



IFS2018

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

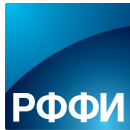
PROGRAM
&
NOTES

September 23–28, 2018
Ekaterinburg, Russia

Organizers



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LASERS AND OPTICAL SYSTEMS



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Welcome

Ural Federal University, M.N. Mikheev Institute of Metal Physics UB RAS, and the Ural Branch of the Russian Academy of Sciences are proud to have been entrusted with hosting the XVIIth International Feofilov Symposium on Spectroscopy of Crystals Doped with Rare Earth and Transition Metal Ions (IFS2018).

IFS2018 continues a sequence of symposia started in 1965. The first nine events were held as national meetings. For more than 20 years, symposia have been gathering researchers working in the fields of optical spectroscopy and condensed matter physics. After the Xth (Saint Petersburg, 1995), XIth (Kazan, 2001), XIIth (Ekaterinburg, 2004), XIIIth (Lake Baikal, 2007), XIVth (Saint Petersburg, 2010), XVth (Kazan, 2013) and XVIth (Saint Petersburg, 2015) Symposia, IFS2018 returns back to Ekaterinburg.

We thank all the contributors who have accepted our invitation to attend IFS2018 for their interest and participation, as well as the sponsoring companies for their support.

On behalf of all organizers, we wish you all a fruitful and enjoyable meeting and a rewarding scientific and human experience at IFS2018.

Alexander S. Moskvin
Sergey P. Feofilov

Symposium Info

The official Symposium language is English. Regarding the length of your presentation including questions and discussion (20 min for contributed talks, 30 min for keynote/invited presentations and 45 min for plenaries) please refer to the scientific program starting at page 3. We kindly ask you to strictly keep the time. Presentation material is to be concise, succinct, and clearly understood. Presentation file should be prepared in Microsoft PowerPoint (format .ppt/.pptx) or LibreOffice Impress (format .odp) in English, files .pdf may be also presented. If you use fonts other than standard Microsoft Office 2016, please bring the font files along with the presentation file. Please bring your PowerPoint presentation file on USB memory stick and submit it to the staff of each presentation room at least 30 min before each session starts. The operator will load the presentation files to the laptop PC of the Symposium. Alternatively, it is possible to connect your own laptop via a standard HDMI interface, testing of equipment is strongly encouraged.

Poster Presentation: 3F, Library Gallery, Poster Sessions
Dates: Sep. 25 (Tue.) and Sep. 27 (Thu.)

Poster Session 1: Sep. 25 (Tue.). Put-up Time: From 09:00–
Presentation Time: 17:25–19:00. Take-down Time: From Sep. 26 (Wed.) 15:00.

Poster Session 2: Sep. 27 (Thu.). Put-up Time: From 09:00–
Presentation Time : 17:30–19:00. Take-down Time: From Sep. 28 (Fri.) 13:30.

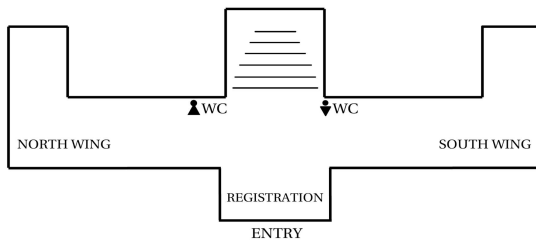
Each poster will be assigned a panel, which has its own paper's number at IFS2018. We do not specify the poster format, whereas each poster should include the title, authors, and affiliation and must fit within a 1.2 m X 1.2 m space. However, A0 layout for posters is recommended. Each poster's code will be shown on the board. Poster presenters are required to prepare their own poster materials in advance and post their presentations 30 min prior to each session. Please remove your poster according to the take-down time. Magnetic holders for posters will be provided in poster session place.

Social Program includes Welcome Reception (Sep. 23, 18.00–20.00, Oktyabrskaya Hotel), Excursion, and Symposium Dinner. Lunches are included in your registration package and will be offered everyday at 4 Seasons Restaurant that is next to the venue of IFS2018, just 2 minutes walk, 17, S. Kovalevskoy Ul.

