
# IFS2025

**XIX International Feofilov Symposium on Spectroscopy of Crystals Doped with Rare Earth and Transition Metal Ions**

# PROGRAM

**November 10-14, 2025**
**Saransk, Russia**


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**PROGRAM**

| **November 10, Monday** | |
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| 9.00 – 11.00 | **Registration of participants**<br>Hall of the Institute of National Culture of National Research Ogarev Mordovia State University (44/3 Polezhaeva St.) |
| 11.00 – 11.30 | **Opening ceremony**<br>Assembly hall of the Palace of Culture and Arts |
| The main building of the university | ***Session 1*** |
| 11.30 – 12.15 | ***N.N. Rosanov[1], S.V. Fedorov[1]***<br>*[1]Ioffe Institute, St. Petersburg, Russia*<br>POLARIZATION OF SHORT ELECTROMAGNETIC PULSES |
| 12.15 – 13.00 | ***V.S. Zapasskii***<br>*Saint Petersburg State University, Spin Optics Laboratory, St. Petersburg, Russia*<br>OPTICAL DETECTION OF MAGNETIZATION AND A SPIN NOISE |
| 13.00 – 14.30 | Lunch |
| The main building of the university | ***Session 2*** |
| 14.30 – 14.50 | ***V.O. Kozlov***<br>*Saint Petersburg State University, St. Petersburg, Russia*<br>SPECTROSCOPY OF POLARIZATION FLUCTUATIONS OF RARE-EARTH IONS IN DIELECTRIC MEDIA |
| 14.50 – 15.10 | ***E.A. Radzhabov***<br>*Vinogradov Institute of Geochemistry SB RAS, Irkutsk, Russia*<br>ANOMALOUS LUMINESCENCE OF $Sm^{2+}$ IN $LaF_3$ CRYSTALS |
| 15.10 – 15.30 | ***V.A. Pustovarov[1], D.A. Tavrunov[1], A.A. Sapov[2], M.S. Tarasenko[3]***<br>*[1]Ural Federal University, Ekaterinburg, Russia*<br>*[2]Novosibirsk State University, Novosibirsk, Russia*<br>*[3]Institute of Inorganic Chemistry SB RAS, Novosibirsk, Russia*<br>$CsLa_{1-x}Ce_xAB_4$ ($x$ = 0–1; A = Si, Ge; B = S, Se) SOLID SOLUTIONS: ELECTRONIC STRUCTURE, OPTICAL PROPERTIES |
| 15.30 – 15.50 | ***A.S. Makarova[1], V.I. Solomonov[1], V.A. Pustovarov[2], V.V. Osipov[1]***<br>*[1]Institute of Electrophysics Ural Branch RAS, Ekaterinburg, Russia*<br>*[2]Ural Federal University, Ekaterinburg, Russia*<br>THE RADIATION REABSORPTION EFFECT ON THE PULSED CATHODOLUMINESCENCE KINETICS OF THE YTTERBIUM ION IN YTTRIA-BASED CERAMICS |
| 15.50 – 16.10 | Coffee break |
| The main building of the university | ***Session 3*** |
| 16.10 – 16.30 | ***T.A. Igolkina[1,2], E.P. Chukalina[1]***<br>*[1]Institute of Spectroscopy RAS, Moscow, Troitsk, Russia*<br>*[2]Moscow Institute of Physics and Technology (National Research University), Dolgoprudny, Russia* |

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| | HYPERFINE AND DEFORMATION LINE SPLITTING IN THE LUMINESCENCE SPECTRA OF A $KY_3F_{10}$:$Ho^{3+}$ CRYSTAL |
| 16.30 – 17.00 | ***V.V. Semashko*[1,2], G.S. Shakurov[1], O.A. Morozov[1,2], S.L. Korableva[2], V.I. Kolesnikova[1,2]***<br>*[1]Kazan E.K. Zavoisky Physical-Technical Institute, Kazan, Russia*<br>*[2]Kazan (Volga Region) Federal University, Kazan*<br>CONCEPT OF THZ RADIATION VISUALIZATION USING RARE-EARTH DOPED FLUORESCENT NANOSENSORS |
| 17.00 – 17.20 | ***A.A. Kornienko*[1], E.B. Dunina[1], L.A. Fomicheva[2]***<br>*[1]Vitebsk State Technological University, Vitebsk, Belarus*<br>*[2]Belarusian State University of Informatics and Radioelectronics, Minsk, Belarus*<br>METHOD FOR DETERMINING THE PROBABILITIES OF TRANSITIONS FROM INDIVIDUAL COMPONENTS OF AN EXCITED MULTIPLET BASED ON THE TEMPERATURE DEPENDENCE OF THE LIFETIME |
| 17.20 – 17.40 | ***S.A. Bukarev*[1], S.V. Gushchin[1], E.E. Lomonova[1,2], V.A. Myzina[1,2], A.A. Reu[2], P.A. Ryabochkina[1]***<br>*[1]Ogarev Mordovia State University, Saransk, Russia*<br>*[2]Prokhorov General Physics Institute RAS, Moscow, Russia*<br>INTENSITY OF f-f TRANSITIONS OF $Eu^{3+}$ IONS IN $ZrO_2$-$Eu_2O_3$ CRYSTALS |
| 17.40 – 18.00 | ***D.A. Akulov*[1], M.O. Kalinkin[1], R.M. Abashev[1,2], N.I. Medvedeva[1], A.I. Syurdo[1,2], D.G. Kellerman[1]***<br>*[1]Institute of Solid State Chemistry UB RAS, Ekaterinburg, Russia*<br>*[2]Institute of Metal Physics UB RAS, Ekaterinburg, Russia*<br>ENHANCEMENT OF THERMOLUMINESCENT RESPONSE IN $LiMgPO_4$, $Li_9Mg_3[PO_4]_4F_3$ AND $Li_2MgPO_4F$ BY DOPING WITH RE IONS |
| 18.00 – 20.30 | ***Concert of the Institute of National Mordovian Culture*** |

