

Curriculum Vitae

Researcher ID : A-9639-2009

NAME Yuri (Yury) Vladimirovich Orlovskii (Orlovskiy)
Date of Birth 28.10.1958
Place Moscow, Russia
Phone +372 7374666; +7 499 5038376 (office)
Phone 2 +372 53239540; +7 905 5223352 (mobile)
E-mail Yury.Orlovskiy@ut.ee; orlovski@Lst.gpi.ru

CAREER

INSTITUTION AND POSITION HELD

01/08/2011 – Top Researcher in the University of Tartu, Faculty of Physics and Chemistry, Institute of Physics, Riia 142, Tartu, 51014, Estonia
 1998- 31/07/2011 Head of the Division of Optical Relaxation Processes in the Department of Laser Materials and Photonics of the Laser Materials and Technologies Research Center (LMT RC) of A.M. Prokhorov General Physics Institute (GPI) Russian Academy of Sciences (RAS)
 38 Vavilov street, Build. 4, 119991, Moscow, Russia
 1985-98 General Physics Institute RAS, Moscow: engineer, senior engineer, junior researcher, researcher, senior researcher in the Laboratory of Laser Spectroscopy of Solids
 1983-84 Military Air Forces, Head of the group of radio-technique metrology, Army service.
 1981-82 Lebedev's Physical Institute of the USSR Academy of Sciences, Moscow, engineer in the Department of Solid State

EDUCATION

1965 – 1975 Specialized English language school #11 in Moscow.
 1975-81 Ms.D. in Electronic Technique, Moscow Power Engineering Institute, Russia, (sup) T.T. Basiev, Создание установки для исследования кинетики затухания люминесценции в наносекундном диапазоне времени (Development of experimental set-up for nanosecond fluorescence kinetics decay study)

DEGREE INFORMATION

November 20, 1998 Doctor of Sciences (Physics and Mathematics), General Physics Institute of Russian Academy of Sciences, Moscow, «Наносекундная безызлучательная релаксация энергии электронного возбуждения в лазерных кристаллах, активированных РЗ ионами», Nanosecond nonradiative relaxation of the energy of electronic excitation in laser crystals doped by RE ions, General Physics Institute of Russian Academy of Sciences.
 1985- April 16, 1990 Ph.D. in Physics of Solid State, General Physics Institute of the USSR Academy of Sciences, Moscow, «Безызлучательная внутри- и междоузельная релаксация энергии с сильнопотушенных высоколежащих уровней иона Nd³⁺ во фторидных лазерных кристаллах», Nonradiative intra- and intersite

relaxation of energy from strongly-quenched high-lying levels of the Nd³⁺ ion in fluoride laser crystals, 1986 - 1990, supervisor T.T. Basiev, General Physics Institute of USSR Academy of Sciences.

ADMINISTRATIVE RESPONSIBILITIES

Organizing and financing of scientific activity of the group consisting of two senior scientists (Ph.D.), one junior scientist and two students.

CREATIVE WORK

Supervising experimental and theoretical studies in the field of novel solid state fluorescent and laser materials.

VISITING POSITIONS

Mar – Jun 1992	Research Associate, Oklahoma State University, Center for Laser Research, USA, Prof. R.C. Powell
Sep –Nov 1993	Visiting Scientist, Kyoto Sangyo University, Department of Engineering, Japan, Prof. T.Tsuboi
Jul - Aug 1997	Visiting Scientist, Technical University of Darmstadt, Institute of Solid State Physics, Germany, Prof. J.Heber
Nov- Dec 1997	Research Associate, University of Alabama at Birmingham, USA, Prof. S.B.Mirov
Nov- Dec 1998	Research Associate, University of Alabama at Birmingham, USA, Prof. S.B.Mirov
Apr -May 1998	Visiting Professor, Technical University of Darmstadt, Institute of Solid State Physics, Germany, Prof. J.Heber
Jul – Sep 2000	Visiting Professor, Technical University of Darmstadt, Institute of Solid State Physics, Germany, Prof. J.Heber
May-Jun 1999	Visiting Professor, University of Alabama at Birmingham, USA, Prof. S.B.Mirov
Mar-Apr 2000	Visiting Professor, University of Alabama at Birmingham, USA, Prof. S.B.Mirov
Mar-Apr 2001	Visiting Professor, University of Alabama at Birmingham, USA, Prof. S.B.Mirov
Jun- Jul 2001	Visiting scientist, CNRS- UPR211, Meudon, Cedex, France, Dr. F. Pelle
Apr- Jun 2003	Visiting Professor, University of Alabama at Birmingham, USA, Prof. S.B.Mirov
Jan- March 2004	Visiting Professor, University of Alabama at Birmingham, USA, Prof. S.B.Mirov
Apr- May 2005	Visiting Professor, University of Alabama at Birmingham, USA, Prof. S.B.Mirov
Jan-Feb 2009	Visiting Scientist, Tartu University, Estonia, Prof. Ilmo Sildos
Aug 2010	Visiting Professor, Tartu University, Estonia, Prof. Ilmo Sildos

