

## Thursday, August 27

15.00 - 18.00	<i>Visit to the Ural Center for Shared Use “Modern Nanotechnology” UrFU</i>
19.00 - 21.00	<i>Welcome party at TransHotel (Gogol str. 15E)</i>

## Friday, August 28

08.30	<b>Registration</b>
09.00	<b>Opening</b>
09.15	I1. <b>Vladimir Shur</b> (Russia) <i>Ural Center for Shared Use “Modern Nanotechnology”. Achievements and horizons</i>
	Session 1. Microscopy and modern experimental methods I (chair Alexander Krylov)
09.40	I2. <b>Andrei Kholkin</b> (Portugal) <i>Nanoscale piezoelectricity due to symmetry breaking: an Atomic Force Microscopy study</i>
10.05	I3. <b>Alexander Ankudinov</b> (Russia) <i>Application of SPM for precise experiments on nanomechanics</i>
10.30	I4. <b>Dongliang Yang</b> (China) <i>Micromechanical analysis of glass-metal sealing</i>
10.55	<b>Tea break</b>
	Session 2. Microscopy and modern experimental methods II (chair Alexander Ankudinov)
11.10	I5. <b>Alexander Krylov</b> (Russia) <i>Using dynamic temperature mode at temperature investigations by Raman spectroscopy</i>
11.35	O1. <b>Kunqi Xu</b> (China) <i>Local thermal conductivity and Seebeck coefficient characterization by scanning thermoelectric microscopy</i>
11.50	O2. <b>Eugene Mingaliev</b> (Russia) <i>Dispensing of subpicoliter droplets by pyroelectric field</i>
12.05	O3. <b>Yuriy Vysokikh</b> (Russia) <i>Expanding atomic-force microscopy studies to quantitative and high-resolution mapping of local properties</i>

12.20	<b>O4. Vera Neudachina</b> (Russia) <i>Novel imaging techniques in materials characterization: from XPS and Raman to nano-IR and AFM</i>
	Session 3. Domains and periodical poling (chair Vladimir Shur)
12.35	<b>I6. Alexander Korzhenevskii</b> (Russia) <i>Dynamics of domain wall in relaxational matrix</i>
13.00	<b>Lunch</b>
14.30	<b>I7. Marc P. De Micheli</b> (France) <i>Precise control of the index profile of SPE waveguides</i>
14.55	<b>O5. Maxim Neradovskiy</b> (Russia) <i>Nanodomains appeared after creation of proton exchange waveguides in periodically poled LiNbO<sub>3</sub> crystals</i>
15.10	<b>I8. Leo McGilly</b> (Switzerland) <i>Controlling domain wall motion as a route towards new functionalities in Pb(Zr,Ti)O<sub>3</sub> ferroelectric thin films</i>
15.35	<b>O6. Andrey Akhmatkhanov</b> (Russia) <i>Polarization reversal and domain structure evolution in MgO doped congruent and stoichiometric lithium tantalate crystals</i>
15.50	<b>O7. Mikhail Kosobokov</b> (Russia) <i>Formation of nanodomain structures in lithium niobate and lithium tantalate crystals induced by pulse laser heating</i>
16.05	<b>Tea break</b>
	Session 4. Multiferroics, relaxors, and thin films I (chair Igor Raevski )
16.20	<b>I9. Eudes B. Araujo</b> (Brazil) <i>Structural, dielectric and local piezoelectric properties of strontium barium niobate thin films</i>
16.45	<b>I10. Jan Dec</b> (Poland) <i>Local polarization dynamics in uniaxial Sr<sub>x</sub>Ba<sub>1-x</sub>Nb<sub>2</sub>O<sub>6</sub> single crystals</i>
17.10	<b>I11. Alexey Pugachev</b> (Russia) <i>Second harmonic generation and Raman scattering as a tool for the investigation of inhomogeneities in ferroelectrics and relaxors</i>
17.35 - 19.00	<b>Poster Session</b>