Venue

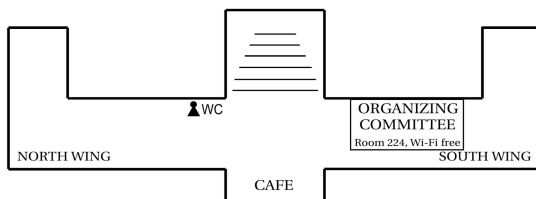
Registration and all the sessions will be held at the M.N. Mikheev Institute of Metal Physics UB RAS, 18, S. Kovalevskoy Ul., Ekaterinburg, Russia.

1ST (GROUND) FLOOR



S. Kovalevskoi Ul.

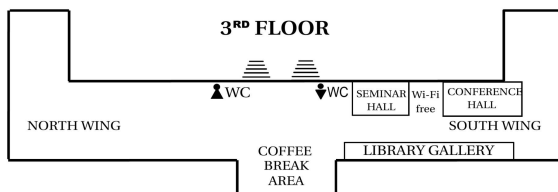
2ND FLOOR



BETWEEN 2ND AND 3RD FLOORS



3RD FLOOR



Contacts

Please do not hesitate to contact us if you have any questions or doubts.

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Scientific Program

September 23, Sunday

September 23, Sunday	
15.00–18.00	Registration M.N. Mikheev Institute of Metal Physics UB RAS / 18, S. Kovalevskoy Ul.
18.00–20.00	Welcome Reception Oktyabrskaya Hotel / 17, S. Kovalevskoy Ul.

September 24, Monday

September 24, Monday	
09.00–10.15	Registration M.N. Mikheev Institute of Metal Physics UB RAS / 18, S. Kovalevskoy Ul.
<i>Assembly Hall</i> 10.15–10.45	Opening <i>Alexander Moskvín and Sergey Feofilov</i>
<i>Assembly Hall</i>	Session 1, Chairs: Alexander Moskvín, Sergey Feofilov
10.45–11.30	<i>Andries Meijerink</i> (Utrecht University, Utrecht, The Netherlands) Understanding luminescence quenching
11.30–12.00	Coffee Break
<i>Assembly Hall</i>	Session 2, Chairs: Zoila Barandiarán, Gilles Ledoux
12.00–12.45	<i>Georges Boulon</i> (Institute of Light and Matter CNRS UCBL, Villeurbanne, France) The choice of 5d→4f UV emission of Ce³⁺/Pr³⁺-doped 20Al(PO₃)₃-80LiF glasses as fast scintillators for neutron detection
12.45–13.30	<i>Sergey Feofilov</i> (A.F. Ioffe Institute RAS, Saint Petersburg, Russia) Disorder response of luminescence zero-phonon lines of 3d³ ions in different cation sublattices in garnet solid solutions
13.30–15.30	Lunch
<i>Assembly Hall</i>	Session 3, Chairs: Andries Meijerink, Romain Gautier
15.30–16.00	<i>Mitch M.C. Chou</i> (National Sun Yat-Sen University, Kaohsiung, Taiwan) Recent progress of crystal growth at National Sun Yat-sen University
16.00–16.30	<i>Li-Wei Tu</i> (National Sun Yat-Sen University, Kaohsiung, Taiwan) Growth and properties of Mn doped GaN thin films and nanorods grown by plasma assisted molecular beam epitaxy
16.30–16.50	<i>Konstantin Pukhov</i> (Prokhorov General Physics Institute RAS, Moscow, Russia) Luminescence properties of the doped nanocomposites based on the core-shell nanoparticles
16.50–17.05	RENISHAW
17.05–17.35	Coffee Break