MEMBERSHIP AT PROFESSIONAL ASSOCIATIONS:

1993	present	Optical Society of America
1992	present	Russian Physical Society
1993	96	Union of Radio Science

RESEARCH ACTIVITY

HONOURS AND AWARDS

1991	GPI Prize Winner on Physics for Young Scientists
1993	Award for Young Scientists of the International Union of Radio Science
1997	Title of Senior Scientist in Solid State Physics, General Physics Institute RAS
2009, June 05	Honorary certificate #35/07 from President of Russian Academy of Sciences for significant contribution into conduction of fundamental and applied scientific studies.
2010	Title of Valued Reviewer of Optical Materials (peer reviewed journal)
2010	Member of the Program Committee of the 14 th International Feofilov Symposium on Spectroscopy of Crystals Doped with Rare Earth and Transition Metal Ions
Since 2011, May 1	Senior Member of the Optical Society of America
2015	Member of the International Advisory Committee of the 16 th International Feofilov Symposium on Spectroscopy of Crystals Doped with Rare Earth and Transition Metal Ions

FIELD OF RESEARCH

Optical properties of laser ceramics, optical properties of dielectric and semiconductor nanocrystals, nonradiative relaxation and energy transfer in nanocrystals, photonic crystals (opal-like matrixes). Experimental and theoretical aspects of multiphonon relaxation and energy transfer of the optical excitations in solids, pulsed tunable solid state (including color centers lasers) and dye lasers, mid IR lasers, time-resolved fluorescence site- selective spectroscopy of solids, gases and liquids, nanosecond correlated photon counting. Other research interests include the development of laser-based techniques for environmental monitoring and medical diagnostics, optical and quantum computers.

CURRENT GRANTS AND PROJECTS

2011-2015	Principal investigator of the Top Researcher project of Estonian Science Foundation " Design of advanced nanostructured materials with tailored properties for novel laser and light sources " No MTT50 – 512K EURO
2016-2017	Перспективные нанолюминофоры для генерации белого света с использованием светодиодов, РФФИ проект № 16-52-76028 ЭРА-А (ERA NET RUS), основной исполнитель

DISSERTATIONS SUPERVISED

1991	K.I. Ismailov , Master Degree Dissertation Moscow Engineering Physics Institute (State University) Russia
1997	S.A. Abalakin , Master Degree Dissertation, Moscow Power Engineering Institute (Technical University), Moscow, Russia
2002	M.V. Polyachenkova Bachelor Dissertation;
2004	Master Degree Dissertation, Moscow Power Engineering Institute (Technical University), Moscow, Russia

- A.E. Chigikov**
 2002 Bachelor Dissertation;
 2004 Master Degree Dissertation
 Moscow Power Engineering Institute (Technical University), Moscow, Russia
- 2009 **E.V. Samsonova**, Bachelor Dissertation,
 Moscow State University, Faculty of Material Sciences, Moscow, Russia
- 2010 **E.V. Samsonova**, Master Degree Dissertation,
 Moscow State University, Faculty of Material Sciences, Moscow, Russia
- 2013-2015 **K. Keevend**, Master Degree Dissertation, University of Tartu, Tartu, Estonia
- 2013-2015 **L. Puust**, Master Degree Dissertation, University of Tartu, Tartu, Estonia
- 2015-2015 **K. Kaldvee**, Bachelor Dissertation, University of Tartu, Tartu, Estonia
- 2012 – 2015 **E.V. Samsonova**, Ph.D. Dissertation, defended September 11, 2015, Institute of Physics,
 University of Tartu, Tartu, Estonia, specialty: materials science.

