

CURRICULUM VITAE

| PERSONAL INFORMATION | |
|---|---|
| Name | Yury V. Ryabchikov |
| Contacts | ryabchikov@fzu.cz ; yury.ryabchikov@hilase.cz |
| EDUCATION AND ACADEMIC DEGREES | |
| 2007 | Ph.D. in Semiconductor Physics Moscow Lomonosov State University, Faculty of Physics |
| 2003 | M.S. in Solid State Physics Moscow Lomonosov State University, Faculty of Physics |
| RESEARCH EXPERIENCE | |
| 2019– (Dolní Břežany, Czech Republic) | Senior Researcher, Marie Skłodowska-Curie Fellow, Former leader of “Mid-IR and bioapplications” group HiLASE Centre, Institute of Physics of the Czech Academy of Sciences, Scientific Laser Application Department |
| 2014–2017 (Marseille, France) | Scientific Researcher Aix-Marseille University (AMU) / CNRS, Laboratory of Lasers Plasmas and Photonic Processing (LP3) |
| 2011–2014 (Lyon, France) | Scientific Researcher INSA Lyon/INSA Valeur, Lyon Institute of Nanotechnologies (INL) |
| 2009–2018 (Moscow, Russia) | Scientific Researcher P.N. Lebedev Physical Institute of the Russian Academy of Sciences, Department of Solid State Physics |
| 2008–2009 (Berlin, Germany) | Postdoctoral Fellow (DAAD Fellowship) Helmholtz-Zentrum Berlin für Materialien und Energie, Department of Silicon Photovoltaics |
| 2003–2008 (Moscow, Russia) | Researcher, Processor Assistant Moscow M.V. Lomonosov State University, Faculty of Physics |
| RESEARCH SKILLS AND SCIENTIFIC INTERESTS | |
| Skills | Nanomaterials Fabrication: Laser-Matter Interaction, Electrochemical Etching, Clean-Room Technologies, Plasma-Enhanced Chemical Vapour Deposition Microscopies: HR-TEM (incl. EDX), SEM, Optical Spectroscopies: Steady-State (Linear and Nonlinear) and Time-Resolved Photoluminescence, Raman Scattering, Optical Absorption, Electron Spin Resonance, Ellipsometry |
| Interests | Biomedical Applications of Laser and Nanomaterials; Extracellular Matrix; Cancer Research; Plasmonic Nanosensors |
| SCIENTIFIC PUBLICATIONS | |
| Publications | Total amount: 49 (<i>indexed by WoS</i>) Citations: 823 (<i>according to WoS</i>) H-factor: 17 (<i>according to WoS</i>) Monographs: 2 |
| Assessment / Peer-review | Projects: 4 (<i>MSCA-PF, Horizon Europe, 2023</i>) Mid-term report: 1 (<i>Latvian Council of Sciences, 2023</i>) PhD Theses: 2 (<i>ITMO University, 2021, 2022</i>) Scientific papers: 31 (<i>APSUS, APL, ASS, JAP, JOLT, MSSP etc.</i>) |



| | |
|-------------------------------|--|
| Editorial board | Collection Editor of the Special Issue “Biomedical Optical Nanosensors” (13 published papers) in Sensors journal (impact-factor – 3.4) |
| SCIENTIFIC EVENTS | |
| Conference abstracts | >80, including 4 following invited talks: - 2019: Advanced Laser Technologies (ALT-19), Prague, Czech Republic; - 2020: High Power Laser Ablation (HPLA), Santa Fe, USA; - 2022: Fundamentals of Laser-Assisted Micro- and Nanotechnologies (FLAMN), Saint Petersburg, Russia; - 2022: International Conference on Laser Applications in Life Science (LALS), Nancy, France |
| Session chairman | - SPIE. Optics+Optoelectronics, Session WS-102, 2019, Prague, Czech Republic; - ALT-19, 2019, Prague, Czech Republic; - 4 th Biatri Workshop, 2020, Prague, Czech Republic |