<i>Assembly Hall</i>	Session 4, Chairs: Mitch M.C. Chou, Li-Wei Tu
17.35–17.55	<i>Sergey Kuznetsov</i> (Prokhorov General Physics Institute RAS, Moscow, Russia) Synthesis and down-conversion luminescence properties of MF₂:Yb:R (M=Ca, Sr; R=Ce, Pr, Eu) powders for photonics
17.55–18.15	<i>Ivan Leonidov</i> (Institute of Solid State Chemistry UB RAS, Ekaterinburg, Russia) Storage of visible light for persistent luminescence in Dy³⁺-doped Ca₂GeO₄
18.15–18.35	<i>Andrey Lyapin</i> (National Research Ogarev Mordovia State University, Saransk, Russia) Upconversion luminescence of fluoride phosphors doped with Er³⁺, Ho³⁺ and Yb³⁺ ions

September 25, Tuesday

<i>Assembly Hall</i>	Session 5, Chairs: Maxim Doroshenko, Alexander Poteryaev
09.00–09.45	<i>Mike Reid</i> (University of Canterbury, Christchurch, New Zealand) Electronic structure of rare earth ions in Y₂SiO₅
09.45–10.30	<i>Luis Seijo</i> (Universidad Autónoma de Madrid, Madrid, Spain) Multiconfigurational ab initio calculations on luminescence
10.30–11.00	Coffee Break
<i>Assembly Hall</i>	Session 6, Chairs: Valerii Zapasskii, Luis Seijo
11.00–11.30	<i>Malgorzata Guzik</i> (University of Wroclaw, Wroclaw, Poland) Combination of structural and spectroscopic properties of cubic polycrystalline rare earths-doped molybdate/tungstate optical materials
11.30–11.50	<i>Elena Mostovshchikova</i> (M.N. Mikheev Institute of Metal Physics UB RAS, Ekaterinburg, Russia) Optical properties of nanocrystalline TiO₂ doped with co-ions after different treatments
11.50–12.10	<i>Sergei Klimin</i> (Institute of Spectroscopy RAS, Troitsk, Moscow, Russia) High-resolution spectroscopy study of rare-earth francisites Cu₃RE(SeO₃)₂OCl
12.10–12.30	<i>Alexey Shavelev</i> (Kazan Federal University, Kazan, Russia) Investigation of Ce³⁺ impurity centers in UV active medium LiSr_xCa_{1-x}AlF₆:Ce³⁺
12.30–12.50	<i>Anastasiia Babkina</i> (ITMO University, Saint Petersburg, Russia) Spectral properties of chromium-doped potassium alumina-borate glass
12.50–13.10	<i>Eduard Madirov</i> (Kazan Federal University, Kazan, Russia) Energy transfer processes in the Sm³⁺/Ce³⁺ doped LaF₃ crystalline nanoparticles
13.10–13.30	<i>Amir Khadiev</i> (Kazan Federal University, Kazan, Russia) Optical temperature sensing in Yb- and Tm-codoped fluoride crystal
13.30–15.30	Lunch