PARTICIPATION IN THE INTERNATIONAL CONFERENCES AND MEETINGS – 53

- 1988 1. 3d International conference "Trends in Quantum Electronics", Romania,
 Bucharest, plenary talk
- 1989 2. EQEC`89, DDR, Dresden, plenary talk
- 1990 3. The annual meeting of the Electro- Chemical Society, USA, Seattle, plenary
 talk
- 1991 4. 14 International conference on Coherent and Nonlinear Optics, Soviet Union,
 Leningrad, plenary talk
- 1993 5. Conference on Lasers and Electro-Optics, CLEO`93, USA, Baltimore, poster
 (full financial support of participation by the International Science Foundation
 (ISF))
- 1993 6. General Assembly of International Union of Radio Science (URSI), Japan,
 Kyoto, poster (full financial support for participation)
- 1994 7. CLEO/Europe'94, Netherlands, Amsterdam, poster
- 1994 8. OSA Annual Meeting, ILS-10, 10-th Interdisciplinary Laser Science
 Conference, USA, Dallas, - plenary talk (full financial support of participation by
 the ISF)
- 1995 9. International Feofilov's Symposium on the Spectroscopy of Rare- Earth and
 Transitions Metals Ions, Russia, St. Peterburg, three posters and one plenary talk
- 1995 10. National Quantum Electronics Conference (QE-12), UK, University of
 Southampton, - four posters (fee exemption from the Organizing Committee)
- 1996 11. International Conference on Luminescence, ICL'96, Prague, Czech Republic,
 2 posters
- 1997 12. Conference on Dynamical Processes, DPC'97, Germany/Austria, 2 posters
- 1997 13. 4th International School on Excited States of Transition Elements, ESTE'97,
 Duszyniki Zdroj, Poland, oral talk
- 1998 14. International conference "Ecology of Cities'98", Rhodes, Greece, Member of
 Organizing Committee, oral talk.
- 1998 15. IX Conference on Lasers Optics'98, St.Petersburg, oral talk
- 1998 16. XVI International conference on Coherent and Nonlinear Optics, ICONO'98,
 Moscow, poster
- 1998 17. International conference on Lasers'98, December, Tucson, USA, 2 oral talks
- 1999 18. International Conference on Dynamical Processes, DPC'99, Puerto- Rico,
 USA, poster
- 1999 19. International Conference on Luminescence, ICL'99, Osaka, Japan, one oral
 talk and two posters

- 2001 20. International Conference on Dynamical Processes in Excited States of Solids, DPC'01, Lyon, France, three posters
- 2001 21. XI-th Feofilov symposium on spectroscopy of crystals activated by rare- earth and transition metal ions, Kazan, Russia, two oral talks and 4 posters
- 2002 22. IQEC/LAT 2002, Moscow, Russia, 3 posters
- 2002 23. ICL 2002, Budapesht, Hungary, oral
- 2003 24. International XI Conference on Laser Optics, Saint- Petersburg, Russia, poster
- 2004 25. Advanced Solid State Photonics 2004, Santa Fe, New Mexico, USA – poster
- 2004 26. XII-th Feofilov symposium on spectroscopy of crystals activated by rare- earth and transition metal ions, Ekaterinburg, Russia, invited talk
- 2005 27. Conference on Lasers and Electro Optics (CLEO'2005), Baltimore, MD, USA, poster
- 2005 28. 2nd International conference on physics of laser crystals, Yalta, September 25 - 30, Ukraine, oral
- 2005 29. Conference on Laser Optics, St. Petersburg, June 26- 30, Russia – oral and two posters
- 2006 30. 2007 Dynamical Processes Conference, Segovia, Spain, June 17 - 22 - poster
- 2007 31. Advanced Solid State Photonics, Vancouver, Canada, January 28 – 31 – poster
- 2008 32. CLEO/QELS, May 4-9, 2008, San Jose, California, USA -poster
- 2008 33. Photonics Prague 2008, 6th International Conference on Photonics, Devices and Systems, August, 27-29, 2008, Prague, Czech Republic - oral
- 2008 34. 3rd EPS-QEOD EUROPHOTON Conference on Solid-State Fiber and Waveguided Light Sources, August 31 - September 5, **2008**, Paris, France – poster
- 2009 35. NANO 2009 CONFERENCE Jerusalem, Israel, March 30-31, **2009** - poster
- 2010 36. 17th International Conference on Dynamical Processes in Excited States of Solids, Argonne National Laboratory, Chicago, USA, June 20 – 25, **2010** – oral and poster
- 2010 37. XIV International Feofilov symposium on spectroscopy of crystals doped with rare earth and transition metal ions, October 18 – 21, **2010**, St.-Petersburg, Russia, one plenary talk and two oral talks
- 2011 38. 16th International Conference on Luminescence, June 26 – July 1, 2011, Ann Arbor, Michigan, USA, two oral talks.
- 2011 39. The third International Workshop on Advanced Spectroscopy and Optical Materials, 17-22 July, 2011, Gdansk, Poland, invited lecture
- 2012 40. 8th International Conference on f-elements, August 26-31, 2012, Udine, Italy, oral talk and poster presentation
- 2013 41. 4th International Topical Meeting on Nanophotonics and Metamaterials, 3 - 6 January, 2013, Seefeld, Tirol, Austria – poster
- 2013 42. Conference Functional Materials and Nanotechnologies 2013 - FM&NT-2013, 21-24 April, Tartu, Estonia - oral, two posters
- 2013 43. 10th International Conference on Nanosciences & Nanotechnologies (NN13), 9-12 July 2013, Thessaloniki, Greece – oral, poster
- 2013 44. 18th International Conference on Dynamical Processes in Excited States of Solids, (DPC 2013), August 4-9, 2013, Fuzhou, China – oral, poster
- 2013 45. 15 International Feofilov symposium on spectroscopy of crystals doped with rare earth and transition metal ions, September 16-20, 2013, Kazan, Russia – oral, two posters
- 2013 46. 8th International Conference on Surfaces, Coatings and Nanostructured Materials (NANOSMAT), 22-25 September **2013**, Granada, Spain - oral