| Conference organization | - ALT-14, 2014, Cassis, France; - SPIE. Optics+Optoelectronics, 2019, Prague, Czech Republic; - ALT-19, 2019, Prague, Czech Republic; - 4 th BIATRI Workshop, 2020, Prague, Czech Republic |
| HONORS AND AWARDS | |
| 2006 | The VIII th All-Russian Youth Conference on Semiconductor Physics and Semiconductor Opto- and Nanoelectronics; Honor Diploma |
| 2005 | The VII th All-Russian Youth Conference on Semiconductor Physics and Semiconductor Opto- and Nanoelectronics; 1 st Place Diploma |
| PROJECTS AND GRANTS | |
| 2020 | Marie Skłodowska-Curie, Individual Fellowship, Horizon 2020, LADENTHER, Grant agreement ID: 897231 (144 980,64 Euro) |
| 2016; 2018; 2019 | Excellence Initiative of the German Research Foundation, Freie Universität Berlin, supporting of joint experiments (Berlin Joint EPR Lab, AG Behrends) |
| 2016 | COST Programme for conducting joint experiments (Oulu University, Finland) |
| 2008 | DAAD one-year grant for doctoral candidate (10 000 Euro) |
| LAST 5 YEAR ACTIVITIES | - Development, laser synthesis and characterization of multi-element plasmonic nanostructures based on silicon and silicon carbide for biomedical applications; - Laser modification of bioprinted collagen and studying their mechanical and optical properties; - Laser modification of commercial collagen samples; - Surface and volumetric material nanostructuring |
| LANGUAGES | Russian (native), English (advanced), French (intermediate), German (intermediate), Czech (basic) |
| DATA BASES | https://publons.com/researcher/2309054/yury-v-ryabchikov/ https://orcid.org/0000-0002-6844-1051 https://www.researchgate.net/profile/Yury-Ryabchikov-2 |
| REFERENCES | Philippe Delaporte , Vice-President for Research, Aix-Marseille University, France (philippe.delaporte@univ-amu.fr) Vladimir Lysenko , CNRS research director, Institute for Light and Matter, France (vladimir.lysenko@univ-lyon1.fr) Tomáš Mocek , Head of the HiLASE Centre, Institute of Physics of the Czech Academy of Sciences, Czech Republic (tomas.mocek@hilase.cz) Jan Behrends , Professor, Free University Berlin, Germany (j.behrends@fu-berlin.de) |

List of Publications of Dr. Ryabchikov Yury (August 2024)

1. H. Kuznietsova, A. Ishchuk, R. Bogatyryov, B. Bozhenko, M. Kurylenko, I. Lysenko, T. Lysenko, T. Rybalchenko, O. Ogloblya, **Yu. Ryabchikov**, O. Zaderko, N. Dziubenko, “Carbon dot dressing as a treatment of alkali-induced skin burns”, *Biol. Stud.*, 18(1), 19–30, 2024. <https://doi.org/10.30970/sbi.1801.758>
2. **Yu.V. Ryabchikov**, I. Mirza, M. Flimelová, A. Kana and O. Romanyuk, “Merging of Bi-Modality of Ultrafast Laser Processing: Heating of Si/Au Nanocomposite Solutions with Controlled Chemical Content”, *Nanomaterials*, 14(4), 321, 2024. <https://doi.org/10.3390/nano14040321>
3. **Yu.V. Ryabchikov**, A. Zaderko, “Green” Fluorescent–Plasmonic Carbon-Based Nanocomposites with Controlled Performance for Mild Laser Hyperthermia”, *Photonics*, 10, 1229, 2023. <https://doi.org/10.3390/photonics10111229>
4. M. Flimelova, **Yu.V. Ryabchikov**, “An Impact of the Laser Irradiation Time on Properties of Colloidal Solutions of Silicon Nanoparticles”, *MM Science Journal*, 6807–6814, 2023. https://doi.org/10.17973/MMSJ.2023_11_2023005