## Saturday, August 29

	Session 5. Multiferroics, relaxors, and thin films II (chair Eudes B. Araujo)
09.00	I12. <b>Rinat Mamin</b> (Russia) <i>Locally induced states in manganites</i>
09.25	I13. <b>Igor Raevski</b> (Russia) <i>Electron microscopy, X-ray diffraction, dielectric and Mossbauer studies of <math>AFe_{0.5}B_{0.5}O_3</math> (A - Pb, Ba; B - Nb, Ta) ceramics sintered from mechanically activated nanopowders</i>
09.50	I14. <b>Gerhard Lackner</b> (Germany) <i>Thin films for photovoltaic application</i>
10.15	O8. <b>Yibo Zhou</b> (China) <i>Abnormal light scattering induced by the growth of PNRs in PMN-PT transparent ceramics</i>
10.30	O9. <b>Evgeniya Khomyakova</b> (Slovenia) <i>The influence of substrate on structure and phase composition of <math>BiFeO_3</math> thick films and the resulting local electro-mechanical properties</i>
10.45	O10. <b>Svetlana Raevskaya</b> (Russia) <i>Electron microscopy, XRD, Mossbauer and dielectric studies of <math>Pb(Fe_{0.5}Nb_{0.5})_{1-x}B_xO_3</math> (B - Zr, Sn, Ce) multiferroic ceramics</i>
11.00	<b>Tea break</b>
	Session 6. Bio and organic materials (chair Andrei Kholkin)
11.15	I15. <b>Vladimir Bystrov</b> (Russia) <i>Investigation of the transition region of the polarization switching from extrinsic to intrinsic in the ultrathin polyvinylidene fluoride homopolymer films</i>
11.40	I16. <b>Dmitry Kolker</b> (Russia) <i>FAN-OUT PPLN-OPO Photo-acoustic laser spectrometer for noninvasive medical diagnostics</i>
12.05	O11. <b>Vladimir Shur</b> (Russia) <i>Contribution of UCSU "Modern Nanotechnology" to nanotoxicological research</i>
12.20	O12. <b>Larisa Privalova</b> (Russia) <i>Main results of animal experiments proving a possibility to significantly attenuate adverse effects of metallic nanoparticles</i>

12.35	O13. <b>Alexander Romashchenko</b> (Russia) <i>Time-space patterns of direct nose-to-brain transport of nanoparticle and their effects on catecholamine metabolism of olfactory system</i>
12.50	O14. <b>Pavel Zelenovskiy</b> (Russia) <i>Low- and high temperature phase transitions in diphenylalanine nanotubes</i>
13.05	<b><i>Closing</i></b>
13.20	<b><i>Lunch</i></b>
15.00	<b><i>Excursion</i></b>

## Poster session

Friday, August 28

### Topic 1. Microscopy and modern experimental methods

**P1. Sergei Asselborn**

*Bessel beam waist scanning by nanoparticles suspended in liquid*

**P2. Irina Yushina**

*Thiazoloquinolinium iodides according to Raman spectroscopy data*

**P3. Dmitry Pelegov**

*Local characterization of materials for batteries and fuel cells using electrochemical strain microscopy and micro-Raman techniques*

**P4. Yuriy Vysokikh**

*Magnetic domain visualization by magnetic force microscopy and near-field polarization microscopy*

**P5. Andrei Korsakov**

*Strain patterns inside kimberlitic and metamorphic diamond crystals as revealed by Raman imaging*

**P6. Liudmila Ivleva**

*Mechanical properties of  $\beta$ - $\text{Na}_{0.28}\text{V}_2\text{O}_{5-y}$  oxide bronze grown by Czochralski method*

### Topic 2. Domains and periodical poling

**P7. Dmitry Chezganov**

*Simulation of spatial distribution of electrons and electric field after e-beam irradiation of MgO-doped lithium niobate covered by resist.*

