissue
14.55 online	**I5. Zelenovskiy Pavel,** *University of Aveiro, Aveiro, Portugal* Transport of small molecules through peptide nanochannels
15.20 online	**O9. Bystrov Vladimir,** *Institute of Mathematical Problems of Biology RAS, Pushchino, Russia* Properties of zinc-substituted and manganese-substituted hydroxyapatite
15.35	**O10. Akhmetova Assel,** *Lomonosov Moscow State University, Russia* LoAFM investigation of biomaterials for dsRNA delivery into plant cells
15.50	*Tea break*
	Session 4. Ceramics and thin films I **Chair: Alexander Krylov**
16.05	**I6. Chouprik Anastasia**, *Moscow Institute of Physics and Technology, Dolgoprudny, Russia* Ferroelastic switching in $Hf_{0.5}Zr_{0.5}O_2$ films
16.30	**I7. Pugachev Alexey**, *Institute of Automatic and Electrometry RAS, Novosibirsk, Russia* Brillouin light scattering in barium strontium niobate thin films
16.55	**I8. Vtyurin Aleksander**, *Kirensky Institute of Physics, Krasnoyarsk, Russia* Phase transition in PYN-xBT ($x < 0.1$) ceramics – Raman scattering data
17.20	**O11. Pronin Igor**, *Ioffe Institute RAS, St. Petersburg, Russia* Mechanical stresses in spherulitic PZT thin films
17.35 online	**O12. Smirnova Elena,** *Ioffe Institute RAS, St. Petersburg, Russia* Physical properties and radiation hardness of piezoelectric ceramics after neutron irradiation
17.50	**O13. Nasedkin Andrey**, *Southern Federal University, Rostov-on-Don, Russia* Numerical analysis of effective temperature coefficients of nanostructured porous piezoceramics under various polarization models
18.05	*End of sessions*
19.00	*Banquet* *Onegin restaurant, Rozy Luxemburg str. 49, 15th floor*

August 29, Thursday

Time zone: GMT+5 (Moscow time +2 hours)

	Session 5. Micro- and nano-domain engineering **Chair: Alexander Pyatakov**
09.00	**I9. Akhmatkhanov Andrei**, *Ural Federal University, Ekaterinburg, Russia* The change of the domain wall shape as a result of ion beam irradiation in lithium niobate
09.25	**I10. Zvezdin Konstantin,** *New Spintronic Technologies, Moscow, Russia* Microwave spintronics. From fundamental research to applications
09.50	**I11. Shur Vladimir**, *Ural Federal University, Ekaterinburg, Russia* Light-only domain switching in ferroelectrics
10.15	**O14. Ivasenko Oleksandr,** *FUNSOM, Soochow University, China* Mechanochemical imprint lithography: direct patterning of C-C covalent grafts
10.30	**O15. Turygin Anton,** *Ural Federal University, Ekaterinburg, Russia* Domain shape evolution during local switching in the crystals of triglycine sulfate family
10.45	**O16. Ganzha Alexander,** *St. Petersburg Polytechnic University, Russia* Angular misorientation of the nanodomains in relaxed antiferroelectric heterostructures
11.00	*Tea break*
	Session 6. Ceramics and thin films II **Chair: Vladimir Shur**
11.15	**I12. Jin Li,** *Xi'an Jiaotong University, Xi'an, China* Moderate fields, maximum potential: Achieving high records with temperature-stable energy storage in lead-free BNT-based ceramics
11.40	**O17. Jing Ruiyi,** *Xi'an Jiaotong University, Xi'an, China* Ultra-high electric field-induced strain of sodium bismuth titanate-based lead-free ferroelectric ceramics
11.55	**O18. Khasanov Oleg,** *Tomsk Polytechnic University, Tomsk, Russia* Novel approaches to manufacture optical transparent and luminescent nanoceramics
12.10 online	**O19. Rybyanets Andrey,** *Southern Federal University, Rostov-on-Don, Russia* Microstructure, complex electromechanical parameters and dispersion characteristic of ferroelectrically hard piezoceramics
12.25	**O20. Savichev Ilya,** *Moscow Institute of Physics and Technology, Moscow, Russia* Depolarization effect in functional memory structures based on ferroelectric $Hf_{0.5}Zr_{0.5}O_2$