- 2014 47. International conference on Laser Applications in Life Science 2014 (LALS 2014), June 29 – July 2, Ulm, Germany – invited lecture
- 2014 48. 17th International Conference on Luminescence and Optical Spectroscopy of Condensed Matter (ICL 2014), 13 – 18 July 2014, Wroclaw, Poland – invited lecture, oral talk, poster.
- 2014 49. Frontiers in Optics and Laser Science (FiO & LS 2014), October 19 – 23, 2014, Tucson, Arizona, USA, oral talk.
- 2015 50. CTCT2015 – Current Trends in Cancer Theranostics, June 1-3, 2015, Leibniz Institute of Photonics Technology, Jena, Germany, invited talk
- 2015 51. HBSM 2015 - 12th INTERNATIONAL CONFERENCE ON HOLE BURNING, SINGLE MOLECULE AND RELATED SPECTROSCOPIES: SCIENCE AND APPLICATIONS. August 24-27, 2015, Tartu, Estonia, oral talk.
- 2015 52. 21th All-Russian conference “Optics and spectroscopy of condensed matter”, September 13-19, Kuban State University, Krasnodar, plenary talk
- 2015 53. 9th International Conference on Luminescent Detectors and Transformers of Ionizing Radiation LUMDETR 2015, Tartu, Estonia, September 20 – 25, 2015, oral and poster talks.
- 2015 54. Functional Materials and Nanotechnologies FM&NT-2015, Vilnius, Lithuania, October 5 – 8, 2015, oral talk
- 2015 55. XVI International Feofilov Symposium (IFS'XVI) on spectroscopy of crystals doped with rare earth and transition metal ions, Saint-Petersburg (Russia), 9-13, November 2015, oral talk

This list does not include numerous national Soviet and Russian meetings, symposiums and conferences.

PERSONAL SCIENTIFIC GRANTS

- 2011-2015 Principal investigator of the Top Researcher project of European Social Fund and Estonian Science Foundation "Design of advanced nanostructured materials with tailored properties for novel laser and light sources" No MTT50 – 544K EURO
- 2011 -2013 Principal investigator of the project of Russian Fund for Basic Research “Nonradiative energy transfer of optical excitations in restricted geometries” project #11-02-00248-a
- 2011 -2012 Principal investigator of the project of Russian Fund for Basic Research “f-d transition of lanthanide ions in various nanosized materials and the effects of coating or uniform embedding into dielectric media” project #11-02-91152
- 2011 -2013 Principal investigator of the project of Russian Fund for Basic Research “Nonradiative energy transfer of optical excitations in restricted geometries” project #11-02-00248-a
- 2011 -2012 Principal investigator of the project of Russian Fund for Basic Research “f-d transition of lanthanide ions in various nanosized materials and the effects of coating or uniform embedding into dielectric media” project #11-02-91152
- 2008 – 2010 Principal investigator of the project of Russian Fund for Basic Research “Radiative transitions in nanosized optical dielectric crystals doped by rare-earth ions” project #08-02-01058-a - 1500000,00 Rubles
- 2007 – 2008 Principal investigator from General Physics Institute RAS of the collaborative project of Ministry of Education and Science of Russian Federation with S. Petersburg and Moscow State Universities “Development of inverse photonic crystals with controllable correlation of magnetic, optical and transport properties for optoelectronic and photonic devices of new generation” #260/07 – 4000000,00 Rubles.
- 2002- 2005 Co-PI from Russian side of UAB- General Physics Institute cooperation in Multiphonon relaxation of mid IR transitions in laser crystals with short phonon