**P8. Victoria Pryakhina**

*Formation of charged domain walls in  $\text{LiNbO}_3$  and  $\text{LiTaO}_3$  with inhomogeneously increased bulk conductivity*

**P9. Artur Udalov**

*About lack of the shape of plane domain wall in uniaxial ferroelectric*

**P10. Arkadi Mandel**

*Collinear and isotropic diffraction of laser beam and incoherent light on periodically poled domain structures in lithium niobate*

**P11. Anton Turygin**

*Self-assembled periodical domain structure appeared on nonpolar cuts of lithium niobate and lithium tantalate crystals*

**P12. Anton Turygin**

*Domain study in Sr-doped potassium sodium niobate lead-free piezoelectric ceramics*

**P13. Anastasia Tyurnina**

*The domain structure evolution in the congruent lithium niobate with silver nanoparticles on the polar surface*

**P14. Ekaterina Barabanova**

*Change the domain structure due to the process of polarization in the multicomponent ceramics*

**P15. Maria Chuvakova**

*Formation of quasi-regular domain structures in single crystals of lithium niobate and lithium tantalate during polarization reversal with metal electrodes and artificial dielectric layer*

**P16. Alexander Esin**

*The abnormal conduction current induced by formation of charged domain walls in stoichiometric lithium niobate*

**P17. Vladimir Rogalin**

*Optical parametric oscillator on the periodically poled MgO:LN crystal generating 70 mW with 4.1  $\mu\text{m}$  wavelength and varied pulse duration*

**P18. Ulyana Salgaeva**

*Effect of pre-annealing process on the surface roughness of ridge waveguide formed with wet etching of  $-Z$ -cut  $\text{LiNbO}_3$*

**P19. Maxim Neradovskiy**

*Investigation of domain kinetics in congruent lithium niobate modified by proton exchange*

**P20. Elizaveta Kolchina**

*Study of ferroelectric domain structure of barium strontium titanate based glass-ceramics*

**Topic 3. Multiferroics, relaxors, and thin films**

**P21. Elizaveta Kolchina**

*Formation of the domain structure as a result of spontaneous backswitching in relaxor  $\text{Sr}_x\text{Ba}_{1-x}\text{Nb}_2\text{O}_6$  single crystals*

**P22. Valentin Afanasjev**

*Formation and Properties of PZT-PbO Thin Heterophase Films*

**P23. Dmitry Redka**

*Optical and structural properties of ZnO thin films after laser treatment*

**P24. Svetlana Raevskaya**

*Electron microscopy and XRD studies of the surface phases of Li-doped  $\text{PbFe}_{0.5}\text{Nb}_{0.5}\text{O}_3$  ceramics sintered from mechanically activated oxides*

**P25. Sergei Mushinsky**

*Protective silicon-silicon oxide magnetron sputtered layer for lithium niobate integrated optical circuits*

**Topic 4. Bio and organic materials**

**P26. Gulshakhar Kudaibergen**

*Study of surface morphology of magnetically active sorbents on the basis of humic acid*

**P27. Vladimir Bystrov**

*Glycine nanostructures and the domains in the beta-glycine: Computational modeling and PFM observations*

**P28. Anna Bystrova**

*Studies of structure and properties of the surface modified Hydroxyapatite for biomedical applications: computational and experimental data analysis*

**P29. Dmitry Bykov**

*Formation of self-assembled island structure in glycine. Experiment and computer simulation*

**P30. Vladimir Rogalin**

*Investigation the temperature dependence of the reflection coefficient of triglycine sulfate in the IR region*

**P31. Alla Nuraeva**

*Ferroelectric and piezoelectric properties of organic films and organic crystals derived from chiral methoxy and amino acids*

**P32. Daria Vasileva**

*Morphology and piezoelectric properties of  $\beta$ -glycine single crystals and micro islands*

**P33. Semen Vasilev**

*Investigation of morphology and piezoelectric properties of diphenylalanine microcrystals*