

**XIV INTERNATIONAL FEOFILOV SYMPOSIUM ON
SPECTROSCOPY OF CRYSTALS DOPED WITH RARE
EARTH AND TRANSITION METAL IONS**

PROGRAM



ITMO



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**October 18-21, 2010
St. Petersburg, Russia**

XIV INTERNATIONAL FEOFILOV SYMPOSIUM ON SPECTROSCOPY OF CRYSTALS DOPED WITH RARE EARTH AND TRANSITION METAL IONS

October 18-21, 2010, St. Petersburg, Russia

Organizers:

- St. Petersburg State University of Information Technologies,
Mechanics and Optics
- A.F. Ioffe Physical Technical Institute of RAS, St. Petersburg

Cooperating Organizations:

- D.S. Rozhdestvensky Optical Society, Russia
- A.M. Prokhorov General Physics Institute of RAS, Moscow

Sponsors:

St. Petersburg State University of Information Technologies,
Mechanics and Optics (ITMO)
Russian Foundation for Basic Researches (RFBR),
The non-profit Dynasty Foundation,

Symposium Honorary Chairs:

Vladimir N. Vasiliev
SPb SU ITMO, St. Petersburg

Vyacheslav V. Osiko
A.M Prokhorov GPI RAS, Moscow

Symposium Chairs:

Alexander A. Kaplyanskii
A.F. Ioffe PTI RAS, St. Petersburg

Nikolay V. Nikonorov
SPb SU ITMO, St. Petersburg

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Web site: <http://feofilov.oi.ifmo.ru>

GENERAL INFORMATION

SYMPOSIUM VENUE

XIV International Feofilov Symposium on Spectroscopy of Crystals
Doped with Rare Earth and Transition Metal Ions
will be held from October 18 - 21, 2010
at St. Petersburg State University of Information Technologies,
Mechanics and Optics
Birzhevaya Linija 4, Vasiljevskiy Island, St. Petersburg, Russia

ARRIVAL & REGISTRATION

Members of the Organizing Committee will meet the participants at Pulkovo airport on October 17 and 18. Transportation for foreign participants will be provided from the airport to registration site.

To ensure that you will be met, please inform the Organizing Committee of the exact time and place of your arrival in St. Petersburg by e-mail: info@oi.ifmo.ru.

Registration will take place at the Symposium Centre in SPb SU ITMO, Birzhevaya Linija 4, Vasiljevskiy Island, tel. (812)337-6882.

The Registration Desk will be open for participants on:

Monday, October 18: 10.00 – 18.00

Tuesday, October 19: 09.00 – 15.00

at Birzhevaya Linija 4

The Symposium Program, Book of Abstracts and other information will be provided at the Registration Desk.

ACCOMMODATION

The hotel rooms are reserved in the hotels “Nauka” (St. Petersburg, ul. Millionnaya, 27) and “Regina” (St. Petersburg, ul. Podrezova, 27).

ORAL AND POSTER SESSIONS

The Symposium program will include oral and poster presentations.

The time for invited talk is 30 min. including 5 min. for discussion.

The time for oral presentation is 20 min. including 5 min. for discussion.

Media and overhead projectors will be available.

During the poster sessions (see Symposium Schedule) the presenters are asked to remain in the vicinity of their posters for informal discussion and explanations.

The maximum poster size is: vertical 1.0 m, horizontal 1.0 m

The tape will be provided for attaching the posters.

LANGUAGES

The official language of the Symposium is English.

WEATHER

In October the weather in Saint-Petersburg is usually unstable with the temperatures in the range of 0°C...+10°C. Rains are possible.

SOCIAL PROGRAM

The excursion to Tsarskoe Selo (Katherine's Palace and park) is planned.

The complete information concerning the social program will be available at the Registration Desk at the beginning of the Symposium.

PROCEEDINGS

Abstracts will be published in the Book of Abstracts.

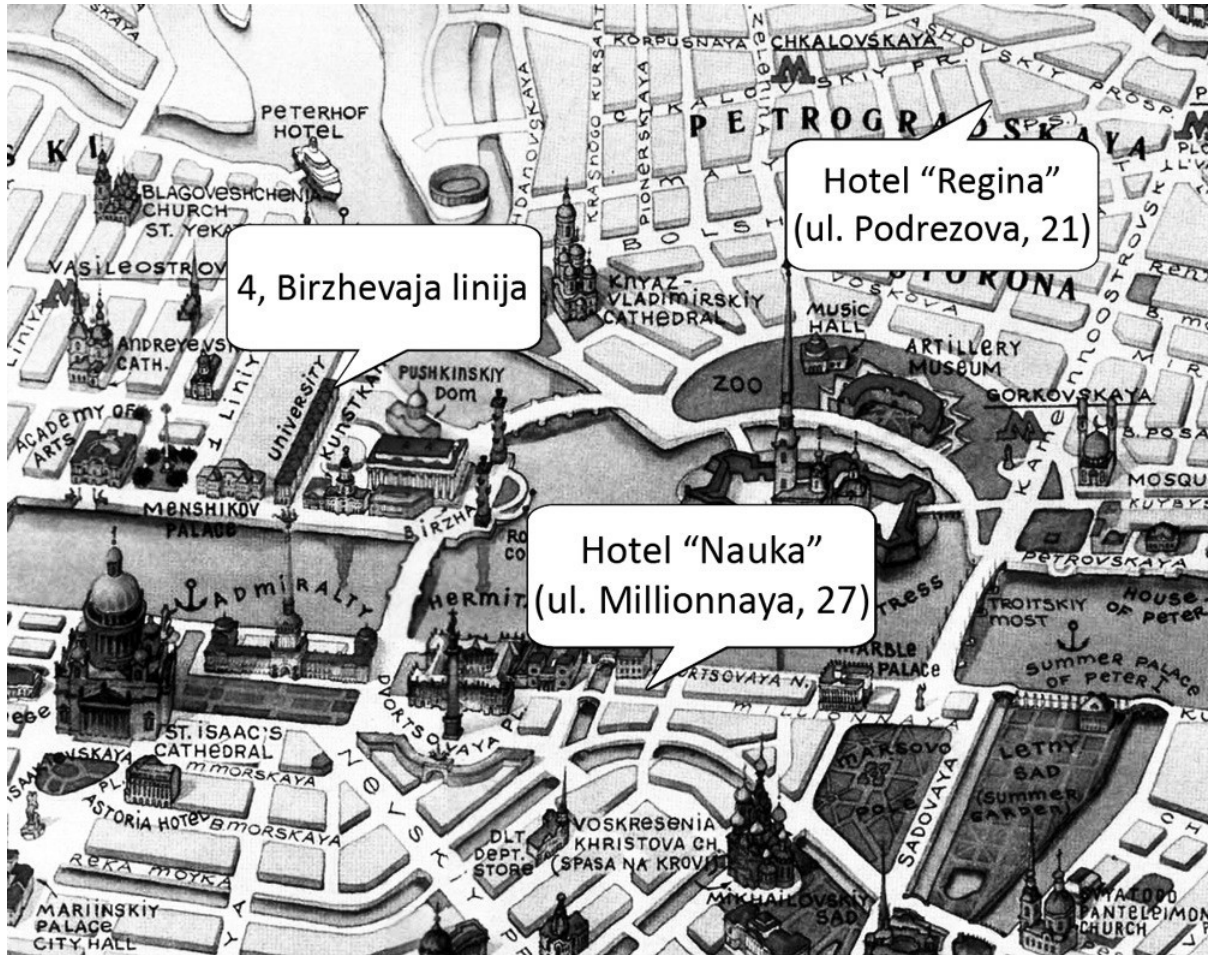
The invited and oral presentations will be published in the special Proceedings Issue of the Russian journal "Optika i spektroskopiya" [English translation: "Optics and Spectroscopy"].