- spectra, Cooperative Grant of the Division of International Programs of ECS (NSF), Prof. Sergey Mirov, grant # ECS-0140484, 85000 USD
- 2002- 2004 NATO grant # PST.CLG.979125 Mid -IR laser transitions in crystals with short phonon spectra, in cooperation with Prof. Sergey Mirov (UAB, USA).
- 2002 -2004 Principal Investigator of Scientific Grant on Fundamental Spectroscopy of the Ministry of Science, Industry and Technologies of Russian Federation, Investigation of fundamental properties of ultra-fast processes of nonradiative energy transfer of the energy of electronic excitation in the single- and multi- site laser crystals, 200000 RUR
- 1999- 2001 Principal Investigator of Scientific Grant of Russian Fund for Basic Research, Investigation of the nanosecond cross- relaxation energy transfer in the rare- earth doped optical crystals, RFBR grant No 99-02-18121, 590000 RUR
- 1998- 2001 Principal Investigator from Russian side of UAB- General Physics Institute Cooperation in Comprehensive Study for the Fast relaxation Processes in Laser Materials, Cooperative Grant of the Division of International Programs of ECS (NSF), Prof. Sergey Mirov, ECS №9710428, 40000 USD
- 1998- 2001 Principal Investigator of Scientific Grant on Fundamental Spectroscopy of the Ministry of Science and Technologies of Russian Federation, Investigation of multiphonon relaxation processes in the rare- earth doped crystals, №01.08.02.9-3100000 RUR
- 1998- 2001 Principal investigator of Scientific Grant of the Ministry of Science and Technology of Russian Federation on Fundamental Metrology, Search of doped crystal matrixes with narrow zero – phonon lines of different wavelengths, № 2.93, 75000 RUR
- 1998- 2000 Grant from Russian Academy of Sciences for outstanding group of young researchers, Investigation of the nanosecond cross- relaxation energy transfer in the rare- earth doped optical crystals, 160000 RUR
- 1995 The joint Grant from the Russian Government and ISF, Grant No MIJ300 (continuation of grant No MIJ000), 5000 USD
- 1994 Principal Investigator of International Science Foundation (ISF), Investigation of multiphonon nonradiative relaxation of the energy of electronic excitation from the high-lying levels of rare- earth ions in fluoride, chloride and oxide crystals, grant No MIJ000, 10000 USD

PARTICIPATING IN THE OTHER PROGRAMS AS LEADING SCIENTIST

- 1993- 2010 Participation as a leading scientist in projects with **ATT, NASA, EOARD, DAAD, CNRS, INTAS, ISTC, RFBR, and CRDF** for the investigation and development of new solid state laser materials including those for UV, near IR and mid IR spectral ranges.
- 1996- 1999 Participation in the **EPSCoR** program with the **University of Alabama at Birmingham, USA** in the development of all solid state Laser Induced Fluorescence (LIF) spectrometer for heavy metals diagnostics in water solutions

Referees

(1) **RICHARD C. POWELL**

Professor Emeritus of Optical Sciences
 Professor Emeritus of Materials Science
 Telephone: 520-621-3513
 Email: rcpowell@u.arizona.edu

Mailing Address: Dr. Richard C. Powell
Optical Sciences
Meinel Building 1630 East University Boulevard
Tucson, Arizona 85721 USA

(2) **SERGEY B. MIROV**

Professor
University of Alabama at Birmingham
Department of Physics
310 Campbell Hall, 1300 University Blvd.,
Birmingham, AL 36294, USA
Phone.: (205) 934- 8088 (office)
Fax: (205) 934- 8042
e-mail: mirov@uab.edu