<i>Assembly Hall</i>	Session 7, Chairs: <i>Vladimir Makhov, Pushpal Ghosh</i>
15.30–16.00	<i>Mauro Fasoli</i> (University of Milano Bicocca, Milano, Italy) Optically stimulated luminescence and defects energy levels in RE-doped LuAG crystals
16.00–16.20	<i>Maxim Doroshenko</i> (Prokhorov General Physics Institute RAS, Moscow, Russia) Fe²⁺ doped materials based on A^{II}B^{VI} solid solutions for mid-IR solid state lasers
16.20–16.40	<i>Evgeny Radzhabov</i> (Institute of Geochemistry SB RAS, Irkutsk, Russia) Electron transfer between heterogeneous lanthanides in fluoride crystals
16.40–16.55	<i>SOL instruments</i>
16.55–17.25	<i>Coffee Break</i>
<i>Library Gallery</i>	Poster Session 1 Chairs: <i>Elena Mostovshchikova, Konstantin Ivanovskikh</i>
17.25–19.00	<p>P1-1 <i>Aleksandr Skvortsov</i> Absorption and emission spectra of Er³⁺ doped GaLaS chalcogenide glass in visible and near IR ranges (400–1700 nm)</p> <p>P1-2 <i>Nadezhda Novikova</i> IR-reflectivity of Al_xGa_{1-x}N:Si films</p> <p>P1-3 <i>Nikita Rudenko</i> High-resolution spectroscopy of YPO₄:Er³⁺ crystals</p> <p>P1-4 <i>Sergei Klimin</i> Optical spectroscopic study of Pr³⁺ doped Sr_{0.7}La_{0.3}Mg_{0.3}Al_{11.7}O₁₉</p> <p>P1-5 <i>Dina Deyneko</i> Co-doped whitlockite-type phosphates for WLED application</p> <p>P1-6 <i>Alexander Ermakov</i> Spectroscopic, luminescent and spectral-kinetics properties of CaF₂-SrF₂:Tm and CaF₂-SrF₂:Ho crystals</p> <p>P1-7 <i>Aleksandr Angervaks</i> Colloids and rods in additively colored CaF₂ crystals</p> <p>P1-8 <i>Vlad Kravets</i> Luminescent study of Eu³⁺-doped bismuth borosilicate and borosilicate glass systems</p> <p>P1-9 <i>Sergey Gushchin</i> Upconversion luminescence in SrF₂:Er phosphors upon excitation of ⁴I_{11/2} and ⁴I_{13/2} levels</p> <p>P1-10 <i>Aleksey Ishchenko</i> Synthesis and luminescence properties of Ho - doped titanates Bi_{1.6}Ho_xTi₂O_{7-δ} and Bi_{1.6}Mg_{0.1}Ho_xTi₂O_{7-δ} with the pyrochlore structure</p> <p>P1-11 <i>Alexander Lovchev</i> Simply stepless adjustment of laser output</p> <p>P1-12 <i>Viktoria Gorieva</i> Spatial anomalies in spectral-kinetic properties of Pr³⁺ - doped LiY_{1-x}Lu_xF₄ mixed crystals</p> <p>P1-13 <i>Nataliya Krutyak</i> Luminescence properties of thermostable phosphors with NASICON structure</p> <p>P1-14 <i>Mikhail Sulimov</i> Excitons in PL spectra of Cu(In,Ga)Se₂ single crystal</p>

- P1-15** *Mikhail Sulimov*
An optical spectroscopy study of CuInTe₂ single crystal: the band structure
- P1-16** *Andrey Mikheev*
Rise kinetics of up-conversion luminescence
- P1-17** *Olga Lipina*
Upconversion luminescence in BaYb_{2-x}Er_xGe₃O₁₀ (x = 0.1–0.3) trigermanates
- P1-18** *Olga Lipina*
Nd³⁺, Ho³⁺-codoped garnet-related niobate phosphors for near-infrared region
- P1-19** *Sergey Kuznetsov*
Synthesis and luminescence properties of up conversion nanocomposite based on nanocellulose/M_{0.92}Ho_{0.08}F_{2.08} (M=Ca, Sr) for photonics
- P1-20** *Maria Kiseleva*
Pulse cathodoluminescence kinetics of lithium gadolinium orthoborate doped with Ce ions
- P1-21** *Eduard Madirov*
Energy transfer processes in the Ce³⁺/Tb³⁺ co-doped YF₃ crystalline nanoparticles
- P1-22** *Konstantin Gerasimov*
Lifetimes and coherency of optically excited states and hyperfine sublevels of the ground state of ¹⁶⁷Er³⁺ in the ⁷LiYF₄ single crystal
- P1-23** *Andrey Smirnov*
Spectroscopic properties of Er³⁺ and Yb³⁺ doped potassium-rubidium lead halide crystals
- P1-24** *Nurbulat Abishev*
Theoretical study of deformation broadening and fine structure of spectral lines in optical spectra of dielectric crystals containing non-Kramers rare-earth ions
- P1-25** *Igor Ogorodnikov*
The origin of anomalous red-luminescence in nonlinear optical crystals K₂Al₂B₂O₇:Fe
- P1-26** *Damir Valiev*
Luminescent properties of Ce³⁺-doped borosilicate glass scintillator
- P1-27** *Damir Valiev*
Synthesis and luminescent properties of Dy³⁺/Tb³⁺ doped MgAl₂O₄ ceramics produced by spark plasma sintering technique
- P1-28** *Chao-Kuei Lee*
Nonlinear engineering of Bi₂Te₃ films and their application as saturable absorber for pulsed solid state laser
- P1-29** *Alexey Shalaev*
Growth and characterization of alkali-earth halide scintillator crystals
- P1-30** *Konstantin Zhuravlev*
Design methods of visible-light excitable highly luminescent europium nitrosalicylates
- P1-31** *Konstantin Zhuravlev*
Luminescence of europium and terbium trifluoroacetylacetonates. Role of LMCT state in the excitation energy transfer to Eu³⁺ ion
- P1-32** *Irina Bazhukova*
Modification of cerium oxide nanoparticles by electron beam irradiation
- P1-33** *Ruslan Vazirov*
Cerium dioxide nanopowders as a novel material for medical and cosmetology applications