LOCATION

St. Petersburg State University of Information Technologies,
Mechanics and Optics

Birzhevaya Linija 4, Vasiljevskiy Island, St. Petersburg, 199034, Russia

Phone +7(911) 998-2181



How to get to the Symposium Centre:

The metro stations closest to the Symposium site are Vasileostrovskaya, Sportivnaya and Nevskiy Prospekt/Gostiny Dvor.

Walking distance to Birzhevaya Linija 4 from Vasileostrovskaya or Sportivnaya is approximately 1.5 km; from Nevskiy Prospekt/Gostiny Dvor it is 2.5 km.

See the map to get to the Symposium Centre.

The Symposium will be held in St. Petersburg city center. St. Petersburg has earned the reputation of being one of the most beautiful cities in the world thanks to its unique architectural ensembles of streets, canals and squares. St. Petersburg is a city of beautiful baroque and classical palaces and buildings.

There are more than 100 museums in the city and its suburbs, including the Hermitage - one of the world's largest collections of art. St. Petersburg is the home of the famous Russian classical ballet school and numerous ballet and opera theaters that will be available during the conference time. Symposium will take place at a time, when several cultural events (musical and theatrical shows and artistic exhibits) will happen here.

Symposium Schedule

Monday, October 18

TIME	EVENT
14:00 – 19:00	Symposium Social Program, bus tour to Tsarskoe Selo (Katherine's Palace and park)

Tuesday, October 19

TIME	EVENT
10:00 – 10:30	Symposium Opening
10:30 – 12:00	Introductory session
12:00-12:30	Coffee Break
12:30-14:00	Oral session 1
14:00-15:30	Lunch
15:30-17:50	Oral session 2
17:50-19:00	Poster Session TuP
19:00	Social Program

Wednesday, October 20

TIME	EVENT
9:30 – 11:50	Oral session 3
11:50-12:10	Coffee Break
12:10 – 14:00	Oral session 4
14:00-15:30	Lunch
15:30 – 17:50	Oral session 5
17:50-18:10	Coffee Break
18:10 – 19:10	Oral session 6
19:10-20:15	Poster Session WeP

Thursday, October 21

TIME	EVENT
9:30 – 11:50	Oral session 7
11:50-12:10	Coffee Break
12:10 – 14:00	Oral session 8
14:00-15:30	Lunch
15:30 – 17:50	Oral session 9
17:50-18:10	Coffee Break
18:10 – 19:10	Oral session 10
19:10	Symposium Closing

TUESDAY, October 19

TUESDAY, October 19

10:00 – 10:30

SYMPOSIUM OPENING

10:00 Vladimir N. Vasiliev, *Rector of St. Petersburg University of ITMO*
Alexander A. Kaplyanskii, *academic of A.F.Ioffe PTI RAS, St. Petersburg*
Nikolay V. Nikonorov, *professor of St. Petersburg University of ITMO*

10:30 – 12:00

INTRODUCTORY SESSION

10:30 [Tu-I-1] COLOR CENTERS IN FLUORITE CRYSTALS: THE HISTORY AND PRESENT STATE

A.I. Ryskin, A.S. Shcheulin, A.E. Angervax

11:00 [Tu-I-2] RARE EARTH DOPANT SEGREGATION IN OPTICAL CERAMICS
G. Boulon^{1,2}, W. Zhao^{1,3}, S. Anghel^{1,4}, C. Mancini¹, D. Amans¹, T. Epicier⁵, V. Chani², A. Yoshikawa²

¹Physical Chemistry of Luminescent Materials (LPCML), University of Lyon, France

²IMRAM, Tohoku University, Japan

³University of Science and Technology of China, China

⁴Institute of Applied Physics, Republic of Moldova

⁵Matériaux, Ingénierie et Sciences (MATEIS), Université de Lyon, France

11:30 [Tu-I-3] NEW NANOGLASSCERAMICS DOPED WITH RARE EARTH AND TRANSITION METAL IONS: OPTICAL, SPECTRAL AND LUMINESCENT PROPERTIES

N. Nikonorov¹, V. Aseev¹, A. Ignatiev¹, A. Kim¹, E. Kolobkova², P. Shershnev¹, A. Sidorov¹, V. Tsekhomsky¹

¹ St. Petersburg University of Information Technologies, Mechanics, and Optics, Russia

²St. Petersburg State Technological Institute (Technical University), Russia

COFFEE BREAK

2:30-14:00

ORAL SESSION 1

12:30 [Tu-I-4] FLUORESCENCE AND VISIBLE UPCONVERSION IN HEAVILY DOPED $\text{LiNd}_x\text{La}_{1-x}\text{P}_4\text{O}_{12}$ NANOCRYSTALLINE POWDERS

W. Strek, L. Marciniak, A. Bednarkiewicz, A. Lukowiak, R.J. Wiglusz, D. Hreniak

Institute of Low Temperature and Structure Research, Polish Academy of Sciences, Wroclaw, Poland

13:00 [Tu-O-5] ENERGY TRANSFER PROBE FOR CHARACTERIZATION OF LUMINESCENT PHOTONIC CRYSTALS MORPHOLOGY

Yu.V. Orlovskii, T.T. Basiev, E.V. Samsonova, N.A. Glushkov

Prokhorov General Physics Institute RAS, Russia

TUESDAY, October 19

- 13:20 [Tu-O-6] MICRO-LUMINESCENCE SPECTROSCOPY OF Xe OPTICAL CENTER IN DIAMOND
Y.A. Dziashko¹, A.M. Zaitsev¹, Mengbing Huang², A.A. Gorokhovskiy¹
¹CUNY – The College of Staten Island and The Graduate Center, USA,
²The University at Albany, The State University of New York, USA
- 13:40 [Tu-O-7] LASER PIEZOSPECTROSCOPY OF Sm³⁺ IONS IN FLUORITE EPITAXIAL LAYERS
S.V.Gastev¹, V.A.Chernyshev², J.K.Choi³, A.V.Krupin¹, N.S.Sokolov¹, A.D. Nazemnykh²
¹Ioffe Physical-Technical Institute of the Russian Academy of Sciences, Russia
²Ural State University, Russia
³University of Canterbury, New Zealand

14:00 - 15:30 LUNCH

15:30-17:50

ORAL SESSION 2

- 15:30 [Tu-I-8] QUANTUM LIGHT STORAGE IN RARE-EARTH DOPED CRYSTALS: LARGE MULTIPLEXING CAPACITY OF TM:YAG.
T. Chanelière, M. Bonarota, V. Damon, R. Lauro, J. Ruggiero, R.C. Tongning, J.-L. Le Gouët
Laboratoire Aimé Cotton, France
- 16:00 [Tu-I-9] DECOHERENCE IN “MOLECULE MAGNETS” AND “SPIN-ORBIT” QUBITS
B. Barbara
Institut Néel-CNRS and INAC-CEA, Grenoble
- 16:30 [Tu-O-10] CRITICAL PHENOMENA AND FEMTOSECOND ORDERING DYNAMICS ASSOCIATED WITH ELECTRONIC AND SPIN ORDERED PHASES IN YVO₃ AND GdVO₃
R.V. Yusupov^{1,2}, D. Mihailovic², C. Colin^{3,4}, G.R. Blake³, T.T.M. Palstra³
¹Kazan Federal University, Russia
²Jozef Stefan Institute, Slovenia
³University of Groningen, The Netherlands
⁴Institut Neel, France
- 16:50 [Tu-O-11] SITE-SELECTIVE SPECTROSCOPY OF BaF₂:Yb³⁺ CRYSTALS
I.E. Mumdzhi, S.L. Korableva, S.I. Nikitin
Kazan Federal University
- 17:10 [Tu-O-12] GASEOUS ENVIRONMENT-SENSITIVE FLUORESCENCE OF Ce³⁺ IMPURITY IONS IN NANOCRYSTALS
S.P.Feofilov¹, D.V.Arsentyev¹, A.B.Kulinkin¹, R.I.Zakharchenya¹, T.Gacoin², G.Mialon², R.S.Meltzer³, C.Dujardin⁴
¹A.F. Ioffe Physical-Technical Institute, Russia
²Ecole Polytechnique – CNRS, France
³Department of Physics and Astronomy, University of Georgia, USA
⁴Université Lyon 1 69622 Villeurbanne, France