12.40 online	**O21. Politova Ekaterina,** *N.N. Semenov Federal Research Center for Chemical Physics RAS, Moscow, Russia* Structure, dielectric, ferroelectric and piezoelectric properties of modified lead-free perovskite ceramics
12.55	*Lunch* *Onegin restaurant, Rozy Luxemburg str. 49, 15th floor*
	Session 7. Multiferroic and magnetic materials I **Chair: Konstantin Zvezdin**
14.00	**I13. Araújo Eudes,** *São Paulo State University, Ilha Solteira, Brazil* Crystallization kinetics of rare-earth doped $BiFeO_3$ thin films
14.25	**I14. Eiras Jose Antonio,** *São Carlos Federal University, São Carlos, Brazil* Designing new room temperature magnetoelectric materials
14.50 online	**I15. Mamin Rinat,** *Zavoisky Physical-Technical Institute, Kazan, Russia* Magnetoelectric properties of small particles with inhomogeneous magnetization
15.15	**I16. Pyatakov Alexander,** *Lomonosov Moscow State University, Moscow, Russia* Surface energy of domain walls as a universal concept in materials science and beyond
15.40	**O22. Gareeva Zukhra,** *Institute of Molecule and Crystal Physics, Russia* Conducting antiferromagnets and antiferromagnetic multiferroics for spintronics
15.55	*Tea break*
	Session 8. Multiferroic and magnetic materials II **Chair: Jose Antonio Eiras**
16.10 online	**I17. Kholkin Andrei,** *University of Aveiro, Aveiro, Portugal* Ferroelectric-ferromagnetic composites for sensing and biomedicine
16.35	**O23. Mukhachev Roman,** *M.N. Mikheev Institute of Metal Physics UB RAS, Ekaterinburg, Russia* Magnetic ordering transition in Al doped GdNiSi
16.50 online	**O24. Karpinsky Dmitri,** *Scientific-Practical Materials Research Centre of NAS of Belarus, Minsk, Belarus* Structure, dielectric and piezoelectric properties of solid solutions $0.7BiFeO_3 – 0.3(Ba,Sr)TiO_3$
17.05 - 18.05	Short oral talks Chair: Andrei Akhmatkhanov
18.05 - 20.00	Poster session, Kuibysheva str. 48, 5th floor Online poster session
20.00	*End of sessions*

August 30, Friday

Time zone: GMT+5 (Moscow time +2 hours)

	Session 9. Application of ferroic materials **Chair: Roman Yusupov**
09.00 online	**I18. Khanuja Manika**, *Jamia Millia Islamia, Delhi, India* Sustainable MXene- Ferrite based nanocomposites for environmental remediation
09.25	**I19. Volegov Alexei,** *Ural Federal University, Ekaterinburg, Russia* Additive manufacturing of magnetic materials
09.50	**O25. Sosunov Alexei,** *Perm State University, Perm, Russia* Structure and properties of proton exchange waveguides in lithium niobate-tantalate single crystals
10.05	**O26. Sotnikova Galina,** *Ioffe Institute RAS, St. Petersburg, Russia* Influence of plasma flows on the functional properties of piezoelectric materials
10.20	**O27. UshakovAndrei,** *Ural Federal University, Ekaterinburg, Russia* Optical scanner based on cascaded domain structure in PMN-PT single crystals
10.35	**I20. Mishina Elena,** *RTU MIREA, Moscow, Russia* Magnetic nanostructure for THz photonics
11.00	*Tea break*
	Session 10. Fundamentals of ferroelectric and magnetic materials I **Chair: Elena Mishina**
11.15	**I21. Lushnikov Sergey**, *Ioffe Institute RAS, St. Petersburg, Russia* Interaction between a relaxation mode and soft acoustic phonon in the relaxor ferroelectric $Na_{1/2}Bi_{1/2}TiO_3$
11.40	**O28. Derets Nikita**, *Ioffe Institute RAS, St. Petersburg, Russia* Study of the heat capacity of the relaxor ferroelectric $PbNi_{1/3}Nb_{2/3}O_3$ in a wide temperature range
11.55	**I22. Yusupov Roman**, *Kazan Federal University, Kazan, Russia* Magnetic irreversibilities, microwave nonreciprocity and ultrafast magnetization dynamics in multiferroic $FeCr_2O_4$ spinel
12.20 online	**I23. Lubomirsky Igor**, *Weizmann Institute of Science, Rehovot, Israel* Large electromechanical coupling in Zr-doped ceria
12.45	**O29. Sturman Boris**, *Institute of automation and electrometry RAS, Novosibirsk, Russia* Kinetics of polarization reversal with conducting domain walls: An application to lithium niobite crystals
13.00	*Lunch* *Onegin restaurant, Rozy Luxemburg str. 49, 15th floor*