	P1-34 <i>Ruslan Vazirov</i> Surface modification of cerium dioxide nanoparticles by PMIDA
	P1-35 <i>Vladimir Pustovarov</i> Spectroscopy and dynamics of Pr ³⁺ 5d–4f emission in K ₃ LuSi ₂ O ₇ :Pr ³⁺
	P1-36 <i>Tatiana Onufrieva</i> Origin of the concentration quenching of luminescence in Zn ₂ SiO ₄ :Mn
	P1-37 <i>Konstantin Ivanovskikh</i> Synchrotron radiation study of impurity and defect related luminescence of Pr ³⁺ and Ce ³⁺ doped complex phosphates
	P1-38 <i>Oleg Goriev</i> Amplified spontaneous emission impact to upconversion luminescence of Tm ³⁺ :LiY _{1-x} Yb _x F ₄ (x = 1 and x = 0.2) single crystals
P1-39 <i>Sergey Zvonarev</i> Luminescence concentration quenching in Mg-doped alumina ceramics	

September 26, Wednesday	
<i>Assembly Hall</i>	Session 8, Chairs: <i>Malgorzata Guzik, Georges Boulon</i>
09.00–09.30	<i>Zoila Barandiarán</i> (Universidad Autónoma de Madrid, Madrid, Spain) Yb and Eu luminescence in fluorite-type hosts. New insights from multiconfigurational ab initio calculations
09.30–10.00	<i>Romain Gautier</i> (Jean Rouxel Institute of Materials CNRS, Nantes, France) Tuning of photoluminescence by controlled reduction of dopants
10.00–10.30	<i>Vladimir Makhov</i> (Lebedev Physical Institute RAS, Moscow, Russia) Spectral properties and thermal quenching of Mn⁴⁺ luminescence in multicomponent garnet hosts
10.30–11.00	Coffee Break
<i>Assembly Hall</i>	Session 9A (Experiment...) Chairs: <i>Mauro Fasoli, Konstantin Pukhov</i>
11.00–11.30	<i>Gilles Ledoux</i> (Institute of Light and Matter CNRS UCBL, Villeurbanne, France) Harvesting light through upconversion processes for photocatalysis applications
11.30–11.50	<i>Pushpal Ghosh</i> (Dr. Harisingh Gour University, Sagar, Madhya Pradesh, India) Energy efficient optoelectronic nanomaterials via green synthesis
11.50–12.10	<i>Victor Sokolov</i> (M.N. Mikheev Institute of Metal Physics UB RAS, Ekaterinburg, Russia) Localized excitons in absorption spectra of zinc oxide doped with manganese
12.10–12.30	<i>Mikhail Sulimov</i> (M.N. Mikheev Institute of Metal Physics UB RAS, Ekaterinburg, Russia) A PL and PLE study of high Cu content Cu₂ZnSnSe₄ films on Mo/glass and solar cells
12.30–12.50	<i>Roman Shendrik</i> (Vinogradov Institute of Geochemistry SB RAS, Irkutsk, Russia) Luminescence of Ce-doped BaBrI crystals
12.50–13.10	<i>Ilya Kolesnikov</i> (Saint Petersburg State University, Saint Petersburg, Russia) Enhancement of luminescence and thermal sensing properties of YVO₄:Nd³⁺ nanoparticles by silica coating
13.10–13.30	<i>Konstantin Ivanovskikh</i> (Ural Federal University, Ekaterinburg, Russia) Impurity and defect-related luminescence of Ce³⁺ and Pr³⁺ doped LiLa_{0.9}(SiO₄)₆O₂ crystals upon UV-VUV, X-ray and cathode ray excitation