TUESDAY, October 19

- 17:30 [Tu-O-13] SPECTROSCOPIC AND LASER PROPERTIES OF TRIVALENT YTTERBIUM IONS IN ZnWO₄ CRYSTAL
E.V. Pestryakov¹, V.V. Petrov¹, V.I. Trunov¹, A.V. Kirpichnikov¹, M.A. Merzliakov¹, E.N. Galashov², V.N. Shlegel², J.V. Vasiliev²
¹Institute of Laser Physics SB RAS, Russia
²Institute of Inorganic Chemistry SB RAS, Russia
- 17:50-19:00** **POSTER SESSION TuP**
- [Tu-P-1] LUMINESCENCE OF CO-DOPE α -ZnAl₂S₄ SPINEL TYPE SINGLE CRYSTALS
S. Anghel^{1,2}, G. Boulon², L. Kulyuk¹, S. Klokishner¹, K. Sushkevich³
¹Institute of Applied Physics, Republic of Moldova
²Physical Chemistry of Luminescent Materials, University of Lyon, France
³Moldavian State University, Republic of Moldova
- [Tu-P-2] MECHANISMS OF THE LOCAL STRUCTURAL TRANSITION OF MnO₄²⁻ MOLECULAR ION IN THE K₃Na(CrO₄)₂ FERROELASTIC
H.R. Asatryan, V.S. Vikhnin, T.I. Maksimova, M. Maczka, J. Hanuza**
Ioffe Physical Technical Institute of RAS, Russia.
*Institute for Low Temperature and Structure Research PAS, Poland
- [Tu-P-3] RESOLVED HYPERFINE STRUCTURE IN OPTICAL SPECTRA OF KY₃F₁₀:Ho³⁺
E.P. Chukalina, D.S. Pytalev
Institute of Spectroscopy, RAS, Russia
- [Tu-P-4] EXCITONS IN THE THIN FILMS OF Zn_{1-x}Mn_xO (X=0–0.06)
V. I. Sokolov¹, A. V. Druzhinin¹, N. B. Gruzdev¹, A. Dejneka², O. Churpita², Z. Hubicka², L. Jastrabik², V. Trepakov^{2,3}
¹Institute of Metal Physics UD RAS, Russia
²Institute of Physics, Czech Republic
³Ioffe Institute RAS, Russia
- [Tu-P-5] TIME-RESOLVED SPECTROSCOPY OF Ce³⁺-DOPED ALKALI GADOLINIUM PHOSPHATES
G. Stryganyuk^{1,2}, T. Shalapska¹, I. Pashyk¹, A. Voloshinovskii¹, A. Krasnikov³, S. Zazubovich³
¹Ivan Franko National University of Lviv, Ukraine
²Institute for Scintillation Materials, NAS of Ukraine, Ukraine
³Institute of Physics, University of Tartu, Estonia
- [Tu-P-6] SELFQUENCHING IN Tm-DOPED SODIUM-YTTRIUM DOUBLE FLUORIDE CRYSTALS (Tm:NYF)
S.E. Ivanova¹, A.M. Tkachuk^{1,2}, A. Mirzaeva², F. Pellé³
¹University of Information Technology, Mechanics and Optics, Russia
²Scientific Production Corporation "S.I. Vavilov State Optical Institute", Russia
³LCMCP UMR7574 CNRS - Université P&M Curie-ENSCP, France
- [Tu-P-7] ANOMALOUS LUMINESCENCE IN CaF₂:Yb²⁺ CRYSTAL FROM AB INITIO CALCULATIONS
A. Myasnikova, E. Radzhabov, A. Mysovsky
Vinogradov Institute of Geochemistry SB RAS, Russia,

TUESDAY, October 19

- [Tu-P-8] SPECTRAL AND LUMINESCENT PROPERTIES AND ENERGY TRANSFER OF LEAD-FLUORINE NANOGLASSERAMICS DOPED WITH ERBIUM AND YTTERBIUM
V. Aseev^{1}, E. Kolobkova², N. Nikonorov¹, E. Korchagin¹, V. Golubkov³, K. Moskaleva¹*
¹ Saint-Petersburg University of Information Technologies, Mechanics, and Optics, Russia
² Saint-Petersburg State Technological Institute (Technical University), Russia,
³ Institute of Silicate Chemistry of RAS, Russia
- [Tu-P-9] OPTICAL AND RADIO FREQUENCY OPTICALLY DETECTED EPR SPECTROSCOPY OF Sm³⁺ IN Cs₂NaYF₆ CUBIC CRYSTAL
M.L. Falin¹, K.I. Gerasimov¹, B.Z. Malkin², N.M. Khaidukov³
¹ Kazan Physical-Technical Institute of RAS, Russia
² Kazan Federal University, , Russia
³ Institute of General and Inorganic Chemistry of RAS, Russia
- [Tu-P-10] UPCONVERSION LUMINESCENCE IN Er³⁺/Yb³⁺ CODOPED Y₂CaGe₄O₁₂
I.I. Leonidov, V.G. Zubkov, A.P. Tyutyunnik, N.V. Tarakina, L.L. Surat
Institute of Solid State Chemistry, UB RAS, Ekaterinburg, Russia
- [Tu-P-11] PERCOLATION THRESHOLD FOR MAGNETIC BINDING IN THE STRUCTURE OF THE HALDANE CHAIN NIKELATES R₂BaNiO₅
V.A. Panfilov, A.V. Potapov, S.A. Klimin
Institute of spectroscopy RAS, Troitsk Moscow region, Russia
- [Tu-P-12] SPECTRAL AND DECAY TIME PROPERTIES OF Pr, Tb, Eu DOPED Gd₂O₂S CERAMICS
P.A. Rodnyi¹, E.I. Gorokhova², S.B. Eron'ko², V.A. Demidenko², S.B. Mikhrin¹, S.D. Gain¹
¹ St. Petersburg State Technical University, Russia
² Scientific Research and Technological Institute of Optical Material Science, S. I. Vavilov State Optical Institute All-Russia Science Center, Russia
- [Tu-P-13] PHOTOINDUCED RECHARGING Pb²⁺ → Pb³⁺ IN FERROELECTRIC LEAD GERMANATE
V.A. Vazhenin, A.N. Ivachev, M.Yu. Artyomov, A.P. Potapov
Research Institute of Physics and Applied Mathematics, Ural State University, Russia
- [Tu-P-14] IDENTIFICATION OF THE DEEP LEVEL DEFECTS IN BULK ALN: EPR STUDIES
V.A. Soltamov, I.V. Ilyin, A.A. Soltamova, E.N. Mokhov, P.G. Baranov
Ioffe Physical-Technical Institute, Russia
- [Tu-P-15] RARE EARTH FLUORIDE SPECIES IN ZEOLITE HOSTS
M. Lezhnina^{1,2}, U. Kynast¹
¹ Department of Chemical Engineering, Applied Materials Sciences, University of Applied Sciences Muenster, Germany
² on leave from Mari State Technical University, Department of Physics, Russia