	Session 11. Fundamentals of ferroelectric and magnetic materials II **Chair: Sergey Lushnikov**
14.00	**I24. Alikin Denis**, *Ural Federal University, Ekaterinburg, Russia* The impact of domain wall conductivity on domain growth in ferroelectric single crystals
14.25	**O30. Samatham Satya**, *Chaitanya Bharathi Institute of Technology, Hyderabad, India* Experimental and theoretical aspects of Mn-Pt-Al based alloys
14.40	**O31. Kosobokov Mikhail**, *Ural Federal University, Ekaterinburg, Russia* Stability of ferroelectric domains created by local switching on non-polar cut MgOLN
14.55	**O32. Ter-Oganessian Nikita**, *Southern Federal University, Rostov-on-Don, Russia* Phase transitions in $PbZrO_3$ from molecular dynamics simulations
15.10	**O33. Moskvin Alexander**, *Ural Federal University, Ekaterinburg, Russia* Interplay of charge, orbital, spin and lattice degrees of freedom in orthonickelates
15.25	**O34. Pamyatnykh Sergey**, *Ural Federal University, Ekaterinburg, Russia* Drift of domain walls in iron garnet plates with magnetic compensation temperature
15.40	*Closing*

Short oral talks, August 29

SO1/P5. **Baidak Semyon,** *M.N. Mikheev Institute of Metal Physics RAS, Ekaterinburg, Russia*
Band structure topology and magnetic properties of GdNiSb and GdSb compounds

SO2/P7. **Chernov Evgenii,** *M.N. Mikheev Institute of Metal Physics RAS, Ekaterinburg, Russia*
Metal-insulator transition in strongly correlated manganese sulfide

SO3/P11. **Levichev Mattew,** *St. Petersburg Electrotechnical University 'LETI', St. Petersburg, Russia*
Contribution of surface and oxygen vacancies to the band structure of barium titanate thin ferroelectric films with resistive switching

SO4/P22. **Umylin Vladislav,** *NUST MISIS, Moscow, Russia*
Near-electrode processes in lithium niobate crystals $LiNbO_3$

SO5/P25. **Dudilovskaya Aleksandra,** *Tver State University, Tver, Russia*
Application of ionic liquids in studies of dielectric microstructure by scanning electron microscopy

SO6/P42. **Abramov Alexander,** *Ural Federal University, Ekaterinburg, Russia*
Local change of the domain structure and conductivity under polarization reversal in BFO thin films

SO7/P45. **Khlyupin Ivan,** *Peter the Great St.Petersburg Polytechnic University, St.Petersburg, Russia*
Field-induced tripling of a pseudo cubic cell in thin films of lead zirconate

SO8/P47. **Kipenko Ilya,** *Ural Federal University, Ekaterinburg, Russia*
Superfast domain wall motion in uniaxial ferroelectric single crystals

SO9/P48. **Lisjikh Boris,** *Ural Federal University, Ekaterinburg, Russia*
Formation of the domain structure in the bulk of ferroelectric crystal by ultrashort laser pulses

SO10/P57. **Yuzhakov Vladimir,** *Ural Federal University, Ekaterinburg, Russia*
Field induced domain evolution in calcium orthovanadate crystals with as-grown domain structure

SO11/P72. **Kadikova Anelya,** *Kazan Federal University, Kazan, Russia*
Inverse spin-Hall effect and structural phase transition in Mn_xPt_{1-x}/Ni80Fe20 bilayer