<i>Conference Hall</i>	Session 9B (...and Theory) Chairs: Mike Reid, Mikhail Eremin
11.00–11.30	<i>Alexander Poteryaev</i> (M.N. Mikheev Institute of Metal Physics UB RAS, Ekaterinburg, Russia) Dynamical mean-field theory for strongly correlated materials
11.30–11.50	<i>Alexey Shorikov</i> (M.N. Mikheev Institute of Metal Physics UB RAS, Ekaterinburg, Russia) Phase transition under pressure in iron compounds: DFT+DMFT study
11.50–12.10	<i>Alexey Ushakov</i> (M.N. Mikheev Institute of Metal Physics UB RAS, Ekaterinburg, Russia) Suppression of magnetism under pressure in FeS: A DFT+DMFT study
12.10–12.30	<i>Nadezhda Medvedeva</i> (Institute of Solid State Chemistry UB RAS, Ekaterinburg, Russia) Ab initio study of optical and magnetic properties, and Na⁺ diffusion in Na_xM_y(MoO₄)₃, M= Mn, Fe, Co, Ni
12.30–12.50	<i>Sergey Streltsov</i> (M.N. Mikheev Institute of Metal Physics UB RAS, Ekaterinburg, Russia) Old puzzle of gold tellurides: incommensurate crystal structure of calaverite AuTe₂
12.50–13.10	<i>Polina Agzamova</i> (M.N. Mikheev Institute of Metal Physics UB RAS, Ekaterinburg, Russia) Influence of orbital ordering on the magnetic hyperfine field in pyrochlore oxides R₂V₂O₇ (R = Lu, Yb, Tm, Y):<i>ab initio</i> calculations
13.10–13.30	<i>Evgeniia Komleva</i> (M.N. Mikheev Institute of Metal Physics UB RAS, Ekaterinburg, Russia) Formation of “molecular clusters” in AlV₂O₄
13.30–15.00	Lunch
15.00–22.00	Excursions & Social Program