| **November 11, Tuesday** | |
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| The main building of the university | ***Session 4*** |
| 9.00 – 9.45 | ***M.D. Dramićanin***<br>*Vinča Institute of Nuclear Sciences – National Institute of the Republic of Serbia, University of Belgrade, Belgrade, Serbia*<br>BRIDGING PHOTONICS AND THERMOMETRY: NEW HORIZONS IN LUMINESCENCE SENSING |
| 9.45 – 10.30 | ***M.N. Popova*[1], S.A. Klimin[1], B.Z. Malkin[2]***<br>*[1]Institute of Spectroscopy RAS, Moscow, Troitsk, Russia*<br>*[2]Kazan (Volga Region) Federal University, Kazan*<br>HIGH-RESOLUTION FOURIER SPECTROSCOPY OF CRYSTALS WITH *f*- AND *d*-IONS. TEMPERATURE, MAGNETIC FIELD, AND STRAIN SENSORS |
| 10.30 – 11.00 | ***S.A. Klimin*[1], M. Diab[1,2], M.N. Popova[1]***<br>*[1]Institute for Spectroscopy RAS, Moscow, Troitsk, Russia* |

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| | *[2]Moscow Institute of Physics and Technology (National Research University), Dolgoprudny, Russia*<br>LUMINESCENCE CRYOTHERMOMETRY |
| 11.00 – 11.20 | Coffee break |
| The main building of the university | ***Session 5*** |
| 11.20 – 11.50 | ***S.A. Moiseev, K.I. Gerasimov, M.M. Minnegaliev, I.V. Brekotkin***<br>*Kazan Quantum Center, Kazan National Research Technical University named after A.N. Tupolev - KAI, Kazan, Russia*<br>RAMSEY RESONANCES IN OPTICALLY DENSE CRYSTALS WITH RARE-EARTH IONS |
| 11.50 – 12.20 | ***A.A. Kalachev***<br>*Zavoisky Physical-Technical Institute, FRC Kazan Scientific Center RAS*<br>ABOUT THE DEVELOPMENT OF QUANTUM REPEATERS BASED ON CRYSTALS ACTIVATED BY RARE EARTH IONS |
| 12.20 –12.40 | ***I.M. Sokolov[1], A.S. Kuraptsev[1,2]***<br>*[1]Peter the Great Saint Petersburg Polytechnic University, St. Petersburg, Russia*<br>*[2]Institute for Analytical Instrumentation RAS, St. Petersburg, Russia*<br>SINGLE-PHOTON SOURCE AND SINGLE-ATOM OPTICAL GATE BASED ON MAGNETO-OPTICAL EFFECTS IN A WAVEGUIDE |
| 12.40 – 14.00 | Lunch |
| The main building of the university | ***Session 6*** |
| 14.00 – 14.30 | ***A.S. Moskvin***<br>*[1]Ural Federal University, Ekaterinburg, Russia*<br>*[2]Mikheev Institute of Metal Physics UD RAS, Ekaterinburg, Russia*<br>JAHN-TELLER MAGNETS |
| 14.30 – 15.00 | ***V.V. Gudkov[1], N.S. Averkiev[2], M.N. Sarychev[1], I.V. Zhevstovskikh[1,3], S. Zherlitsyn[4], N.Yu. Tavrunova[1]***<br>*[1]Ural Federal University, Ekaterinburg, Russia*<br>*[2] A.F. Ioffe Physical Technical Institute RAS, St. Petersburg, Russia*<br>*[3]M.N. Mikheev Institute of Metal Physics UB RAS, Ekaterinburg, Russia*<br>*[4]Hochfeld-Magnetlabor Dresden (HLD-EMFL), Helmholtz-Zentrum Dresden-Rossendorf, Germany*<br>THE JAHN-TELLER EFFECT IN PHYSICAL ACOUSTICS. DOPED CRYSTALS |
| 15.00 – 15.20 | ***N.Yu. Tavrunova[1], M.N. Sarychev[1], I.V. Zhevstovskikh[1,2], V.T. Surikov[3], N.Yu. Tabachkova[4,5], P.A. Ryabochkina[6], N.S. Averkiev[7], V.V. Gudkov[1]***<br>*[1]Ural Federal University, Ekaterinburg, Russia*<br>*[2]M.N. Mikheev Institute of Metal Physics UB RAS, Ekaterinburg, Russia*<br>*[3]Institute of Solid State Chemistry UB RAS, Ekaterinburg, Russia*<br>*[4]Prokhorov General Physics Institute RAS, Moscow, Russia*<br>*[5]National University of Science and Technology (MISIS), Moscow, Russia* |