SO12/P87. **Safina Violetta,** *Ural Federal University, Ekaterinburg, Russia*
Size effect of the piezoelectric properties, crystal structure and memristive effect in $BiFeO_3$ thin films

Poster session, August 29

Section 1. Fundamentals of ferroelectric and magnetic materials

P1. Al Saedi Sabih, *Volgograd State Technical University, Volgograd, Russia*
Reversible characteristics of dielectric properties in cobalt-containing ferroelectric ceramics $(1\text{-}x)Ba_{0.95}Pb_{0.05}TiO_3+xCo_2O_3$

P2. Al Saedi Sabih, *Volgograd State Technical University, Volgograd, Russia*
Photoelectric response of KNN ferroelectric ceramics doped with barium titanate

P3. Alaverdova Alexandra, *Southern Federal University, Rostov-on-Don, Russia*
Structural features of nonstoichiometric solid solutions of $Pb(B'_{1/3}B''_{2/3})O_3$-based relaxor ferroelectrics

P4. Alaverdova Alexandra, *Southern Federal University, Rostov-on-Don, Russia*
Preparation and ferroelectric properties of pyrochlore-free $Pb(Mg_{1/3}Nb_{2/3})O_3$-based solid solutions

P5. Baidak Semyon, *M.N. Mikheev Institute of Metal Physics, RAS, Ekaterinburg, Russia*
Band structure topology and magnetic properties of GdNiSb and GdSb compounds

P6. Balayeva Vera, *Saratov State University, Saratov, Russia*
Spin waves in nanoscale lateral coupled ferromagnetic and magnonic structures

P7. Chernov Evgenii, *M.N. Mikheev Institute of Metal Physics, RAS, Ekaterinburg, Russia*
Metal-insulator transition in strongly correlated manganese sulfide

P8. Gudkov Sergey, *Tver State University, Tver, Russia*
Phase transition in P(VDF-TrFE) copolymer films manufactured by 4D printing

P9. Kislyuk Aleksandr, *NUST MISIS, Moscow, Russia*
Features of conductivity of charged domain walls in chemically reduced lithium niobate crystals

P10. Kostritskii Sergey, *RPC Optolink, Zelenograd, Moscow, Russia*
Variation of bandgap and Urbach tail in proton–exchanged $LiNbO_3$ waveguides, depending on phase composition of $Li_{1-x}H_xNbO_3$

P11. Levichev Mattew, *St. Petersburg Electrotechnical University 'LETI', St. Petersburg, Russia*
Contribution of surface and oxygen vacancies to the band structure of barium titanate thin ferroelectric films with resistive switching

P12. Lobanov Nikita, *Saratov State University, Saratov, Russia*
Amplitude and frequency processing of spin-wave signals in structures with magnon crystal and normal metal

P13. Marakhovskiy Makhail, *Southern Federal University, Rostov-on-Don, Russia*
Influence of impurity phases of the feedstock on the properties of ferroelectric material of the PZT system

P14. Motseyko Alexey, *Southern Federal University, Rostov-on-Don, Russia*
Monte Carlo studies of magnetic phase transitions in $(1-x)BiFeO_3$ – $xPbFe_{1/2}Sb_{1/2}O_3$ solid solutions

P15. Nuzhin Stepan, *Ural Federal University, Ekaterinburg, Russia*
Magnetic structures of orthonickelates at charge disproportionation

P16. Panov Yury, *Ural Federal University, Ekaterinburg, Russia*
Modeling of magnetic and charge ordering in nickelates

P17. Rassadin Alexander, *HSE University, Nizhny Novgorod, Russia*
Asymptotic solution of the Landau-Khalatnikov equation for ferroelectric

P18. Ryumshin Vitaly, *Ural Federal University, Ekaterinburg, Russia*
Monte Carlo study of model nickelate

P19. Shuba Andrei, *Military Educational and Scientific Centre of the Air Force N.E. Zhukovsky and Y.A. Gagarin Air Force Academy, Voronezh, Russia*
Stochastic model of ferroelectrics switching

P20. Soliman Tarek, *Ural Federal University, Ekaterinburg, Russia*
Effect of the alignment of Fe nanoparticles in polyvinyl alcohol films on the structure, thermomechanical, and magnetic properties