September 27, Thursday

Conference Hall	Session 10, Chairs: <i>Sergey Feofilov, Sergei Klimin</i>
09.00–09.45	<i>Valerii Zapasskii</i> (Saint Petersburg State University, Saint Petersburg, Russia) Studying paramagnets via Faraday-rotation noise
09.45–10.30	<i>Marina Popova</i> (Institute of Spectroscopy RAS, Troitsk, Moscow, Russia) Direct observation of hyperfine level anticrossings in optical spectra of a crystal
10.30–11.00	Coffee Break
Conference Hall	Session 11, Chairs: <i>Marina Popova, Sergey Streltsov</i>
11.00–11.30	<i>Athanassios Boudalis</i> (University of Strasbourg, Strasbourg, France) Assessing magnetic symmetries and Dzialoshinskii-Moriya interactions in highly symmetric molecular spin triangles
11.30–11.50	<i>Gilman Shakurov</i> (Zavoisky Kazan Physical-Technical Institute RAS, Kazan, Russia) High-frequency EPR spectroscopy of YAG
11.50–12.10	<i>Valerii Tarasov</i> (Zavoisky Kazan Physical-Technical Institute RAS, Kazan, Russia) EPR study of Tm³⁺ impurity ions in Y₂SiO₅ single crystal
12.10–12.30	<i>Vladimir Ulanov</i> (Kazan State Power Engineering University, Kazan, Russia) EPR spectroscopy of Gd³⁺ centers in PbS narrow gap semiconductor doped with Ag
12.30–12.50	<i>Roman Yusupov</i> (Kazan Federal University, Kazan, Russia) Spectral and magnetic properties of impurity Er³⁺ and Yb³⁺ ions in single crystals of Y₂Ti₂O₇ pyrochlore
12.50–13.10	<i>Vladimir Gudkov</i> (Ural Federal University, Ekaterinburg, Russia) The Jahn-Teller effect and elastic relaxations in CdSe:Cr²⁺ crystals
13.10–13.30	<i>Konstantin Gerasimov</i> (Kazan National Research Technical University, Kazan, Russia) Revival of silenced echo quantum memory protocol in the Fabry-Perot single-mode optical cavity
13.30–15.30	Lunch
Conference Hall	Session 12, Chairs: <i>Evgeny Radzhabov, Ivan Leonidov</i>
15.30–16.00	<i>Akira Yoshikawa</i> (Tohoku University, Sendai, Japan) Design, crystal growth, characterization and application of directionally solidified eutectics for scintillator
16.00–16.20	<i>Mikhail Zuev</i> (Institute of Solid State Chemistry UB RAS, Ekaterinburg, Russia) New nano-sized phosphors produced by evaporation of silicates and germanates of REE
16.20–16.40	<i>Maksim Pudovkin</i> (Kazan Federal University, Kazan, Russia) Luminescence nanothermometry and photoinduced toxicity of Pr³⁺:LaF₃ core and Pr³⁺:LaF₃-LaF₃ core-shell nanoparticles
16.40–17.00	<i>Elena Trofimova</i> (Ural Federal University, Ekaterinburg, Russia) Up- and down-conversion emission in Gd₂O₃ doped with Er³⁺ ions
17.00–17.30	Coffee Break
Library Gallery	Poster Session 2 Chairs: <i>Ilya Kolesnikov, Roman Shendrik</i>
17.30–19.00	P2-1 <i>Michail Falin</i> EPR and optical spectroscopy of Yb ³⁺ ions in LiCaAlF ₆ single crystals P2-2 <i>Anatoliy Gorlov</i> Static and dynamic contributions to the ground state splitting of Eu ²⁺ in SrMoO ₄

- P2-3** *Vladimir Vazhenin*
Paramagnetic ions of Fe^{3+} and Cr^{3+} in zinc selenide crystals
- P2-4** *Alexander Moskvín*
NMR study of magnetic structure and hyperfine interactions in binary helimagnet FeP
- P2-5** *Dmitrii Nazipov*
Raman spectrum and elastic properties of rare-earth oxyorthosilicates R_2SiO_5 : *ab initio* calculation
- P2-6** *Natalya Sakharova*
Phase composition and local crystal structure of solid solutions ZrO_2 – Sc_2O_3 – R_2O_3 – Eu_2O_3 ($\text{R} = \text{Y}, \text{Yb}, \text{Gd}, \text{Ce}$)
- P2-7** *Anastasiia Babkina*
Magneto optical properties of terbium and cerium-doped phosphate glass
- P2-8** *Andrey Telegin*
Magnetoreflexion and transversal Kerr effect in $\text{La}_{0.67}\text{Ba}_{0.33}\text{MnO}_3$ films with a variant structure
- P2-9** *Valerii Sokolov*
Comparative study of magnetic circular dichroism of f - f transitions in $\text{ErAl}_3(\text{BO}_3)_4$ and $\text{ErFe}_3(\text{BO}_3)_4$
- P2-10** *Alexander Malakhovskii*
Local properties of rare earth ferrobates in the optically excited states
- P2-11** *Alexander Moskvín*
Exchange and exchange-relativistic effects in excited states of $3d$ -ions in crystals
- P2-12** *Liudmila Gonchar*
Effect of orbital ordering upon magnetic resonance spectra in charge ordered and frustrated manganites
- P2-13** *Vladimir Gapontsev*
Spectral and magnetic properties of Na_2RuO_3
- P2-14** *Anastasia Petrova*
Ab initio investigation of optical properties of LuLiF_4 compound under hydrostatic pressure
- P2-15** *Danil Radzivonchik*
Band gap design of solar cell chalcopyrite materials using hybrid-functional *ab initio* methods
- P2-16** *Alexander Serdtsev*
Structure stability of $\text{RE}_3\text{Al}_5\text{O}_{12}$ ($\text{RE} = \text{La}–\text{Lu}$) under pressure: *ab initio* study
- P2-17** *Vitaliy Ryumshin*
Lattice dynamics of MeF_2 crystals ($\text{Me} = \text{Ca}, \text{Sr}, \text{Ba}, \text{Pb}$) in cubic and ortho-phases: *ab initio* calculation
- P2-18** *Vladimir Chernyshev*
Phonon spectrum of Nd_2TiO_5 crystal: *ab initio* calculation
- P2-19** *Marina Popova*
Lattice dynamics of the new langasites $\text{Ln}_3\text{CrGe}_3\text{Be}_2\text{O}_{14}$ ($\text{Ln} = \text{La}, \text{Pr}, \text{Nd}$)
- P2-20** *Ivan Zhidkov*
Origin of room-temperature ferromagnetism in Mn-doped SnO_2 quantum dots: an experimental and DFT approach
- P2-21** *Ivan Zhidkov*
Stability of boron-doped graphene/copper interface: XPS and DFT studies
- P2-22** *Natalia Ovechkina*
Change of the electron structure of Cu (II) heterospin complex of a “breathing crystal” under photonic irradiation