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| | *[6]Ogarev Mordovia State University, Saransk, Russia*<br>*[7]A.F. Ioffe Physical Technical Institute RAS, St. Petersburg, Russia*<br>RELAXATION PHENOMENA IN ELASTIC MODULI OF $NaGd(WO_4)_2$:Er CRYSTAL |
| 15.20 – 15.50 | ***N.S. Averkiev***<br>*Ioffe Institute, St. Petersburg, Russia*<br>ANISOTROPIC JAHN-TELLER DEFECTS IN GaAs |
| 15.50 – 16.10 | Coffee break |
| The main building of the university | ***Session 7*** |
| 16.10 – 16.40 | ***A.A. Kravtsov, E.A. Brazhko, D.P. Bedrakov, V.A. Tarala***<br>*North-Caucasus Federal University, Stavropol, Russia*<br>EFFECT OF $Sc^{3+}$ CONCENTRATIONS ON THE OPTICAL PROPERTIES OF YTTRIUM SCANDIUM ALUMINUM GARNETS DOPED WITH RARE EARTH CATIONS |
| 16.40 – 17.10 | ***G.E. Malashkevich[1], V.V. Kouhar[1], A.A. Sukhodola[2], V.N. Sigaev[3]***<br>*[1]B.I. Stepanov Institute of Physics NAS of Belarus, Minsk, Belarus*<br>*[2]Belarusian National Technical University, Minsk, Belarus*<br>*[3]Mendeleev Russian University of Chemical Technology, Moscow, Russia*<br>EXCITATION OF LUMINESCENCE OF $Ln^{3+}$ IONS OUTSIDE THEIR ABSORPTION BANDS IN ACTIVATED GLASSES |
| 17.10 – 17.30 | ***A.D. Molchanova[1], S.A. Klimin[1], N.N. Kuzmin[1], L.H. Yin[2], M.N. Popova[1]***<br>*[1]Institute of Spectroscopy RAS, Moscow, Troitsk, Russia*<br>*[2]Institute of Solid State Physics, CAS, Hefei, Anhui, P. R. China*<br>SPECTROSCOPY OF PHASE TRANSITION IN MULTIFERROIC *h*-$YbMnO_3$ |
| 17.30 – 19.00 | ***Banquet*** |

| **November 12, Wednesday** | |
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| The main building of the university | ***Session 8*** |
| 9.00 – 9.45 | ***A.I. Smirnov***<br>*P.L. Kapitza Institute for Physical Problems RAS, Moscow, Russia*<br>ESR SPECTROSCOPY OF THE FERMI-LIQUID OF SPINONS IN ANTIFERROMAGNETIC CHAINS |
| 9.45 – 10.15 | ***M.V. Eremin[1], V.F. Tarasov[2]***<br>*[1]Kazan (Volga Region) Federal University, Kazan, Russia*<br>*[2]Zavoisky Physical-Technical Institute, FRC Kazan Scientific Center RAS, Kazan, Russia*<br>EFFECT OF MAGNETOELECTRIC NONRECIPROCITY IN SUBMILLIMETER EPR SPECTROSCOPY OF IMPURITY $^{166}Er^{3+}$ IONS IN $^{7}LiYF_4$ SINGLE CRYSTAL |