P21. Solnyshkin Alexander, *Tver State University, Tver, Russia*
Switching processes in polyvinylidene fluoride films produced by additive technology

P22. Umylin Vladislav, *NUST MISIS, Moscow, Russia*
Near-electrode processes in lithium niobate crystals $LiNbO_3$

P23. Yasinskaya Darya, *Ural Federal University, Ekaterinburg, Russia*
Markov chains approach for analyzing states of 1D spin systems

P24. Zhukova Natalia, *Peter the Great Saint-Petersburg Polytechnic University, St. Petersburg, Russia*
Potential of RF cathode sputtering method for synthesis of lead-containing antiferroelectric films

Section 2. Characterization of micro- and nano-materials

P25. Dudilovskaya Aleksandra, *Tver State University, Tver, Russia*
Application of ionic liquids in studies of dielectric microstructure by scanning electron microscopy

P26. Dzyuba Dmitry, *Southern Federal University, Taganrog, Russia*
High-temperature annealing of ZnO:Ga thin films for neuromorphic applications

P27. Ivleva Liudmila, *Prokhorov General Physics Institute RAS, Moscow, Russia*
Optical properties of Cr^{3+} and Mn^{3+} ions in $Ca_3(VO_4)_2$ single crystals: effect of Mg^{2+} ions

P28. Kartel Maksim, *Southern Federal University, Taganrog, Russia*
Characterization of titanium oxide-graphene memristive structures

P29. Kozyumenko Konstantin, *Southern Federal University, Taganrog, Russia*
Resistive switching in transparent ITO/ZnO/ITO memristors deposited by magnetron sputtering

P30. Kuznetsov Dmitry, *Ural Federal University, Ekaterinburg, Russia*
Capillary flow and liquid spreading dynamics on aluminum surfaces structured by nanosecond laser irradiation

P31. Melnikov Semyon, *Ural Federal University, Ekaterinburg, Russia*
The calibration of cantilever stiffness of SPM probes

P32. Mutovkin Pavel, *Sevastopol State University, Sevastopol, Russia*
Investigation of nanodiamonds as a potential targeted drug delivery system

P33. Mutovkin Pavel, *Sevastopol State University, Sevastopol, Russia*
Investigation of potential antifouling coatings using scanning probe microscopy

P34. Nasedkin Andrey, *Southern Federal University, Rostov-on-Don, Russia*
Numerical study of tubular piezoelectric transducer with spiral electrodes made of porous piezoceramics

P35. Pryakhina Victoria, *Ural Federal University, Ekaterinburg, Russia*
Dopant distribution in silicon surface layer after laser hyperdoping

P36. Pryakhina Victoria, *Ural Federal University, Ekaterinburg, Russia*
Local doping of lithium niobate surface layer using femtosecond laser irradiation

P37. Reznichenko Anna, *Southern Federal University, Rostov-on-Don, Russia*
Electromechanical and ferroelectric hysteresis in porous piezoceramics

P38. Rulev Ilya, *NUST MISIS, Moscow, Russia*
Integration and optimization of nanocalorimetric sensors for combined Raman microscopy and nanocalorimetry analysis

P39. Sergeeva Olga, *Tver State University, Tver, Russia*
Dielectric response of polar film heterostructure AlGaN/SiC/Si

P40. Shuba Andrei, *Military Educational and Scientific Centre of the Air Force N.E. Zhukovsky and Y.A. Gagarin Air Force Academy, Voronezh, Russia*
Elastically stressed state of ferroelectric nanocomposite, caused by the phase transition

P41. Yaminsky Dmitry, *Lomonosov Moscow State University, Moscow, Russia*
Nanometrology in nanomicroscopy

Section 3. Micro- and nano-domain engineering

P42. Abramov Alexander, *Ural Federal University, Ekaterinburg, Russia*
Local change of the domain structure and conductivity under polarization reversal in BFO thin films

P43. Chuvakova Maria, *Ural Federal University, Ekaterinburg, Russia*
The effect of complete spontaneous backswitching in rubidium titanyl arsenate single crystals