TUESDAY, October 19

- [Tu-P-16] LASER SPECTROSCOPY OF TWO CENTRE OF Eu^{3+} IN SILICATE WITH APATITE STRUCTURE
A.M. Karpov, M.G. Zuev
Institute of Solid State Chemistry, Ural Branch Russian Academy of Science
- [Tu-P-17] CALCULATION OF Sm^{3+} OPTICAL SPECTRA IN $\text{CaF}_2:\text{Sm}$ STRAINED EPITAXIAL LAYERS ON SILICON
V.A. Chernyshev¹, A.E. Nikiforov¹, A.D. Nazemnykh¹, S.V. Gastev², N.S. Sokolov²
¹Ural State University, Russia
²Ioffe Physical-Technical Institute, Russia
- [Tu-P-18] LUMINESCENT PROPERTIES OF Am IN YTTRIUM ALUMINUM GARNET
Ya. V. Kuznetsova¹, B. E. Burakov², A. N. Trofimov¹, V. P. Usacheva¹, M. V. Zamoryanskaya¹
¹ Ioffe Physical-Technical Institute, Russia
² V. G. Khlopin Radium Institute, Russia
- [Tu-P-19] A TRANSIENT OPTICAL ABSORPTION SPECTROSCOPY OF $\text{Li}_6\text{Re}(\text{BO}_3)_3$ CRYSTALS
I.N. Ogorodnikov¹, N.E. Poryvay¹, I.N. Sedunova¹, A.V. Tolmachev², R.P. Yavetskiy², V.Yu. Yakovlev³
¹Ural State Technical University, Russia
²STC Institute for Single Crystals, NAS of Ukraine, Ukraine
³Tomsk Polytechnic University, Russia
- [Tu-P-20] ER CENTERS IN KTaO_3 : OPTICAL AND EPR SPECTROSCOPY STUDY
A.P. Skvortsov¹, V.A. Trepakov^{1,2}, N.K. Poletaev¹, Z Potucek², V.V. Laguta², L. Jastrabik²
¹ Ioffe Physico-Technical Institute RAS, Russia
² Institute of Physics AS CR, Czech Republic
- [Tu-P-21] LUMINESCENT PROPERTIES OF LANTHANIDE CARBOXYLATES UNDER TUNABLE DISTORTIONS OF Ln^{3+} COORDINATION POLYHEDRON
K. Zhuravlev¹, V. Tsaryuk¹, V. Zolin¹, A. Vologzhanina²
¹ V.A. Kotelnikov Institute of Radioengineering and Electronics of RAS, Russia,
² A.N. Nesmeyanov Institute of Organoelement Compounds of RAS, Russia
- [Tu-P-22] PRESSURE DEPENDENCE OF CRYSTAL, ORBITAL, AND MAGNETIC STRUCTURES OF LaMnO_3 AND $\text{LaMn}_{0.5}\text{Ga}_{0.5}\text{O}_3$
L.E. Gonchar^{1,2}, A.E. Nikiforov¹, Yu.V. Leskova¹, A.A. Firsin¹, D.P. Kozlenko³*
¹Ural State University, Russia;
²Ural State University of Railway Transport, Russia
³ Frank Laboratory of Neutron Physics, Russia

TUESDAY, October 19

- [Tu-P-23] NEAR-BAND GAP ELECTRONIC STRUCTURE OF THE TETRAGONAL RARE-EARTH AND BISMUTH CUPRATES
R.V. Pisarev¹, V.V. Pavlov¹, A.M. Kalashnikova^{1,3}, A.S. Moskvina²
¹A. F. Ioffe Physical-Technical Institute of RAS, Russia
²Ural State University, Russia
³Radboud University Nijmegen, The Netherlands
- [Tu-P-24] SUPER-HYPERFINE STRUCTURE OF EPR SPECTRA OF IMPURITY IONS WITH 4f AND 5f ELECTRONS IN DOUBLE FLUORIDES LiRF₄ (R=Y, Lu, Tm)
L.K. Aminov, A.A. Ershova, S.L. Korableva, I.N. Kurkin, B.Z. Malkin, A.A. Rodionov
Kazan Federal University, Russia
- [Tu-P-25] STRUCTURAL PHASE TRANSFORMATION AND PARAMAGNETIC RESONANCE OF THE Mn⁴⁺, Mn²⁺, Fe³⁺, Cr³⁺ AND Gd³⁺ CENTERS IN LANTHANUM GALLATE.
V.A. Vazhenin, V.B. Guseva, A.V. Fokin, A.P. Potapov, M.Yu. Artyomov
Research Institute of Physics and Applied Mathematics, Ural State University, Russia
- Tu-P-26] PULSE EXCITATION OF CERIUM DOPED CRYSTALS
V.I. Baryshnikov, A.V. Bolondz, D.V. Sannikova
Irkutsk State Railway University, Russia.
Irkutsk Filial of Laser Physics Institute at SB RAS, Russia.
Applied Physics Institute of Irkutsk State University, Russia.
- [Tu-P-27] **CATHODOLUMINESCENT PROPERTIES OF YAG:Nd³⁺**
K.N. Guliaeva, A.N. Trofimov, M.V. Zamoryanskaya
Ioffe Physical-Technical Institute, Russia
- [Tu-P-28] EPR STUDY OF THE VANADIUM DOPED FORSTERITE CRYSTAL
R.V. Yusupov¹, I.N. Subacheva¹, A.A. Rodionov¹, N.I. Silkin¹, V.B. Dudnikova², V.F. Tarasov³, E.V. Zharikov^{4,5}, M.Kh. Salakhov¹
¹Kazan Federal University, Russia
²Vernadsky Institute of Geochemistry and Analytical Chemistry of the Russian Academy of Sciences, Russia
³Zavoisky Physical-Technical Institute of the Kazan Scientific Center of the Russian Academy of Sciences, Russia
⁴Mendeleev University of Chemical Technology of Russia, Russia
⁵Prokhorov General Physics Institute of the Russian Academy of Sciences, Russia
- [Tu-P-29] LUMINESCENCE STUDY IN {Bi,Gd}₃(Ga,Ti)₅O₁₂ SINGLE CRYSTALLINE FILMS
N.V. Vasilieva¹, D.A. Spassky², Yu.V. Ryabchikov³, A.V. Platonova⁴, V.V. Randoshkin¹, V.N. Kolobanov⁴, V.G. Plotnichenko⁵
¹Prokhorov General Physics Institute RAS, Russia
²Skobeltsyn Institute of Nuclear Physics, M.V. Lomonosov Moscow State University, Russia
³Lebedev Physical Institute RAS, Russia
⁴Faculty of Physics, M.V. Lomonosov Moscow State University, Russia
⁵Fiber Optics Research Center RAS, Russia

TUESDAY, October 19

[Tu-P-30]