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| 10.15 – 10.45 | ***G.S. Shakurov*[1], *A.D. Shishkin*[1], *I.V. Romanova*[2], *V.V. Semashko*[1,2], *O.A. Morozov*[1,2], *S.L. Korableva*[2]**<br>*[1]Zavoisky Physical-Technical Institute FRC Kazan Scientific Center RAS, Kazan, Russia*<br>*[2]Kazan (Volga Region) Federal University, Kazan, Russia*<br>SUBTERAHERTZ EXCITATION SPECTRA OF $LiY_xDy_{1-x}F_4$ CRYSTALS |
| 10.45 – 11.05 | Coffee break |
| The main building of the university | ***Session 9*** |
| 11.05 – 11.35 | ***R.V. Pisarev***<br>*Ioffe Institute RAS, St. Petersburg, Russia*<br>OPTICAL PHENOMENA IN NON-CENTROSYMMETRIC ANTIFERROMAGNET $CuB_2O_4$ |
| 11.35 – 12.05 | ***A.R. Nurmukhametov, M.V. Eremin***<br>*Kazan (Volga Region) Federal University, Kazan*<br>CALCULATION OF LIGHT EMISSION NONRECIPROCITY IN THE ANTIFERROMAGNET $CuB_2O_4$ |
| 12.05 – 12.35 | ***K.V. Vasin*[1,2], *I. Kezsmarki*[2], *S. Bordacs*[3], *V. Turkan*[4], *J. Deisenhofer*[2]**<br>*[1]Kazan (Volga Region) Federal University, Kazan, Russia*<br>*[2]Institute for Physics, University of Augsburg, Augsburg, Germany*<br>*[3]Budapest University of Technology and Economics, Budapest, Hungary*<br>*[4]Institute of Applied Physics, Chisinau, Moldova*<br>CIRCULAR DICHROISM IN A POLAR ALTERMAGNET $Fe_2Mo_3O_8$ |
| 12.35 – 14.00 | Lunch |
| 14.00 – 15.00 | ***City tour*** |
| 15.00 – 16.30 | ***Visit to the Erzya museum*** |
| 17.00 – 19.00 | ***Poster session*** |
| | ***A.O. Ariskin*[1], *E.M. Buzaeva*[1], *P.A. Ryabochkina*[1], *R.N. Maksimov*[2], *V.V. Osipov*[2], *V.A. Shitov*[2]**<br>*[1]Ogarev Mordovian State University, Saransk, Russia*<br>*[2]Institute of Electrophysics Ural Branch RAS, Ekaterinburg, Russia*<br>SPECTRAL AND LUMINESCENT CHARACTERISTICS OF $Y_2O_3$:Tm, $Y_2O_3$:Ho, $Y_2O_3$:Tm,Ho CERAMICS |
| | ***G.R. Asatryan*[1,4], *G.S. Shakurov*[2], *B.Z. Malkin*[3], *A.G. Petrosyan*[4]**<br>*[1]A.F. Ioffe Physical Technical Institute, RAS, St. Petersburg, Russia*<br>*[2]Kazan Physical-Technical Institute, FIC KazNC RAS, Kazan, Russia*<br>*[3]Kazan (Volga Region) Federal University, Kazan, Russia*<br>*[4]Institute for Physical Research NAS RA, Ashtarak, Armenia*<br>WIDEBAND EPR-SPECTROSCOPY OF NON-KRAMERS RARE-EARTH IONS IN GARNET AND $YAlO_3$ CRYSTALS |

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| | ***V.A. Boronin*[1,2], *M.G. Ivanov*[1], *M.V. Gavrilyak*[1,2], *A.M. Gavrilyak*[2], *N.D. Kundikova*[1,2], *F.V. Podgornov*[2]**<br>[1]*Institute of Electrophysics Ural Branch RAS, Ekaterinburg, Russia*<br>[2]*South Ural State University, Chelyabinsk, Russia*<br>OXYGEN VACANCIES IN Nd:YAG CERAMICS |
| | ***V.A. Boronin*[1,2], *M.G. Ivanov*[1], *M.V. Gavrilyak*[1,2], *A.M. Gavrilyak*[2], *N.D. Kundikova*[1,2], *F.V. Podgornov*[2]**<br>[1]*Institute of Electrophysics Ural Branch RAS, Ekaterinburg, Russia*<br>[2]*South Ural State University, Chelyabinsk, Russia*<br>THERMAL DEPENDENCE OF JUDD-OFELT PARAMETERS IN Nd:YAG CERAMICS |
| | ***K.I. Gerasimov*[1], *M.M. Minnegaliev*[1], *S.A. Moiseev*[1], *I.V. Brekotkin*[1], *M.N. Popova*[2]**<br>[1]*Kazan Quantum Center, Kazan, Russia*<br>[2]*Institute of Spectroscopy RAS, Moscow, Troitsk, Russia*<br>SUPERFLUORESCENCE EMISSION AND SUPERRADIANCE LASER GENERATION IN $YPO_4$: $Er^{3+}$ SINGLE CRYSTAL AT A TELECOMMUNICATION WAVELENGTH |
| | ***A.S. Alekseeva*[1], *S.A. Bukarev*[1], *T.V. Volkova*[1], *V.M. Kyashkin*[1], *E.E. Lomonova*[1,2], *V.A. Myzina*[1,2], *P.A. Ryabochkina*[1], *N.Yu. Tabachkova*[2,3]**<br>[1]*Ogarev Mordovia State University, Saransk, Russia*<br>[2]*Prokhorov General Physics Institute RAS, Moscow, Russia*<br>[3]*National University of Science and Technology (MISIS), Moscow, Russia*<br>STRUCTURE AND SPECTRAL-LUMINESCENT PROPERTIES OF NANO-SIZED PARTICLES $ZrO_2$-$Y_2O_3$-$Eu_2O_3$ |
| | ***E.S. Zhukovskaya, A.M. Savvotin, D.V. Deyneko***<br>*Lomonosov Moscow State University, Chemistry Department, Moscow, Russia*<br>A NEW CLASS OF PHOSPHORS BASED ON STRONTIUM VANADATES $Sr_8Mg\mathit{R}(VO_4)_7$ |
| | ***E.V. Yezhikova*[1], *I.A. Telegin*[2], *N.A. Khokhlov*[2], *A.V. Kulebyakin*[1], *E.E. Lomonova*[1], *V.A. Myzina*[1], *A.A. Rey*[1], *N.Yu. Tabachkova*[1,3], *M.K. Tapero*[1,3]**<br>[1]*Prokhorov General Physics Institute RAS, Moscow, Russia*<br>[2]*Crystals of Siberia LTD, Novosibirsk, Russia*<br>[3]*National University of Science and Technology (MISIS), Moscow, Russia*<br>STRUCTURAL AND PHYSICO-CHEMICAL CHARACTERISTICS OF ALUMOMAGNESIUM SPINEL OPTICAL CERAMICS |
| | ***K.P. Zhuravlev*[1], *V.D. Savchenko*[1], *A.V. Vologzhanina*[2], *V.I. Tsaryuk*[1]**<br>[1]*V.A. Kotelnikov Institute of Radioengineering and Electronics RAS, Fryazino, Russia*<br>[2]*A.N. Nesmeyanov Institute of Organoelement Compounds RAS, Moscow, Russia*<br>STRUCTURE AND LUMINESCENCE OF DIMERIC LANTHANIDE PIVALATES WITH DERIVATIVES OF 1,10-PHENANTHROLINE |
| | ***P.G. Zverev, A.V. Nekhoroshikh, V.A. Konyushkin***<br>*Prokhorov General Physics Institute RAS, Moscow, Russia* |