P44. Greshnyakov Evgenii, *Ural Federal University, Ekaterinburg, Russia*
Domain shape transition during fast temperature change in lithium niobate single crystal

P45. Khlyupin Ivan, *Peter the Great St.Petersburg Polytechnic University, St.Petersburg, Russia*
Field-induced tripling of a pseudo cubic cell in thin films of lead zirconate

P46. Kholodenko Maria, *Ural Federal University, Ekaterinburg, Russia*
Forward domain growth during local switching by focused electron beam in strontium-barium niobate crystal

P47. Kipenko Ilya, *Ural Federal University, Ekaterinburg, Russia*
Superfast domain wall motion in uniaxial ferroelectric single crystals

P48. Lisjikh Boris, *Ural Federal University, Ekaterinburg, Russia*
Formation of the domain structure in the bulk of ferroelectric crystal by ultrashort laser pulses

P49. Lugovaya Mariya, *Southern Federal University, Rostov-on-Don, Russia*
Electroelastic hysteresis and relaxation in relaxor piezoceramics at low dc electric fields

P50. Mekhonoshin Dmitry, *Ural Federal University, Ekaterinburg, Russia*
The structure of magnetic domain walls during drift in an oscillating magnetic field

P51. Meng Anastasia, *Ural Federal University, Ekaterinburg, Russia*
Local polarization switching by scanning probe microscopy tip and in-plane domain growth in $BaTiO_3$ single crystals

P52. Petrova Ekaterina, *Southern Federal University, Rostov-on-Don, Russia*
Dielectric hysteresis and relaxation in relaxor piezoceramics at low dc electric fields

P53. Savelyev Evgenii, *Ural Federal University, Ekaterinburg, Russia*
Abnormal domain growth in lithium niobate with surface layer modified by soft proton exchange

P54. Shikhova Vera, *Ural Federal University, Ekaterinburg, Russia*
Electrical-field tunable diffraction optical element based on strontium-barium niobate single crystals

P55. Smirnov Egor, *NUST MISiS, Moscow, Russia*
Micromagnetic simulation of the microstructure parameters influence on the realization of high coercivity state in hard-magnetic MnAl alloys

P56. Turygin Anton, *Ural Federal University, Ekaterinburg, Russia*
Domain structure and local switching in ceramics and crystals of layered bismuth titanate

P57. Yuzhakov Vladimir, *Ural Federal University, Ekaterinburg, Russia*
Field induced domain evolution in calcium orthovanadate crystals with as-grown domain structure

P58. Zhu Bohao, *Ural Federal University, Ekaterinburg, Russia*
The features of bulk screening process in congruent lithium niobate single crystals

Section 4. Multiferroic and magnetic materials

P59. Korolkova Anastasia, *Southern Federal University, Rostov-on-Don, Russia*
Influence of phase state and microstructure features on magnetic properties of solid solutions of lanthanum-bismuth manganite

P60. Kubrin Stanislav, *Southern Federal University, Rostov-on-Don, Russia*
Mössbauer study of (1-x)$BiFeO_3$-x$AFe_{0.5}B_{0.5}O_3$ (A=Ba, Sr, Pb; B=Nb, Sb) solid solutions

P61. Lymar Dmitry, *Southern Federal University, Rostov-on-Don, Russia*
Structure, dielectric and magnitodielectric properties of solid solutions of the system based on bismuth ferrite and lithium niobate

P62. Nazarenko Alexander, *Southern Scientific Centre RAS, Rostov-on-Don, Russia*
Crystal structure and properties of ceramics based on 0.55$BiFeO_3$-0.45$YMnO_3$ multiferroic system

P63. Platonov Sergey, *M. N. Mikheev Institute of Metal Physics RAS, Ekaterinburg, Russia*
Magnetic and magnetocaloric properties of $GdMn_{1-x}V_xSi$ compounds

P64. Rudskiy Daniil, *Southern Federal University, Rostov-on-Don, Russia*
Features of the synthesis, structure and properties of $Bi_{1-x}FeO_{3-\delta}$ with $0 \leq x \leq 0.20$