PHONON-ASSISTED MAGNETIC ABSORPTION IN LOW-DIMENSIONAL MAGNETIC SYSTEMS. OPTICAL DATA ON $\text{Gd}_2\text{BaNiO}_5$

S.A. Klimin¹, A.B. Kuzmenko², M.N. Popova¹, B.Z. Malkin³

¹ Institute of Spectroscopy RAS, Russia

² DPMC, University of Geneva, Switzerland

³ Kazan Federal University, Russia

19:00 Social Program

WEDNESDAY, October 20

WEDNESDAY, October 20

9:30 – 11:50

ORAL SESSION 3

- 9:30 [We-I-14] RARE EARTH DOPED NANOPARTICLES FOR HIGH RESOLUTION IMAGING
F. Pellé¹, L. Caillat¹, A. Tadili¹, B. Hajj², D. Chauvat², J. Zyss²
¹ LCMCP UMR7574 CNRS/UMPC/Chimie ParisTech, France
² LPQM, UMR 8537 CNRS, France;
- 10:00 [We-I-15] RADIATIVE PROPERTIES OF THE NANOCRYSTALS DOPED WITH LANTHANIDE AND TRANSITION METAL IONS
K.K. Pukhov, T.T. Basiev, Yu.V. Orlovskii
A.M. Prokhorov General Physics Institute RAS, Russia
- 10:30 [We-O-16] VISIBLE LUMINESCENCE OF NANOCRYSTALS
T.A.Kudykina, A.I.Pervak.
University “Ukraine”, Department of Engineering Technologies, Ukraine
- 10:50 [We-O-17] EPR OF IMPURITY d-ION COMPLEXES IN THE FLUORITE TYPE CRYSTALS: PECULIARITIES CAUSED BY THE JAHN-TELLER EFFECT ON TRIPLY DEGENERATED GROUND ORBITAL STATE
V.A. Ulanov^{1,2}, M.M. Zaripov², A.D. Siraev¹
¹Kazan State Energetic University,
²Zavoisky Physical Technical Institute RAS
- 11:10 [We-O-18] OPTICAL STUDIES OF THE UNIAXIAL STRESS-INDUCED ALIGNMENT OF JAHN-TELLER Cr²⁺ CENTERS IN KZnF₃ CRYSTAL
S.I. Nikitin, I.N. Subacheva, R.V. Yusupov
Kazan Federal University
- 11:30 [We-O-19] PHOTOLUMINESCENCE AND PHOTOLUMINESCENCE EXCITATION SPECTROSCOPY OF ZnO DOPED WITH Co AND Ni
V.I. Sokolov¹, V.A. Pustovarov², N.B. Gruzdev¹, V.T. Surikov³
¹ Institute of Metal Physics UD RAS, Russia
² Ural Federal University the name after The First President of Russia
B.N. Yeltzin, Russia,
³ Institute of Chemistry of Solid State, Russia

COFFEE BREAK

WEDNESDAY, October 20

12:10 – 14:00

ORAL SESSION 4

- 12:10 [We-I-20] SPECTROSCOPY AND LASER OSCILLATIONS IN LOW PHONON CRYSTALS AND CERAMICS
T.T. Basiev, M.E. Doroshenko, A.M. Prokhorov
General Physics Institute RAS, Russia.
- 12:40 [We-O-21] RESEARCH OF CIRCADIAN RESPONSE FOR WHITE LIGHTING WITH Ce³⁺-DOPED GLASS PHOSPHOR AND UV/BLUE LEDS
L. Andrade^{1,2}, S. Lima¹, A. Novatski^{1,2}, A. Steimacher^{1,2}, M.P. Belançon^{3,2}, A. Neto³, A. Bento³, M. Baesso³, Y. Guyot², G. Boulon²
¹Grupo de Espectroscopia Óptica e Fototérmica, Universidade Estadual de Mato Grosso do Sul, Brazil
²Physical Chemistry of Luminescent Materials (LPCML), University of Lyon, France
³Departamento de Física, Universidade Estadual de Maringá, Brazil
- 13:00 [We-O-22] Ce(III)- AND Ce(IV)-RELATED SPECTRAL COMPONENTS OBSERVABLE IN THE UV ABSORPTION SPECTRA OF PHOTO-THERMO-REFRACTIVE GLASS MATRICES
A.M. Efimov, A.I. Ignatiev, N.V. Nikonorov, E.S. Postnikov
St. Petersburg State University of Information Technologies, Mechanics, and Optics
- 13:20 [We-O-23] 5d-4f EMISSION AND SCINTILLATION PROPERTIES OF SrF₂-Pr³⁺ AND SrF₂-Ce³⁺ CRYSTALS
R. Shendrik, E. Radzhabov
Vinogradov Institute of Geochemistry, Russia
- 13:40 [We-O-24] PUMP-PROBE EXPERIMENTS WITH CaF₂:Ce³⁺+Yb³⁺ CRYSTALS
A.S. Nizamutdinov, S.A. Kirysheva, V.V. Semashko, A.K. Naumov, S.L. Korableva, E.Yu. Gordeev
Kazan State University, Russia

14:00-15:30 LUNCH

15:30 – 17:50

ORAL SESSION 5

- 15:30 [We-I-25] CLUSTER THEORY OF THE CHARGE TRANSFER EXCITATIONS IN STRONGLY CORRELATED OXIDES
A.S. Moskvin
Ural State University, Russia
- 16:00 [We-I-26] INDUCTIVE-RESONANT THEORY OF NONRADIATIVE TRANSITIONS IN LANTHANIDE AND TRANSITION METAL IONS
E.B. Sveshnikova, V.L. Ermolaev
St. Petersburg State University of Information Technologies, Mechanics, and Optics, Russia
- 16:30 [We-O-27] PHOTOCONDUCTIVITY MEASUREMENTS IN Ce³⁺-DOPED FLUORIDES
L. Nurtdinova¹, V. Semashko¹, Y. Guyot², S. Korableva¹, M.-F. Joubert²
¹Kazan State University,
²Université Claude-Bernard Lyon 1

WEDNESDAY, October 20

- 16:50- [We-O-28] EFFECT OF IONIZING RADIATION ON STRUCTURE AND VALENCE STATE OF IMPURITY CHROMIUM IONS IN SYNTHETIC FORSTERITE AS STUDIED BY TUNABLE HIGH-FREQUENCY EPR SPECTROSCOPY
D.A. Akhmetzyanov¹, V.B. Dudnikova², A.A. Konovalov¹, V.F. Tarasov¹, E.V. Zharikov^{3,4}
¹Zavoisky Physical-Technical Institute of the Kazan Scientific Center of the Russian Academy of Sciences, Russia
²M.V. Lomonosov Moscow State University, Russia
³Mendeleev University of Chemical Technology of Russia, Russia
⁴Prokhorov General Physics Institute of the Russian Academy of Sciences, Russia
- 17:10 [We-O-29] CATHODOLUMINESCENCE STUDY OF Y(Ta,Nb)O₄:Tb³⁺-BASED POWDER PHOSPHORS
A.N. Trofimov¹, M.V. Zamoryanskaya¹, M.V. Nazarov², S.V. Andreev³, A.A. Zaytsev³
¹Ioffe Physical-Technical Institute, Russia,
²Department of Materials Science and Engineering, Gwangju Institute of Science and Technology, Republic of Korea
³ St Petersburg Academic University — Nanotechnology Research and Education Centre
- 17:30 [We-O-30] THE FORMATION OF STABLE DIVALENT STATE OF Yb IONS IN THE CRYSTAL Na₄Y₆F₂₂: Ce³⁺, Yb³⁺ AFTER ACTION BY INTENSIVE UV IRRADIATION
D.I. Tselischev, A.K. Naumov, E.Yu. Koryakina, E.Yu. Gordeev, V.V. Semashko, S.L. Korableva
Kazan (Volga region) Federal University, Russia