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| | SPECTROSCOPIC STUDY AND VISIBLE LUMINESCENCE OF $Tb^{3+}$ IONS IN Tb/Yb:$SrF_2$ CRYSTALS |
| | ***A.M. Zubareva, A.A. Shavelev, A.A. Shakirov, T.M. Minnebaev, E.I. Oleinikova, I.D. Sidorov, A.K. Ginkel, A.S. Nizamutdinov***<br>*Kazan (Volga region) Federal University, Institute of Physics, Kazan, Russia*<br>PHOTODYNAMIC PROCESSES IN $BaY_2F_8$ CRYSTALS WITH COACTIVATION BY $Tb^{3+}$-$Yb^{3+}$ IONS |
| | ***Q. Shi[1], K.V. Ivanovskikh[2], X. Zhu[1], M. Zhai[1], J. Qiao[1], L. Wang[1], X. Yang[1], H. Guo[1], P. Huang[1], X.-J. Wang[1], C. Cui[1]***<br>*[1]College of Physics and Optoelectronics, Taiyuan University of Technology, Taiyuan, China*<br>*[2]Institute of Physics and Technology, Ural Federal University, Ekaterinburg, Russia*<br>LUMINESCENCE, DEFECT ENGINEERING, AND THERMAL STABILITY OF $Mn^{4+}$-DOPED RED-EMITTING PHOSPHORS FOR LIGHTING AND OPTICAL THERMOMETRY |
| | ***V.V. Klekovkina***<br>*Kazan (Volga Region) Federal University, Kazan*<br>QUADRUPOLE INTERACTIONS IN RARE-EARTH CRYSTALS WITH PYROCHLORE STRUCTURE |
| | ***I.V. Koklyushkina, K.N. Orekhova, T.B. Popova, B.E. Burakov, M.V. Zamoryanskaya***<br>*Ioffe Institute, St. Petersburg, Russia*<br>SYNTHESIS AND STUDY OF CATHODOLUMINESCENCE IN YTTRIUM AND LUTETIUM ORTHOPHOSPHATES. CHARGE CARRIER TRAPS AND ENERGY TRANSFER |
| | ***A.V. Koshelev, N.A. Arkharova, D.N. Karimov***<br>*Shubnikov Institute of Crystallography, Kurchatov Complex of Crystallography and Photonics, National Research Centre «Kurchatov Institute», Moscow, Russia*<br>INVESTIGATION OF THE EFFECT OF THE COMPOSITION ON THE LUMINESCENT PROPERTIES OF α-Na*R*$F_4$:Yb/Er/Ce/(Zn,Mg) (*R*= Y, Yb, Lu) NANOCRYSTALS IN THE NEAR-INFRARED RANGE FOR BIOMEDICINE AND OPTICAL TECHNOLOGIES |
| | ***A.S. Alekseeva[1], V.A. Kocheshkova[1], V.M. Kyashkin[1], N.A. Larina[1], E.E. Lomonova[2], P.A. Ryabochkina[1], N.Yu. Tabachkova[2,3]***<br>*[1]National Research Ogarev Mordovia State University, Saransk, Russia*<br>*[2]Prokhorov General Physics Institute RAS, Moscow, Russia*<br>*[3]National University of Science and Technology (MISIS), Moscow, Russia*<br>SPECTRAL-LUMINESCENT CHARACTERISTICS OF $ZrO_2$-$Sc_2O_3$-$Eu_2O_3$ CRYSTALS AND NANOPARTICLES |
| | ***A.A. Rybnikova, O.F. Lipina, A.Yu. Chufarov, A.P. Tyutyunnik, V.G. Zubkov***<br>*Institute of Solid State Chemistry, Ekaterinburg, Russia*<br>IR PHOSPHORS BASED ON $NaYGeO_4$, ACTIVATED BY $Tm^{3+}$, $Tm^{3+}$/$Ho^{3+}$, $Tm^{3+}$/$Dy^{3+}$ IONS |