P65. Skryabin Anton, *Southern Federal University, Rostov-on-Don, Russia*
Valence state of iron ions in single-crystal compounds $Bi_{1-x}R_xFeO_3$ (R=Eu, Gd, Nd) according to X-ray photoelectron spectroscopy

P66. Zubrilin Alexandr, *Southern Federal University, Rostov-on-Don, Russia*
Phase formation, size effects and Maxwell-Wagner relaxation phenomena in bismuth ferrite modified with rare earth elements

Section 5. Ceramics and thin films

P67. Alikin Denis, *Ural Federal University, Ekaterinburg, Russia*
Ferroelectric properties and domain structure in the P(VDF - TrFE) films

P68. Alikin Denis, *Ural Federal University, Ekaterinburg, Russia*
Relationship between domain structure and structural state on the morphotropic phase boundary of the $Bi_{0.5}Na_{0.5}TiO_3$-$PbTiO_3$ ferroelectric ceramics

P69. Baraishuk Siarhei, *Belarusian State Agrarian Technical University, Minsk, Belarus*
Degradation of sensory elements induced by external potential

P70. Chirkova Diana, *Southern Scientific Centre RAS, Rostov-on-Don, Russia*
On the thermal stability of polar state in the modified antimony sulphoiodide above the Curie point

P71. Esin Egor, *Southern Federal University, Rostov-on-Don, Russia*
The effect of Mn_2O_3 modification on the dielectric characteristics of the binary $BiFeO_3$-$BaTiO_3$ ceramics

P72. Kadikova Anelya, *Kazan Federal University, Kazan, Russia*
Inverse spin-Hall effect and structural phase transition in Mn_xPt_{1-x}/Ni80Fe20 bilayer

P73. Kolosov Stanislav, *Southern Federal University, Rostov-on-Don, Russia*
Temperature and field dependences of the dielectric permittivity and converse piezoelectric modulus of $PbFe_{1/2}Nb_{1/2}O_3$ and $PbSc_{1/2}Nb_{1/2}O_3$ ceramics

P74. Kozyumenko Konstantin, *Southern Federal University, Taganrog, Russia*
Synaptic plasticity in nanocrystalline ZnO films for neuromorphic applications

P75. Lebedev Alexander, *Lomonosov Moscow State University, Moscow, Russia*
Combined experimental and theoretical study of cobalt-doped strontium titanate

P76. Makinyan Norayr, *Southern Scientific Centre RAS, Rostov-on-Don, Russia*
Leakage currents in two-layer heterostructures based on ferroelectrics with the tetragonal tungsten bronze structure

P77. Martins Maximiliano, *Center for the development of the nuclear technology (CDTN), Belo Horizonte, Brazil*
Development of magnet feedstock based on polymers and Nd-Fe-B magnetic powder for 4D additive manufacturing of magnetic devices

P78. Martynenko Alexandr, *Southern Federal University, Rostov-on-Don, Russia*
Electrophysical properties of ferroelectric ceramic materials based on the PZT system obtained by slip casting technology

P79. Martynenko Alexandr, *Southern Federal University, Rostov-on-Don, Russia*
Electrophysical properties of high-temperature ferroelectric solid solutions of the $(1-x)BiScO_3$-$xPbTiO_3$ system

P80. Masliaev Artyom, *Southern Federal University, Rostov-on-Don, Russia*
Microwave absorption properties of multicomponent solid solutions based on lead zirconate titanate

P81. Matyash Yana, *Southern Scientific Centre RAS, Rostov-on-Don, Russia*
Nanostructure and ferroelectric properties of multilayer heterostructures based on SBN and BNFNO materials

P82. Matyash Yana, *Southern Scientific Centre RAS, Rostov-on-Don, Russia*
Features of the nanostructure and ferroelectric properties of multilayer films based on materials with the tetragonal tungsten bronze structure

P83. Pankratiev Pavel, *Ioffe Institute, Saint-Petersburg, Russia*
Physical properties and sintering features of high temperature piezoelectric ceramics $0.36BiScO_3$-$0.64PbTiO_3$

P84. Pavlenko Anatoly, *Southern Scientific Centre RAS, Rostov-on-Don, Russia*
Fabrication and properties of STO thin films grown by RF sputtering in an oxygen atmosphere