5. **Yu.V. Ryabchikov**, “Multi-modal Laser-Fabricated Nanocomposites with Non-Invasive Tracking Modality and Tuned Plasmonic Properties”, *Crystals*, 13(9), 1381, 2023. <https://doi.org/10.3390/cryst13091381>
6. **Yu.V. Ryabchikov**, “Plasmon-affected luminescent nanothermometry with multi-band SiNPs/SiN_x nanocomposites”, *Journal of Luminescence*, 260, 119891, 2023. <https://doi.org/10.1016/j.jlumin.2023.119891>
7. M. Flimelova, **Yu.V. Ryabchikov**, J. Behrends, N.M. Bulgakova, “Environmentally Friendly Improvement of Plasmonic Nanostructure Functionality towards Magnetic Resonance Applications”, *Nanomaterials*, 13(4), 764, 2023. <https://doi.org/10.3390/nano13040764>
8. M. Flimelova and **Yu.V. Ryabchikov**, “A Facile Route of Manufacturing of Silicon-Based Nanostructures with Tuned Plasmonic Properties”, *Journal of Physics: Conference Series*, 2015, 012128, 2021. <https://doi.org/10.1088/1742-6596/2015/1/012128>
9. **Yu.V. Ryabchikov** and J. Behrends, “Expedient Paramagnetic Properties of Surfactant-Free Plasmonic Silicon-Based Nanoparticles”, *Optical and Quantum Electronics*, 52, 177, 2020. <https://doi.org/10.1007/s11082-020-02297-6>
10. **Yu.V. Ryabchikov**, “Unique Applications of Optical Properties of Silicon Nanostructures”, *MM Science Journal*, 3573–3578, 2019. https://doi.org/10.17973/MMSJ.2019_12_2019102
11. **Yu.V. Ryabchikov**, An. Lukianov, B. Oliinyk, T. Nychporouk, V. Lysenko, “Development of Silicon Nitride-Based Nanocomposites with Multicolour Photoluminescence”, *Applied Physics A*, 125, 630, 2019. <https://doi.org/10.1007/s00339-019-2915-z>
12. S. Uusitalo, M. Kögler, Al. Popov, **Yu Ryabchikov**, O. Bibikova, H.-L. Alakomi, R. Juvonen, V. Kontturi, S. Siitonen, A.-L. Välimaa, R. Laitinen, A. Popov, G. Tselikov, A. Al-Kattan, P. Neubauer, A.V. Kabashin, I. Meglinski, J. Hiltunen, A. Laitila, “Surface-enhanced Raman spectroscopy for beverage spoilage yeasts and bacteria detection with patterned

- substrates and gold nanoparticles”, Proc. of SPIE, 10907, 1090703, 2019. <https://doi.org/10.1117/12.2513956>
13. A.Yu. Kharin, V.V. Lysenko, A. Rogov, **Yu.V. Ryabchikov**, A. Geloen, I. Tishchenko, O. Marty, P.G. Sennikov, R.A. Kornev, I.N. Zavestovskaya, A.V. Kabashin, V.Yu. Timoshenko, “Bi-modal nonlinear optical contrast from Si nanoparticles for cancer theranostics”, *Advanced Optical Materials*, 7(13), 18011728, 2019. <https://doi.org/10.1002/adom.201801728>
 14. **Yu.V. Ryabchikov**, “Facile Laser Synthesis of Multimodal Composite Silicon/Gold Nanoparticles with Variable Chemical Composition”, *Journal of Nanoparticle Research*, 21(4), 85, 2019. <https://doi.org/10.1007/s11051-019-4523-4>
 15. **Yu.V. Ryabchikov**, “Size Modification of Optically Active Contamination-Free Silicon Nanoparticles with Paramagnetic Defects by Their Fast Synthesis and Dissolution”, *Physica Status Solidi*, 216(2), A1800685, 2019. <https://doi.org/10.1002/pssa.201800685>
 16. M. Kögler, **Yu.V. Ryabchikov**, S. Uusitalo, A. Popov, A. Popov, G. Tselikov, A.–L. Välimaa, A. Al–Kattan, J. Hiltunen, R. Laitinen, P. Neubauer, I. Meglinski, A.V. Kabashin, “Bare Laser–Synthesized Au–Based Nanoparticles as Non–Disturbing SERS Probes for Bacteria Identification”, *Journal of Biophotonics*, 11(7), e201700225, 2018. <https://doi.org/10.1002/jbio.201700225>