COFFEE BREAK

18:10 – 19:10

ORAL SESSION 6

- 18:10 [We-O-31] CATHODOLUMINESCENCE OF WIDE GAPE CRYSTALS DOPED WITH RARE EARTH IONS
M.V. Zamoryanskaya, A.N. Trofimov, K.N. Guliaeva
Ioffe Physical Technical Institute, Russia
- 18:30 [We-O-32] ADIABATIC POTENTIAL IN ZNSE:Fe²⁺ CRYSTAL RECONSTRUCTED IN AN ULTRASONIC EXPERIMENT
V.V. Gudkov¹, I.V. Zhevstovskikh²
¹Ural Federal University, Russia
²Institute for Metal Physics, Ural Department of the Russian Academy of Sciences, Russia
- 18:50 [We-O-33] TERAHERTZ EPR-SPECTROSCOPY OF Fe²⁺ IONS IN THE NATURAL AND SYNTHETIC FORSTERITE
G.S. Shakurov, T.A. Shcherbakova, V.A. Shustov
Kazan Physical-Technical Institute RAS, Russia

WEDNESDAY, October 20

19:10-20:15

POSTER SESSION WeP

- [We-P-31] OPTICAL SPECTRUM OF Yb^{3+} IMPURITY CLUSTER IN CaF_2
V.A. Chernyshev, A.E. Nikiforov, V.P. Volodin
Ural State University, Russia
- [We-P-32] THE ORIGIN OF THE 1.6 eV ABSORPTION BAND IN THE RARE-EARTH HEXAGONAL MANGANITES RMnO_3 AND $\text{YMn}_{1-x}\text{Ga}_x\text{O}_3$
A.M. Kalashnikova,^{1,5} S.A. Basun,¹ A.S. Moskvina,² A.A. Nugroho,^{3,4} T.T.M. Palstra,⁴ Th. Rasing⁵, R.V. Pisarev¹
¹Ioffe Physical-Technical Institute, Russia
²Ural State University, Russia
³Solid State Materials Laboratory, Zernike Institute for Advanced Materials, University of Groningen, The Netherlands
⁴Faculty of Mathematics and Natural Sciences, Institut Teknologi Bandung, Indonesia
⁵Radboud University Nijmegen, Institute for Molecules and Materials, The Netherlands
- [We-P-33] TERBIUM LOW-LYING ENERGY LEVELS IN PYROCHLORE STRUCTURE $(\text{Tb}_x\text{R}_{1-x})_2\text{Ti}_2\text{O}_7$ STUDIED BY OPTICAL SPECTROSCOPY
M.V. Narozhnyy¹, S.A. Klimin¹, M.N. Popova¹, T. Lummen², P.H.M. van Loosdrecht², G. Dhalenne³
¹Institute for spectroscopy RAS, Russia
²Material Science Center, University of Groningen, the Netherlands
³Laboratoire de Physico-Chimie de l'État Solide, Université Paris-Sud, France
- [We-P-34] COHERENCE TIMES AND RABI OSCILLATIONS OF Cr^{5+} IONS IN CaWO_4
E.I. Baibekov, I.N. Kurkin, M.R. Gafurov, R.M. Rakhmatullin, G.V. Mamin
Kazan Federal University, Russia
- [We-P-35] UPCONVERSION LUMINESCENCE IN YTTERBIUM-SENSITIZED PRASEODYMIUM-DOPED LEAD-FLUORINE NANOGLASSERAMICS
K. Moskaleva¹, V. Aseev¹, E. Kolobkova², N. Nikonov, E. Korchagin¹, V. Golubkov³,
¹ Saint-Petersburg University of Information Technologies, Mechanics, and Optics, Russia
² Saint-Petersburg State Technological Institute (Technical University), Russia,
Institute of Silicate Chemistry of RAS, Russia

WEDNESDAY, October 20

- [We-P-36] SPECTROSCOPIC, LASER INVESTIGATIONS AND CONCENTRATION QUENCHING OF TWO Yb³⁺-DOPED OH- FREE CALCIUM ALUMINOSILICATE LASER GLASSES
A. Steimacher^{1,2}, M.P. Belançon^{1,2}, A.N. Medina¹, L. Baesso¹, L.H.C. Andrade^{2,3}, S. Lima^{2,3}, R. Peretti², A.M. Jurdyc², A. Brenier², Y. Guyot², G. Boulon^{2}*
¹Departamento de Física, Universidade Estadual de Maringá, Brazil
²Physical Chemistry of Luminescent Materials (LPCML), University of Lyon, France
³Grupo de Espectroscopia Óptica e Fototérmica, Universidade Estadual de Mato Grosso do Sul, Brazil
- [We-P-37] MULTIFREQUENCY EPR STUDY OF Dy³⁺ IONS IN RbPb₂Cl₅
G.S. Shakurov¹, I.I. Fazlizhanov¹, V.A. Shustov¹, A.G. Okhrimchuk², N.V. Lichkova³, V.N. Zagorodnev³
¹Kazan Physical-Technical Institute of RAS, Russia
²Fiber Optics Research Center of RAS, Russia.
³Institute of Microelectronics Technology of RAS, Russia
- [We-P-38] LI-DOPING INDUCED GREAT ENHANCEMENT OF UPCONVERSION LUMINESCENCE IN Y₂O₃:Yb³⁺,Tm³⁺
M. Yin, J. Zhao, X. Wei, Y. Chen, W. Zhang
Hefei National Laboratory for Physical Sciences at Microscale, Department of Physics, University of Science and Technology of China, China
- [We-P-39] SPECTRAL AND LUMINESCENT PROPERTIES OF LEAD-FLUORINE NANOSTRUCTURED GLASSERAMICS DOPED WITH ERBIUM
V. Aseev^{1}, E. Kolobkova², N. Nikonorov¹, A. Yasukevich³, N. Kuleshov³, K. Moskaleva¹*
¹ Saint-Petersburg University of Information Technologies, Mechanics, and Optics, Russia
²Saint-Petersburg State Technological Institute (Technical University), Russia
³Research institute of optical material and technologies BNTU, Belarus
- [We-P-40] MONTE-CARLO SIMULATION OF ENERGY TRANSFER PROCESSES FOR INHOMOGENEOUS ACTIVATOR DISTRIBUTION
V.M. Sitdikov, N.V. Nikonorov, A.K. Przhevuskii
St. Petersburg State University of Information Technologies, Mechanics and Optics, Russia
- [We-P-41] OPTICAL SPECTROSCOPY OF THE CHAIN NICKELATE Sm₂BaNiO₅:CRYSTAL-FIELD INTERACTIONS AND MAGNETIC ORDERING
A.S. Galkin¹, S.A. Klimin¹, E.P. Chukalina¹, M.N. Popova¹, B.V. Mill²
¹ Institute of Spectroscopy RAS, Russia
² Moscow State University, Physics Department, Russia