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| | ***M.A. Sadovnikova[1], D.V. Shurtakova[1], G.V. Mamin[1], N.V. Petrakova[2], M.R. Gafurov[1]***<br>*[1]Kazan (Volga Region) Federal University, Kazan*<br>*[2]A.A. Baikov Institute of Metallurgy and Materials Science, RAS, Moscow, Russia*<br>ANALYSIS OF THE LOCAL ENVIRONMENT OF CE(III) IONS IN HYDROXYAPATITE BY EPR SPECTROSCOPY |
| | ***V.V. Sokolov, A.V. Malakhovskii, I.A. Gudim***<br>*Kirensky Institute of Physics, Krasnoyarsk, Russia*<br>ELECTRO-OPTICAL AND MAGNETO-ELECTRO-OPTICAL EFFECTS IN THE CRYSTAL $HoFe_3(BO_3)_4$ IN THE REGION OF THE TRANSITION $^5I_8 \rightarrow {}^5S_2$ |
| | ***V.V. Titkov, B.I. Lazoryak***<br>*Lomonosov Moscow State University, Moscow, Russia*<br>NIOBIUM-CONTAINING PHOSPHORS |
| | ***E.P. Chukalina[1], T.A. Igolkina[1,2], N.N. Kuzmin[1], M.N. Popova[1]***<br>*[1]Institute for Spectroscopy RAS, Troitsk, Moscow, Russia*<br>*[2]Moscow Institute of Physics and Technology (National Research University), Dolgoprudny, Russia*<br>LUMINESCENCE THERMOMETRY BASED ON $KY_3F_{10}:Er^{3+}$ CRYSTAL |
| | ***A.M. Shegeda[1], S.L. Korableva[2], O.A. Morozov[1], N.K. Solovarov[1], V.F. Tarasov[1]***<br>*[1]Zavoisky Physical-Technical Institute, FRC Kazan Scientific Center RAS, Kazan, Russia*<br>*[2]Kazan (Volga Region) Federal University, Kazan, Russia*<br>MANIFESTATION OF MEMORY AND BUTTERFLY IN THE PHOTON ECHO |
| | ***D.V. Shurtakova, M.A. Sadovnikova, G.V. Mamin, M.R. Gafurov***<br>*Kazan (Volga Region) Federal University, Kazan*<br>THE g-FACTOR CALCULATION OF RARE EARTH IONS IN HYDROXYAPATITE |

| **November 13, Thursday** | |
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| The main building of the university | ***Session 10*** |
| 9.00 – 9.45 | ***I.S. Lyubutin[1], A.G. Gavrilyuk[1,2], A.A. Mironovich[2], A.G. Ivanova[1], D.N. Trunov[2], S.N. Aksenov[2], M.V. Lyubutina[1], I.A. Troyan[1]***<br>*[1]A.V. Shubnikov Institute of Crystallography, Kurchatov Complex of Crystallography and Photonics, National Research Center «Kurchatov Institute», Moscow, Russia*<br>*[2]Institute for Nuclear Research RAS, Troitsk, Moscow, Russia*<br>MAGNETIC AND ELECTRONIC PROPERTIES OF IRON HYDRIDES AND THE ε-Fe PHASE AT HIGH PRESSURES BASED ON MÖSSBAUER SPECTROSCOPY DATA AND SUPERCONDUCTIVITY EFFECTS |
| 9.45 – 10.15 | ***M.N. Popova[1], M. Diab[1,2], N.N. Kuzmin[1], K.A. Subbotin[3], A.I. Titov[3], B.Z. Malkin[4]*** |