 17. A. Al–Kattan, V.P. Nirwan, A. Popov, **Yu.V. Ryabchikov**, G. Tselikov, M. Sentis, A. Fahmi, A.V. Kabashin, “Recent advances in laser–ablative synthesis of bare Au and Si nanoparticles and assessment of their prospects for tissue engineering applications”, *International Journal of Molecular Sciences*, 19(6), 1563, 2018. <https://doi.org/10.3390/ijms19061563>
 18. A.A. Popov, A. Al–Kattan, V.P. Nirwan, E. Munnier, G.I. Tselikov, **Yu.V. Ryabchikov**, I. Chourpa, A. Fahmi, A.V. Kabashin, “Bare laser–synthesized Si nanoparticles as functional elements for chitosan nanofiber–based tissue engineering platforms”, Proc. of SPIE, 10521, 152510A, 2018. <https://doi.org/10.1117/12.2295196>
 19. S. Uusitalo, A. Popov, **Yu.V. Ryabchikov**, O. Bibikova, H.–L. Alakomi, R. Juvonen, V. Kontturi, S. Siitonen, A. Kabashin, I. Meglinski, J. Hiltunen, A. Laitila, “Surface enhanced Raman spectroscopy for identification and discrimination of beverage spoilage yeasts using patterned substrates and gold nanoparticles”, *Journal of food engineering*, 212, 47–54, 2017. <https://doi.org/10.1016/j.jfoodeng.2017.05.007>
 20. O. Bibikova, J. Haas, A.I. López–Lorente, A. Popov, M. Kinnunen, **Yu. Ryabchikov**, A. Kabashin, I. Meglinski, B. Mizaikoff, “Surface enhanced infrared absorption spectroscopy based on gold nanostars and spherical nanoparticles”, *Analytica Chimica Acta*, 990, 141–149, 2017. <https://doi.org/10.1016/j.aca.2017.07.045>
 21. A.O. Kucherik, **Yu.V. Ryabchikov**, S.V. Kutrovskaya, A. Al–Kattan, S.M. Arakelyan, T.E. Itina, A.V. Kabashin, “Cavitation–free CW laser ablation from a solid target to synthesize low size–dispersed Au nanoparticles“, *ChemPhysChem*, 18(9), 1185–1191, 2017. <https://doi.org/10.1002/cphc.201601419>

22. V. Bubenschikov, G. Kodina, A. Kabashin, M. Rakhimov, A. Al-Kattan, Y. Ryabchikov, Ga-labeling of Si-SiO_x nanoparticles, *Journal of Labelled Compounds & Radiopharmaceuticals*, 60, S200, 2017.
23. **Yu.V. Ryabchikov**, A. Al-Kattan, V. Chirvony, J.F. Sanchez-Royo, M. Sentis, V.Yu. Timoshenko, A.V. Kabashin, “Influence of oxidation state on water solubility of Si nanoparticles prepared by laser ablation in water”, *Proc. of SPIE*, 10078, 100780C-1-7, 2017. <https://doi.org/10.1117/12.2257404>
24. A. Al-Kattan, **Yu.V. Ryabchikov**, T. Baati, V. Chirvony, J.F. Sanchez-Royo, M. Sentis, D. Braguer, V.Yu. Timoshenko, M.-A. Estève and A.V. Kabashin, “Ultrapure laser-synthesized Si nanoparticles with variable oxidation state for biomedical applications”, *Journal of Materials Chemistry B*, 4, 7852-7858, 2016. <https://doi.org/10.1039/C6TB02623K>
25. T. Baati, A. Al-Kattan, M.-A. Esteve, L. Njim, **Yu. Ryabchikov**, F. Chaspoul, M. Hammami, M. Sentis, A.V. Kabashin, D. Braguer, “Ultrapure laser-synthesized Si-based nanomaterials for biomedical applications: in vivo assessment of safety and biodistribution”, *Scientific Reports*, 6, 25400, 2016. <https://doi.org/10.1038/srep25400>
26. A.O. Kucherik, S.V. Kutrovskaya, S.M. Arakelyan, **Y.V. Ryabchikov**, A. Al-Kattan, A.V. Kabashin, and T.E. Itina. “Laser ablative nanostructuring of Au in liquid ambience in continuous wave illumination regime”, *Proc. of SPIE*, 9737, 973709-1-7, 2016. <https://doi.org/10.1117/12.2217436>