WEDNESDAY, October 20

- [We-P-42] TWO-PHOTON PICOSECOND ABSORPTION DYNAMICS IN MeWO₄ CRYSTALS (ME=Zn, Pb, Ca, Sr, Ba)
V.I. Lukinin, D.S. Chunaev, A.Ya. Karasik
Prokhorov General Physics Institute RAS
- [We-P-43] ACCUMULATION OF EXCITATION ENERGY NANOPARTICLES FROM Ln(III) COMPLEXES AT DYE MOLECULE ADMIXTURE.
*V.L. Ermolaev**, *E.B. Sveshnikova*, *S.S.Dudar'*
St. Petersburg State University of Information Technologies, Mechanics and Optics, Russia
- [We-P-44] TEMPERATURE DEPENDENCES OF THE SECOND RANK PARAMETERS b_2^0 AND P_2^0 FOR THE ODD ISOTOPES Gd³⁺ IN PbMoO₄ AND YVO₄
A.D. Gorlov, D.A. Gorlov
Institute of Physics and Applied Mathematics,
Ural State University, Russia
- [We-P-45] INTERCONFIGURATIONAL 4fⁿ - 4fⁿ⁻¹ 5d SPECTRA OF Pr³⁺ AND Tm³⁺ IN LiLuF₄ HOST
B.Z. Malkin¹, O.V. Solovyev¹, V.N. Makhov², G. Stryganyuk³, M. Kirm⁴, E. Garcia Villora⁵, K. Shimamura⁵
¹ Kazan Federal University, Russia
² P.N. Lebedev Physical Institute, Russia
³ Institute for Scintillation Materials NAS of Ukraine, Ukraine
⁴ Institute of Physics, University of Tartu, Estonia
⁵ Advanced Materials Lab., NIMS, Japan
- [We-P-46] ESA AND ACTIVATOR IONS PHOTOIONIZATION SPECTRA INVESTIGATIONS OF Ce:YLF AND Ce:LiLuF₄ SINGLE CRYSTALS
V.V. Pavlov, V.V. Semashko, A.K. Naumov, S.L. Korableva, L.A. Nurtdinova, A.S. Nizamutdinov
Kazan (Volga Region) Federal University, Russia
- [We-P-47] PHOTOLUMINESCENCE OF Zn_{1-x}Ni_xO SOLID SOLUTIONS WITH NaCl-TYPE SYMMETRY
V.I. Sokolov¹, V.A. Pustovarov², A.N. Baranov³, P.S. Sokolov³, N.B. Gruzdev¹
¹ Institute of Metal Physics UD RAS, Russia
² Ural Federal University the name after The First President of Russia B.N. Yeltzin, Russia,
³ M.V.Lomonosov Moscow State University, Russia
- [We-P-48] OPTICAL AND FAR-INFRARED SPECTROSCOPY OF MULTIFERROIC EuFe₃(BO₃)₄
T.N. Stanislavchuk^{1,2}, K.N. Boldyrev², M.N. Popova², B.Z. Malkin³
¹ Moscow Institute of Physics and Technology (State University), Russia
² Institute for Spectroscopy, RAS, Russia
³ Kazan Federal University, Russia
- [We-P-49] ELECTRON PARAMAGNETIC RESONANCE OF Dy³⁺ IONS IN A PbGa₂S₄ SINGLE CRYSTALS
H.R. Asatryan, V.A. Khramtsov, D.V. Kramushchenko, A.A. Gurin
Ioffe Physical Technical Institute of RAS, Russia

WEDNESDAY, October 20

- [We-P-50] FIRST-PRINCIPLES CALCULATIONS OF HYPERFINE INTERACTIONS IN IONS CRYSTALS
O.A. Anikeenok
Kazan State University, Russia
- [We-P-51] THE CHARGE TRANSFORMATION OF CHROMIUM ION IMPURITY UNDER LIGHT AND THERMAL ANNEALING IN SrTiO₃ SINGLE CRYSTALS STUDIED BY EPR
A.G. Badalyan¹, P. Galinetto², A.S. Gurin¹, M.C. Mozzati², V.A. Trepakov^{1,3}, J. Rosa³, L. Jastrabik³
¹ Ioffe Physical-Technical Institute, Russia
² Dipartimento di Fisica "A. Volta, Università di Pavia, CNISM-1-27100 Pavia, Italy
³ Institute of Physics, AS CR, Czech Republic
- [We-P-52] THE INVESTIGATION OF PHOTOCHROMISM IN CaF₂, SrF₂, BaF₂.
T.Y. Sizova, E.A. Radzhabov
The Vinogradov Institute of Geochemistry, Siberian Branch of Russian Academy of Sciences, Russia
- [We-P-53] SILICATE PHOTOLUMINOPHOR FOR CONVERSION OF RADIATION OF NITRIDE LIGHT-EMITTING DIODES
N.P. Soshchin, V.N. Lichmanova, V.A. Bol'shuhin
Science-Research Institute "Platan", Russia
- [We-P-54] EPR STUDY OF SOLID SOLUTION La_{1-0.33y}Ba_{0.33y}Mn_yAl_{1-y}O₃ (y = 0.02; 0.04; 0.10)
*R.R. Andronenko, S.I. Andronenko **
Institute of Silicate Chemistry RAN, Russia
*Kazan State University, Russia
- [We-P-55] SPIN DYNAMICS AND LOW SYMMETRY EFFECTS IN Gd³⁺ EPR SPECTRA OF SINGLE CRYSTAL OF EuAlO₃
*S.I. Andronenko *, R.R. Andronenko*
Institute of Silicate Chemistry, Russia
*Physics Department, Kazan State University, Russia
- [We-P-56] ADDITIVE COLORATION OF CaF₂:Sm CRYSTALS
A.S. Shcheulin, T.S. Semenova, M.A. Petrova, L.F. Koryakina, A.E. Angervax, A.I. Ryskin
- [We-P-57] SPECTROSCOPIC PROPERTIES OF COLOR CENTERS IN CRYSTALS KY₃F₁₀: Ce AND KY₃F₁₀: Ce, Yb
E.Yu. Koryakina, A.K. Naumov, D.I. Tselitchev, S.L. Korableva, V.V. Semashko
Kazan (Volga region) Federal University, Kazan, Russia

WEDNESDAY, October 20

[We-P-58]

SPECTROSCOPY OF AN ION Ce^{+3} AS PROBE OF THE
COMPOSITION MULTILIGANDE GARNETS

N.P. Soshchin

The East-Chinese normal University, Shanghai, Peoples Republic Of
China

[We-P-59]

OPTICAL SPECTROSCOPY OF $LaGaO_3$ CRYSTAL DOPED WITH
Mn IONS

L.R.Gilyazov, S.I.Nikitin

Kazan Federal University

THURSDAY, October 21

THURSDAY, October 21

9:30 – 11:50

ORAL SESSION 7

- 9:30 [Th-I-34] PARALLEL BETWEEN RARE EARTH-TRAPPED EXCITON AND CHARGE TRANSFER IN RARE EARTH DOPED CRYSTALS
C. Pedrini¹, A. Belsky¹, A. Petrosyan², R.V. Sargsyan², I. Kamenskikh³
¹ Université de Lyon, Université Lyon 1, CNRS, UMR5620, France
² Institute for Physical Research, Laboratory of Crystal Growth of Luminescent Materials, Armenia
³ M.V.Lomonosov Moscow State University, Physics Department, Synchrotron Radiation Laboratory, Russia
- 10:00 [Th-O-35] LUMINESCENT PROPERTIES OF RARE EARTH IONS IN NANOSCALED LAYER STRUCTURES
M. Lezhnina^{1,2}, M. Bentlage¹, U. Kynast¹
¹ Department of Chemical Engineering, Applied Materials Sciences, University of Applied Sciences Muenster, Germany
² on leave from Mari State Technical University, Department of Physics, Russia
- 10:30 [Th-O-36] 5d-4f EMISSION OF Nd³⁺, Er³⁺, Tm³⁺, Gd³⁺ IONS IN ALKALINE EARTH FLUORIDES
E.A. Radzhabov, E.A. Prosekina
Vinogradov Institute of Geochemistry, Russian Academy of Sciences, Russia
- 10:50 [Th-O-37] LUMINESCENCE AND RECOMBINATION PROCESSES IN Li₆Gd_xY_{1-x}(BO₃)₃:Eu BULK CRYSTALS
I.N. Ogorodnikov¹, N.E. Poryvay¹, I.N. Sedunova¹, A.V. Tolmachev², R.P. Yavetskiy²
¹ Ural State Technical University, Russia
² STC Institute for Single Crystals, NAS of Ukraine, , Ukraine
- 11:10 [Th-O-38] LOW-TEMPERATURE STUDY OF INTRINSIC ELECTRONIC EXCITATIONS IN WIDE-GAP MATERIALS USING LUMINESCENT RE³⁺ AND Cr³⁺ IMPURITY IONS
Ch. Lushchik, I. Kudryavtseva, T. Kärner, A. Lushchik, F. Savikhin, E. Vasil'chenko
Institute of Physics, University of Tartu, Estonia
- 11:30 [Th-O-39] LASER-RELATED SPECTROSCOPY OF Ce³⁺:SrAlF₅ CRYSTALS
A.N. Yunusova, A.S. Nizamutdinov, V.V. Semashko, A.K. Naumov, S.L. Korableva, M.A. Marisov
Kazan Federal University, Russia