	P2-23 <i>Vasily Ulitko</i> Computer simulation of photoinduced effects in a model cuprate
	P2-24 <i>Niyaz Rakhimov</i> Potentiality for holographic structures in crystals $\text{CaF}_2\text{-LuF}_3$, doped with Ce^{3+} and Yb^{3+} ions
	P2-25 <i>Fedor Podgornov</i> Direct current ionic conductivity in liquid crystalline nanodispersions
	P2-26 <i>Vitaliy Konev</i> Features of optical response in electronically inhomogeneous cuprates
	P2-27 <i>Yury Panov</i> Features of the spin-charge competition in a model cuprate
	P2-28 <i>Darya Yasinskaya</i> Critical properties of the 2D spin system with charged impurities
	P2-29 <i>Vsevolod Deryushkin</i> Study of linear magnetoresistance due to small concentration of cobalt impurity in mercury selenide single crystals

September 28, Friday

<i>Conference Hall</i>	Session 13, Chairs: Alexander Moskvina, Athanassios Boudalis
09.00–09.30	<i>Igor Solovyov</i> (National Institute for Materials Science, Tsukuba, Japan) Microscopic origins of magnetoelectric coupling and electric polarization induced by magnetic order
09.30–10.00	<i>Vladimir Mazurenko</i> (Ural Federal University, Ekaterinburg, Russia) Skyrmions in nanosystems with sp electrons: new magnetic models and neural networks
10.00–10.30	<i>Andrey Telegin</i> (M.N. Mikheev Institute of Metal Physics UB RAS, Ekaterinburg, Russia) Magneto-optical properties of ferro- and ferrimagnetic spinel in the infrared range
10.30–11.00	Coffee Break
<i>Conference Hall</i>	Session 14, Chairs: Andrey Telegin, Igor Solovyov
11.00–11.30	<i>Mikhail Eremin</i> (Kazan Federal University, Kazan, Russia) New materials and new tasks
11.30–12.00	<i>Alexander Moskvina</i> (Ural Federal University, Ekaterinburg, Russia) Optical spectroscopy and superconductivity in cuprates
12.00–12.20	<i>Uygun Valiev</i> (National University of Uzbekistan, Tashkent, Uzbekistan) The role of the J–J “mixing” mechanism in the magneto-optics of the praseodymium yttrium-aluminum garnet $\text{Pr}^{3+}:\text{YAG}$
12.20–12.40	<i>Dmitriy Sofich</i> (Vinogradov Institute of Geochemistry SB RAS, Irkutsk, Russia) Optical spectroscopy of rare-earth ions in double molybdates
12.40–13.00	<i>M. Yakushev</i> (M.N. Mikheev Institute of Metal Physics UB RAS, Ekaterinburg, Russia) A magneto-reflectivity study of CuGaSe_2 single crystals: light hole effective mass
13.00–13.30	Closing Remarks Announcement of IFS2021
13.30–15.00	Lunch