27. A. Rogov, I. Tishchenko, C. Joulaud, A. Pastushenko, **Yu. Ryabchikov**, A. Kyrychenko, D. Mishchuk, A. Kharin, V. Timoshenko, Y. Mugnier, R. Le Dantec, A. Geloën, Jean-Pierre Wolf, V. Lysenko, and L. Bonacina, “Nonlinear Optical Properties of Silicon Carbide (SiC) Nanoparticles by Carbothermal Reduction”, *Proc. of SPIE*, 9722, 972213-1-6, 2016. <https://doi.org/10.1117/12.2203133>
28. S. Uusitalo, M. Kögler, A.-L. Välimaa, A. Popov, **Y. Ryabchikov**, V. Kontturi, S. Siitonen, J. Petäjä, T. Virtanen, R. Laitinen, M. Kinnunen, I. Meglinski, A. Kabashin, A. Bunker, T. Viitalab, J. Hiltunen, “Detection of *Listeria innocua* on roll-to-roll produced SERS substrates with gold nanoparticles”, *RSC Advances*, 6, 62981, 2016. <https://doi.org/10.1039/C6RA08313G>
29. A.V. Kabashin, K.P. Tamarov, **Yu.V. Ryabchikov**, L.A. Osminkina, S.V. Zinovyev, J.V. Kargina, M.B. Gongalsky, A.Al-Kattan, V.G. Yakunin, M. Sentis, A.V. Ivanov, V.N. Nikiforov, A.P. Kanavin, I.N. Zavestovskaya, V. Yu. Timoshenko, “Si nanoparticles as sensitizers for radio frequency-induced cancer hyperthermia”, *Proc. of SPIE*, 9737, 97370A-1-10, 2016. <https://doi.org/10.1117/12.2222814>
30. **Yu.V. Ryabchikov**, A.A. Popov, M. Sentis, V.Yu. Timoshenko, A.V. Kabashin, “Structural properties of gold-silicon nanohybrids formed by femtosecond laser ablation in water at different fluences”, *Proc. of SPIE*, 9737, 97370F-1-6, 2016. <https://doi.org/10.1117/12.2217777>
31. K.P. Tamarov, L.A. Osminkina, S.V. Zinovyev, K.A. Maximova, J.V. Kargina, M.B. Gongalsky, **Yu.V. Ryabchikov**, A. Al-Kattan, A.P. Sviridov, M. Sentis, A.V. Ivanov, V.N.

- Nikiforov, A.V. Kabashin, V.Yu. Timoshenko, "Radio frequency radiation-induced hyperthermia using Si nanoparticle-based sensitizers for mild cancer therapy", *Scientific Reports*, 4, 7034, 2014. <https://doi.org/10.1038/srep07034>
32. **Yu.V. Ryabchikov**, V. Lysenko, T. Nychporuk, "Enhanced Thermal Sensitivity of Silicon Nanoparticles Embedded in (nano-Ag)/SiN_x for Luminescent Thermometry", *The Journal of Physical Chemistry C*, 118, 12515–12519, 2014. <https://doi.org/10.1021/jp411887s>
 33. **Yu.V. Ryabchikov**, S.A. Alekseev, V. Lysenko, G. Bremond, J.-M. Bluet, "Photoluminescence thermometry with alkyl-terminated silicon nanoparticles dispersed in low-polar liquids", *Physica Status Solidi RRL*, 7(6), 414–417, 2013. <https://doi.org/10.1002/pssr.201307093>
 34. **Yu.V. Ryabchikov**, S.A. Alekseev, V. Lysenko, G. Bremond, J.-M. Bluet, "Photoluminescence of silicon nanoparticles chemically modified by alkyl groups and dispersed in low-polar liquids", *Journal of Nanoparticle Research*, 15(4), 1535–1–9, 2013. <https://doi.org/10.1007/s11051-013-1535-3>
 35. S. Aguado, C. Aquino, C. Martineau, **Yu.V. Ryabchikov**, V. Lysenko, E.A. Quadrelli, J. Canivet and D. Farrusseng, "Design of microporous mixed zinc-nickel triazolate metal-organic frameworks with functional ligands", *CrystEngComm*, 15, 9336–9339, 2013. <https://doi.org/10.1039/c3ce41260a>
 36. I.A. Belogorokhov, M.S. Kotova, E.V. Tikhonov, A.A. Volikhov, M.A. Dronov, **Yu.V. Ryabchikov**, A.S. Vorontzov, M.N. Martyshov, P.A. Forsh, G.P. Boronina, V.E. Pushkarev, L.G. Tomilova, D.R. Khokhlov, "Transport and Spectroscopic Features of Composite Semiconductor Material Based on Poly[2-Methoxy-5-(2-Ethyl-Hexyloxy)-1,4-Phenylene-Vinylene]", *Journal of Nanoelectronics and Optoelectronics*, 7(6), 614–618, 2012. <https://doi.org/10.1166/jno.2012.1397>