PUBLICATIONS

Chapters in Books - 5

Publications in the refereed journals – 56

Conference Proceedings - 30

h index – 13

Chapters in Books

1. K.K. Pukhov, **Yu.V. Orlovskii**, T.T. Basiev, Spontaneous and stimulated transitions in impurity dielectric nanoparticles, chapter 16, pp. 317-339, in the book *Recent Optical and Photonic Technologies*, Edited by Ki Young Kim, 450 pages, Open access IN-TECH Publisher, **ISBN 978-953-7619-71-8**, Croatia (2010) [<http://sciyo.com/articles/show/title/spontaneous-and-stimulated-transitions-in-impurity-dielectric-nanoparticles>]
2. O.K. Alimov, T.T. Basiev, **Yu.V. Orlovskii**, M.I. Samoilovich, Stimulated emission of Oksazine 17 dye in opal-like matrix, in the book *Nanomaterials. III. – Photonic crystals and nanocomposites based on opal-like matrixes*, ed. M.I. Samoilovich, Moscow, p. 152-162 (2007) **ISBN 5-902740-07-X**
3. T.T. Basiev, V.A. Demidenko, K.V. Dykel'skii, P.P. Fedorov, E.I. Gorokhova, I.A. Mironov, **Yu.V. Orlovskii**, V.V. Osiko, and A.N. Smirnov, Optical Fluoride and Oxysulfide Ceramics: Preparation and Characterization, in the book, "Developments in Ceramic Materials Research", Editors: Dena Rosslere, NOVA Publishers, 2007, **ISBN 1-60021-770-2**, Chapter 3, pp. 53-95.
4. T.T. Basiev, A. Yu. Dergachev, **Yu.V. Orlovskii**, A.M. Prokhorov, Multiphonon nano- and subnanosecond relaxation from high-lying levels of Nd^{3+} ions in laser fluorides and oxides, Proceedings of General Physics Institute, Moscow, Nauka, v. 46, p.3-64 (1994)
5. T.T. Basiev, **Yu.V. Orlovskii**, Nanosecond quenched energy transfer in laser crystals, Proceedings of General Physics Institute, Moscow, Nauka, v. 46, p. 65- 85 (1994)

Papers in the referred journals

1. **Yu.V. Orlovskii**, A.S. Vanetsev, K. Keevend, K. Kaldvee, E.V. Samsonova, L. Puust, B. del Rosal, D. Jaque, A.V. Ryabova, A.E. Baranchikov, S. Lange, I. Sildos, J. Kikas, V.B. Loschenov, NIR fluorescence quenching by OH acceptors in the Nd^{3+} doped KY_3F_{10} nanoparticles synthesized by microwave-hydrothermal treatment, *Journal of Alloys and Compounds*, 661, 312-321 (2016) <http://dx.doi.org/10.1016/j.jallcom.2015.11.156>
Orlovskii, Yu.V.; Vanetsev, A.S.; Keevend, K.; Kaldvee, K.; Samsonova, E.V.; Puust, L.; Rosal, B. del; Jaque, D.; Ryabova, A.V.; Baranchikov, A.E.; Lange, S.; Sildos, I.; Kikas, J.; Loschenov, V.B.
2. Blanca del Rosal, Alberto Pérez Delgado, M. Misiak, Artur Bednarkiewicz, Alexander S. Vanetsev, Yurii Orlovskii, Dragana J. Jovanović, Miroslav D. Dramićanin, Ueslen Rocha, K. Upendra Kumar, Carlos Jacinto, Elizabeth Navarro, E. Martín Rodríguez, Marco. Pedroni, Adolfo Speghini, Gustavo A. Hirata, I. Rafael Martín, and Daniel Jaque, Neodymium doped nanoparticles for infrared fluorescence bioimaging: the role of the host, *Journal of Applied Physics*, 118, 143104 (2015) <http://dx.doi.org/10.1063/1.4932669>
del Rosal, Blanca; Delgado, Alberto Pérez; Misiak, M.; Bednarkiewicz, Artur; Vanetsev, Alexander S.; Orlovskii, Yurii; Jovanović, Dragana J.; Dramićanin, Miroslav D.; Rocha, Ueslen; Kumar, K. Upendra; Jacinto, Carlos; Navarro, Elizabeth; Rodríguez, E. Martín; Pedroni, Marco; Speghini, Adolfo; Hirata, Gustavo A.; Martín, I. Rafael; and Jaque, Daniel
3. **Yurii V. Orlovskii**, Alexander S. Vanetsev, Igor D. Romanishkin, Anastasiya V. Ryabova, Konstantin K. Pukhov, Alexander E. Baranchikov, Elena V. Samsonova, Kerda Keevend, Ilmo Sildos, and Victor B. Loschenov, Laser heating of the $\text{Y}_{1-x}\text{Dy}_x\text{PO}_4$ nanocrystals, *Optical Materials Express*, 5, 1230 – 1239 (2015) DOI:10.1364/OME.5.001230
4. E. V. Samsonova, A. V. Popov, A. S. Vanetsev, K. Keevend, K. Kaldvee, A. E. Baranchikov, A. V. Ryabova, S. G. Fedorenko, I. Sildos, J. Kikas, R. Steiner, V. B. Loschenov, and **Yu. V. Orlovskii**, Fluorescence quenching mechanism for water-dispersible $\text{Nd}^{3+}:\text{KYF}_4$ nanoparticles synthesized by microwave-hydrothermal technique, *Journal of Luminescence*, 169, Part B, 722–727 (2016) doi:10.1016/j.jlumin.2015.03.015