COFFEE BREAK

THURSDAY, October 21

12:10 – 14:00

ORAL SESSION 8

- 12:10 [Th-I-40] ZERO-PHONON LINES: NOVEL MANIFESTATIONS OF VIBRONIC INTERACTIONS IN IMPURITY CENTERS OF SOLIDS
V. Hizhnyakov
Institute of Physics, University of Tartu, Estonia
- 12:40 [Th-O-41] EXPERIMENTAL AND THEORETICAL RESEARCH OF LiF:Cu
A.S. Paklin, A.S. Mysovsky, A.A. Shalaev
- 13:00 [Th-O-42] NON-CONDON OPTICAL SPECTRA OF IMPURITY CENTERS IN CRYSTALS AT FINITE TEMPERATURES: THEORY AND EXPERIMENT
O.V. Solovyev¹, V.N. Makhov², G. Stryganyuk³, M. Kirm⁴
¹Kazan Federal University, Russia
²P.N. Lebedev Physical Institute, Russia
³Institute for scintillation materials, NAS of Ukraine, Ukraine
⁴Institute of Physics, University of Tartu, Estonia
- 13:20 [Th-O-43] RAMAN, INFRARED, AND VIBRONIC SPECTRA OF YbAl₃(BO₃)₄
K.N. Boldyrev¹, B.N. Mavrin¹, L.N. Bezmaternykh²
¹Institute of spectroscopy RAS, Russia
²Kirensky Institute of Physics, Russia
- 13:40 [Th-O-44] EXCHANGE-INDUCED MAGNETIC DIPOLE MECHANISM OF MAGNON SIDEBAND IN KCuF₃
M.V. Eremin^{1}, J. Deisenhofer², M. A. Fayzullin¹, Ch. Kant², A. Loidl²*
¹Kazan State University, Russia;
²Institute for Physics, Augsburg University, Germany

14:00-15:30 LUNCH

15:30 – 17:50

ORAL SESSION 9

- 15:30 [Th-I-45] HIGH-RESOLUTION SPECTROSCOPY OF RARE-EARTH ORTHOBORATES: CRYSTAL-FIELD AND ANISOTROPIC f-d EXCHANGE INTERACTIONS DEFECTS
M.N. Popova
Institute of Spectroscopy, RAS, Russia
- 16:00 [Th-I-46] PARTICULAR FEATURES OF ELECTRONIC STRUCTURE IN MULTIFERROIC OXIDES
R.V. Pisarev
Ioffe Physical-Technical Institute, Russian Academy of Sciences, Russia
- 16:30 [Th-O-47] SPECTROSCOPIC STUDY OF MULTIFERROIC TbMn₂O₅
E.P. Chukalina¹, M.N. Popova¹, M.A. Kaschenko^{1,2}, R.V. Pisarev³
¹Institute of Spectroscopy of RAS, Russia
²Moscow Institute of Physics and Technology, Russia
³Ioffe Physical-Technical Institute of RAS, Russia

THURSDAY, October 21

- 16:50 [Th-O-48] LUMINESCENCE AND ENERGY TRANSFER IN $\text{RE}^{3+}:\text{KPb}_2\text{Cl}_5$ CRYSTALS AT UV EXCITONIC AND RE DIRECT EXCITATION
*S.E. Ivanova*¹, *A.M. Tkachuk*^{1,2}, *F. Pellé*³, *L.I. Isaenko*⁴,
*M.-F. Joubert*⁵, *Y. Guyot*⁵
¹ University of Information Technology, Mechanics and Optics, Russia
² Scientific Production Corporation “S.I. Vavilov State Optical Institute”, Russia
³ LCMCP UMR7574 CNRS - Université P&M Curie-ENSCP, France
⁴ Institute of Mineralogy & Petrography SB RAS, Russia
⁵ LPCML, UMR 5620 du CNRS, Université Lyon 1, France
- 17:10 [Th-O-49] UPCONVERSION ABSOLUTE EFFICIENCY IN Er DOPED CALCIUM-YTTRIUM DOUBLE FLUORIDE CRYSTAL
*S. Ivanova*¹, *F. Pellé*², *A.M. Tkachuk*^{1,3}
¹ University of Information Technology, Mechanics and Optics, St. Petersburg, Russia
² LCMCP UMR 7574 CNRS - Université P&M Curie-ENSCP, France
³ Scientific Production Corporation “S.I. Vavilov State Optical Institute”, Russia
- 17:30 [Th-O-50] INFLUENCE OF THE ADDITIONAL EXCITED STATES ON ENERGY TRANSFER PROCESSES IN LANTHANIDE-CONTAINING COMPOUNDS
*L.N. Puntus*¹, *K.A. Lyssenko*², *I.S. Pekareva*¹
¹ Laboratory of Molecular Nanoelectronics, Institute of Radioengineering & Electronics, Russian Academy of Sciences, Russia
² X-ray Structural Center, A.N. Nesmeyanov Institute of Organoelement Compounds, Russian Academy of Sciences, Russia

COFFEE BREAK

- 18:10 – 19:10** **ORAL SESSION 10**
- 18:10 [Th-O-51] THE MANY-PARTICLE KINETICS OF THE HOPPING LUMINESCENCE QUENCHING IN DISORDERED SOLID SOLUTIONS
*S.G. Fedorenko*¹, *Yu.V. Orlovskii*², *E.V. Samsonova*²
¹ Institute of Chemical Kinetics and Combustion SB RAS, Russia
² Prokhorov General Physics Institute RAS, Russia

THURSDAY, October 21

- 18:30 [Th-O-52] PHOTOINDUCED COMPLEXES IN $\text{KTa}_{0.988}\text{Nb}_{0.012}\text{O}_3$ CRYSTALS: EPR STUDY
*I.N. Subacheva*¹, *A.A. Rodionov*¹, *R.V. Yusupov*¹,
V.A. Trepakov^{2,3}, *P.P. Syrnikov*², *A.I. Gubaev*⁴, *M.Kh. Salakhov*¹
¹Kazan Federal University, Russia
²Ioffe Physical-Technical Institute, RAS, Russia
³Institute of Physics, ASCR, Czech Republic
⁴Basel University, Switzerland
- 18:50 [Th-O-53] ANOMALOUS LINE SHAPE OF EPR SPECTRA OF IMPURITY Ho^{3+} ION IN SYNTHETIC FORSTERITE
*K.M. Salikhov*¹, *A.A. Sukhanov*¹, *V.F. Tarasov*¹, *R.B. Zaripov*¹,
E.V. Zharikov^{2,3}
¹Zavoisky Physical-Technical Institute of the Kazan Scientific Center of the Russian Academy of Sciences, Russia
²Mendeleev University of Chemical Technology of Russia, Russia
³Prokhorov General Physics Institute of the Russian Academy of Sciences, Russia

19:10 SYMPOSIUM CLOSING