P85. Pavlenko Anatoly, *Southern Scientific Centre RAS, Rostov-on-Don, Russia*
Dielectric characteristics of multilayer heterostructures based on SBN thin films

P86. Rybyanets Andrey, *Southern Federal University, Rostov-on-Don, Russia*
Complex electromechanical characteristics of ceramic matrix composites

P87. Safina Violetta, *Ural Federal University, Ekaterinburg, Russia*
Size effect of the piezoelectric properties, crystal structure and memristive effect in $BiFeO_3$ thin films

P88. Sapsaliou Dmitry, *A.V. Luikov Heat and Mass Transfer Institute NAS Belarus, Minsk, Belarus*
Composite polyvinylcarbazole films with zinc oxide nanoparticles formed by the Langmuir–Blodgett method

P89. Sapsaliou Dmitry, *A.V. Luikov Heat and Mass Transfer Institute NAS Belarus, Minsk, Belarus*
Composite polyvinylcarbazole coatings with silicon dioxide nanoparticles formed by spin-coating method

P90. Senkevich Stanislav, *Ioffe Institute, St. Petersburg, Russia*
Recrystallization of the perovskite phase in spherulitic films of lead zirconate titanate

P91. Shvetsov Igor, *Southern Federal University, Rostov-on-Don, Russia*
Microstructure, complex electromechanical parameters and dispersion characteristic of porous piezoceramics

P92. Shvetsov Igor, *Southern Federal University, Rostov-on-Don, Russia*
Ferroelectric hysteresis and switching process in relaxor type PZT piezoceramics

P93. Shvetsova Natalia, *Southern Federal University, Rostov-on-Don, Russia*
Electromechanical hysteresis and relaxation in PZT piezoceramics in low electric fields

P94. Stryukov Daniil, *Southern Scientific Center RAS, Rostov-on-Don, Russia*
$Sr_{0.6}Ba_{0.4}Nb_2O_6$ thin films on Si(110) substrate fabricated by RF-cathode sputtering

P95. Stryukov Daniil, *Southern Scientific Center RAS, Rostov-on-Don, Russia*
Intermittent deposition of $Ba_2NdFeNb_4O_{15}$ thin films

P96. Ushakov Andrey, *Ural Federal University, Ekaterinburg, Russia*
Understanding the phase heterogeneity and functional responses in the relaxor BNT-ST ceramics

P97. Zhidel Karina, *Southern Scientific Centre RAS, Rostov-on-Don, Russia*
Estimation of the band gap in multilayer heterostructures based on SBN and BNFN

P98. Zhidel Karina, *Southern Scientific Centre RAS, Rostov-on-Don, Russia*
Transmission spectra of SBN61 thin films in the low temperature region

Section 6. Bioinspired materials

P99. Bystrov Vladimir, *Institute of Mathematical Problems of Biology, Keldysh Institute of Applied Mathematics, RAS, Pushchino, Russia*
Diphenylalanine peptide nanotubes as substrates for surface-enhanced Raman spectroscopy

Section 7. Application of ferroic materials

P100. Kubasov Ilya, *NUST MISIS, Moscow, Russia*
Experimental validation of one-dimensional model of an ideal bimorph actuator provided on bidomain lithium niobate

P101. Makarev Dmitry, *Southern Federal University, Rostov-on-Don, Russia*
Features of porous piezoceramics polarization by point sources of electric field

P102. Sosunov Aleksei, *Perm State University, Perm, Russia*
Stress of annealed proton exchange waveguides in mixed lithium niobate-tantalate single crystals

P103. Turutin Andrei, *NUST MISIS, Moscow, Russia*
2D Mapping technique of non-uniform magnetic fields using self-biased magnetoelectric composites based on “bidomain $LiNbO_3$/Ni/Metglas” structures

P104. Wang Linghang, *Xi’an Jiaotong University, Xi’an, China*
Extremely large strain response under low driving electric fields in lead-based textured piezoelectric ceramics

P105. Rumyantsev Evgeny, *Ural Federal University, Ekaterinburg, Russia*
The structure and preferred orientation of the 180° domain walls in uniaxial ferroelectric lithium niobate and lithium tantalate