5. A.S. Vanetsev, E.V. Samsonova, O.M. Gaitko, K. Keevend, A.V. Popov, U. Mäeorg, H. Mändar, I. Sildos, **Yu.V. Orlovskii**, Phase composition and morphology of nanoparticles of yttrium orthophosphates synthesized by microwave-hydrothermal treatment: the influence of synthetic conditions, *Journal of Alloys and Compounds*, 639, 415–421 (2015)
DOI: 10.1016/j.jallcom.2015.03.125
6. Elena Samsonova, Alexandr V. Popov, Alexander S. Vanetsev, Kerda Keevend, Elena O. Orlovskaya, Valter Kiisk, Sven Lange, Urmas Joost, Kaarel Kaldvee, Uno Mäeorg, Nikolay A. Glushkov, Anastasiya V. Ryabova, Ilmo Sildos, Vyacheslav V. Osiko, Rudolf Steiner, Victor B. Loschenov, and **Yurii V. Orlovskii***, Energy Transfer Kinetics Probe for OH- Quenchers in the $\text{YPO}_4:\text{Nd}^{3+}$ Nanocrystals Suitable for Imaging in the Biological Tissue Transparency Window, *Physical Chemistry Chemical Physics*, 2014, 16, 26806 – 26815 DOI: 10.1039/C4CP03774J
7. C.-G. Ma, A.V. Popov, A.S. Vanetsev, O.M. Gaitko, E.O. Orlovskaya, S. Lange, I. Sildos, **Yu.V. Orlovskii**, Vacuum ultraviolet spectroscopic analysis of Ce^{3+} -doped hexagonal $\text{YPO}_4 \cdot 0.8\text{H}_2\text{O}$ based on exchange charge model, *Journal of Luminescence*, 18th International Conference on Dynamical Processes in Excited States of Solids, 152, August, 70–74 (2014)
<http://dx.doi.org/10.1016/j.jlumin.2013.10.069>
8. A.V. Popov, **Yu.V. Orlovskii**, A.S. Vanetsev, O.M. Gaitko, E.O. Orlovskaya, I. Sildos, Nanosecond Fluctuation Kinetics of Luminescence Hopping Quenching Originated from the $5d^1$ Level in the $\text{Ce}^{3+}:\text{YPO}_4 \cdot 0.8\text{H}_2\text{O}$ Nanocrystals, *Journal of Luminescence*, 145, January, 774–778 (2014) <http://dx.doi.org/10.1016/j.jlumin.2013.08.065>
9. K. K. Pukhov, T. T. Basiev, Chang_Kui Duan, and Yu. V. Orlovskii, Luminescent Properties of Doped Dielectric Nanocrystals, *Optics and Spectroscopy*, 2013, Vol. 114, No. 6, pp. 868–872 [К.К. Пухов, Т.Т. Басиев, Chang Kui Duan, **Ю.В. Орловский**, Люминесцентные свойства активированных диэлектрических нанокристаллов, *Оптика и спектроскопия*, (2013), том 114, № 6, с. 953–957] DOI: 10.1134/S0030400X13060155
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