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| | *[1]Institute of Spectroscopy RAS, Moscow, Troitsk, Russia*<br>*[2]Moscow Institute of Physics and Technology (National Research University), Dolgoprudny, Russia*<br>*[3]Prokhorov General Physics Institute RAS, Moscow, Russia*<br>*[4]Kazan (Volga Region) Federal University, Kazan*<br>HIGH-RESOLUTION LUMINESCENCE SPECTROSCOPY OF $CaWO_4:Ho^{3+}$ |
| 10.15 – 10.45 | ***P.A. Ryabochkina[1], S.A. Khrushchalina[1], A.S. Alekseeva[1], A.S. Bikeev[1], V.I. Shlyapkina[1], O.A. Kulikov[1], N.Yu. Tabachkova[2]***<br>*[1]Ogarev Mordovia State University, Saransk, Russia*<br>*[2]Prokhorov General Physics Institute RAS, Moscow, Russia*<br>OPTICAL SPECTROSCOPY OF $ZrO_2$ AND $HfO_2$ NANOPARTICLES DOPED WITH RARE EARTH IONS |
| 10.45 – 11.05 | Coffee break |
| The main building of the university | ***Session 11*** |
| 11.05 – 11.35 | ***M.V. Zamoryanskaya, K.N. Orekhova, G.A. Gusev, V.A. Kravets, E.V. Dementeva, P.A. Dementev, A.N. Trofimov***<br>*Ioffe Institute, St. Petersburg, Russia*<br>INVESTIGATION OF TRAPS IN WIDE-BAND LUMINESCENT MATERIALS |
| 11.35 – 12.05 | ***N.M. Khaidukov[1], M.N. Brekhovskikh[1], N.Yu. Kirikova[2], V.A. Kondratyuk[2], V.N. Makhov[2]***<br>*[1]N.S. Kurnakov Institute of General and Inorganic Chemistry RAS, Moscow, Russia*<br>*[2]P.N. Lebedev Physical Institute RAS, Moscow, Russia*<br>TEMPERATURE-RESOLVED LUMINESCENCE SPECTRA OF MULTICOMPONENT FLUORIDES DOPED WITH $Eu^{2+}$ IONS |
| 12.05 – 12.25 | ***E.V. Dementeva[1], K.N. Orekhova[1], D.A. Tavrunov[2], A.F. Zatsepin[2], M.V. Zamoryanskaya[1]***<br>*[1]Ioffe Institute, St. Petersburg, Russia*<br>*[2]Ural Federal University, Ekaterinburg, Russia*<br>$Eu^{3+}$ LUMINESCENCE IN $HfO_2$-$Y_2O_3$-$Eu_2O_3$ CERAMICS |
| 12.25 – 14.00 | Lunch |
| The main building of the university | ***Session 12*** |
| 14.00 – 14.30 | ***V. Pankratov***<br>*Institute of Solid State Physics, University of Latvia, Riga, Latvia*<br>SYNCHROTRON-BASED SPECTROSCOPIC INVESTIGATIONS OF NOVEL SCINTILLATORS: RECENT WORK AT DESY AND MAX IV FACILITIES |
| 14.30 – 14.50 | ***A.A. Kalinichev[1], E.V. Afanaseva[2], I.E. Kolesnikov[1]***<br>*[1]Saint Petersburg State University, St. Petersburg, Russia*<br>*[2]Peter the Great Saint Petersburg Polytechnic University, St. Petersburg, Russia*<br>BOLTZMANN-TYPE CRYOGENIC RATIOMETRIC THERMOMETRY |
| 14.50 – 15.10 | ***A.K. Ginkel[1], P.M. Rakhmatullin[1], S.L. Korableva[1], O.A. Morozov[1,2], A.A. Rodionov[1], M.S. Pudovkin[1]*** |

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| | *[1]Kazan (Volga Region) Federal University, Institute of Physics, Kazan, Russia*<br>*[2]Kazan Institute of Physics and Technology, Kazan Scientific Center RAS, Kazan, Russia*<br>STUDY OF COMPOSITE STRUCTURES $CeF_3/CeO_2$ ACTIVATED BY $Nd^{3+}/Yb^{3+}$ IONS FOR TEMPERATURE SENSING |
| 15.10 – 15.30 | ***E.I. Shosheva, M.S. Pudovkin***<br>*Kazan (Volga Region) Federal University, Kazan, Russia*<br>INFLUENCE OF THERMAL EXPANSION EFFECT ON THE TEMPERATURE SENSITIVITY OF $YF_3$: $Nd^{3+}$, $Yb^{3+}$ SAMPLES |
| 15.30 – 15.50 | ***M.S. Pudovkin, D.Ya. Safiullina, S.I. Kalinichenko***<br>*Kazan (Volga Region) Federal University, Kazan, Russia*<br>PHYSICAL PRINCIPLES OF FUNCTIONING OF LUMINESCENT TEMPERATURE SENSORS BASED ON CRYSTALLINE PARTICLES OF FLUORIDES ACTIVATED BY ION PAIR $Ce^{3+}/Tb^{3+}$ |
| 15.50 – 16.10 | Coffee break |
| The main building of the university | ***Session 13*** |
| 16.10 – 16.30 | ***A.A. Kapustin, A.N. Romanov, E.V. Khaula, V.N. Korchak***<br>*N.N. Semenov Federal Research Center for Chemical Physics RAS, Moscow, Russia*<br>BROADBAND PHOTOLUMINESCENCE OF IMPURITY CATIONS $Cu^{2+}$ IN THE SPINEL LATTICE $LiAl_5O_8$ |
| 16.30 – 16.50 | ***F.D. Fedyunin[1], A.N. Vasil'ev[2], N.S. Kozlova[3], E.V. Zabelina[3], V.M. Kasimova[3], O.A. Buzanov[4], A.G. Petrosyan[5]***<br>*[1]Lomonosov Moscow State University, Faculty of Physics, Moscow, Russia*<br>*[2]Skobeltsyn Institute of Nuclear Physics, Lomonosov Moscow State University, Moscow, Russia*<br>*[3]National University of Science and Technology (MISIS), Moscow, Russia*<br>*[4]FOMOS-Materials, Moscow, Russia*<br>*[5]Institute for Physical Research, Ashtarak, Armenia*<br>INFLUENCE OF CATIONIC COMPOSITION ON OPTICAL AND LUMINESCENT PROPERTIES OF MULTICOMPONENT GARNETS |
| 16.50 – 17.10 | ***D.A. Tavrunov[1], N.G. Naumov[2], R.E. Nikolaev[2], V.A. Trifonov[2], V.A. Pustovarov[1]***<br>*[1]Ural Federal University, Ekaterinburg, Russia*<br>*[2]Institute of Inorganic Chemistry SB RAS, Novosibirsk, Russia*<br>LUMINESCENT SPECTROSCOPY, ENERGY TRANSFER AND RADIATION RESISTANCE OF $Gd_2O_3$:$RE^{3+}$ SINGLE CRYSTALS |
| 17.10 – 17.30 | ***L.N. Puntus[1,2]***<br>*[1]A.V. Topchiev Institute of Petrochemical Synthesis RAS, Moscow, Russia*<br>*[2]Kotel'nikov Institute of Radioengineering and Electronics RAS, Moscow, Russia*<br>CHARGE TRANSFER STATES IN LANTHANIDE ORGANOMETALLIC COMPOUNDS |
| 17.30 – 17.50 | ***A.A. Lyapin*** |

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| | *PhotonTechSystem LLC*<br>INFRASTRUCTURE SOLUTIONS FOR SPECTRAL LABORATORIES: SAFETY, ERGONOMICS |

| **November 14, Friday** | |
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| The main building of the university | ***Session 14*** |
| 9.00 – 9.30 | ***A.V. Naumov***[1,2,3]<br>[1]*P.N. Lebedev Physical Institute RAS, Branch in Troitsk, Moscow, Russia*<br>[2]*Moscow State Pedagogical University, Moscow, Russia*<br>[3]*Institute of Spectroscopy RAS, Moscow, Troitsk, Russia*<br>MICROSCOPIC NATURE OF THE THEMPERATURE BROADENING OF LUMINESCENCE SPECTRA OF SINGLE QUANTUM EMITTERS |
| 9.30 – 10.00 | ***E.F. Martynovich, Ya.I. Grigorov, A.A. Tyutrin, V.P. Dresvyansky***<br>*Irkutsk Branch of the Institute of Laser Physics SB RAS, Irkutsk, Russia*<br>MEASURING THE PROPERTIES OF AN ENSEMBLE OF LUMINESCENT CENTERS IN A CRYSTALLINE MEDIUM BY THE CHARACTERISTICS OF ITS SINGLE CENTERS |
| 10.00 – 10.20 | ***K.K. Pukhov[1], P.A. Tanner[2]***<br>[1]*Moscow Pedagogical State University, Moscow, Russia*<br>[2]*Hong Kong Baptist University, Hong Kong SAR, P.R. China*<br>THE ELECTRIC DIPOL RADIATIVE DECAY RATE OF A LUMINESCENT CENTER IN CONFINED TWO-DIMENSIONAL CRYSTALLINE HOMOGENEOUS DIELECTRIC THIN FILMS |
| 10.20 – 10.40 | ***K.A. Barantsev, A.N. Litvinov***<br>*Peter the Great Saint Petersburg Polytechnic University, St. Petersburg, Russia*<br>EFFICIENT PUMPING OF ATOMIC MOMENTS UNDER SPIN EXCHANGE CONDITIONS IN BELL-BLOOM QUANTUM OPTICAL MAGNETOMETER |
| 10.40 – 11.00 | Coffee break |
| 11.00 – 11.45 | ***Closing ceremony. Awarding of the winners of the competition "Best report of young scientists"*** |