 37. **Yu.V. Ryabchikov**, S.A. Alekseev, V.V. Lysenko, G. Bremond, J.-M. Bluet, "Luminescence behavior of silicon and carbon nanoparticles dispersed in low-polar liquids", *Nanoscale Research Letters*, 7, 365–1–5, 2012. <https://doi.org/10.1186/1556-276X-7-365>
 38. I.A. Belogorokhov, E.V. Tikhonov, M.A. Dronov, L.I. Belogorokova, **Yu.V. Ryabchikov**, L.G. Tomilova, D.R. Khokhlov, "Vibronic States in Organic Semiconductors Based on Non-Metal Naphtalocyanine. Detection of Heterocyclic Phtalocyanine Compounds in a Flexible Dielectric Matrix", *Semiconductors*, 46(1), 99–104, 2012. <https://doi.org/10.1134/S1063782612010046>
 39. I.A. Belogorokhov, E.V. Tikhonov, M.A. Dronov, **Yu.V. Ryabchikov**, V.S. Neudachina, L.V. Yashina, L.G. Tomilova, D.R. Khokhlov, "Infrared Spectroscopy of Semiconductor Structures Based on Alkyl-Substituted Lanthanide (III) Clam-Shell Mono-, Di-, and Di-Trisphtalocyanine Complexes", *Journal of Nanoelectronics and Optoelectronics*, 6(4), 478–483, 2011. <https://doi.org/10.1166/jno.2011.1199>
 40. I.A. Belogorokhov, E.V. Tikhonov, M.A. Dronov, L.I. Belogorokhova, **Yu.V. Ryabchikov**, L.G. Tomilova, D.R. Khokhlov, "Features of the Spectral Dependences of Transmittance of Organic Semiconductors Based on Tert-Butyl Substituted Lutetium Phtalocyanine Molecules", *Semiconductors*, 45(11), 1453–1456, 2011. <https://doi.org/10.1134/S1063782611110042>

41. I.A. Belogorokhov, E.V. Tikhonov, M.A. Dronov, **Yu.V. Ryabchikov**, N.V. Pashkova, E.I. Kladova, L.I. Belogorokhova, L.G. Tomilova, D.R. Khokhlov, “Study of the Transport Properties of Organic Semiconductors Based on Europium Diphtalocyanine and bi-tris–Phtalocyanine Complexes with ortho–bis(Oxymetyl)Phenyl Bridge and Based on Europium and Europium Diphtalocyanine Complexes,” *Semiconductors*, 45(11), 1457–1461, 2011. <https://doi.org/10.1134/S1063782611110054>
42. **Yu.V. Ryabchikov**, I.A. Belogorokhov, M.B. Gongalskiy, L.A. Osminkina, V.Yu. Timoshenko, “Photosensitized Generation of Singlet Oxygen in Powders and Aqueous Suspensions of Silicon Nanocrystals”, *Semiconductors*, 45(8), 1059–1063, 2011. <https://doi.org/10.1134/S106378261108015X>
43. I.A. Belogorokhov, M.N. Martishov, D.A. Mamichev, M.A. Dronov, V.E. Pushkarev, **Yu.V. Ryabchikov**, P.A. Forsh, L.G. Tomilova, D.R. Khokhlov, “Vibronic Properties of Organic Semiconductors Based on Phthalocyanine Complexes with Asymmetrically Distributed Electron Density”, *Semiconductors*, 44(6), 766–771, 2010. <https://doi.org/10.1134/S1063782610060138>
44. E.A. Konstantinova, V.A. Demin, **Yu.V. Ryabchikov**, M.B. Gongalskiy, P.K. Kashkarov, “EPR and Photoluminescence Diagnostics of Singlet Oxygen Generation on Porous Silicon Surface”, *Physica Status Solidi C*, 7, 1700–1703, 2009. <https://doi.org/10.1002/pssc.200881082>
45. I.A. Belogorokhov, M.N. Martushov, A.S. Gavriilyuk, M.A. Dronov, E.V. Tikhonov, M.O. Breusova, V.E. Pushkarev, **Yu.V. Ryabchikov**, P.A. Forsh, A.V. Zoteev, L.G. Tomilova, D.R. Khokhlov, “The Optical and Electrical Properties of the Semiconductors Structure Based on the Butyl–Substituted Phthalocyanine, Containing Ions of Erbium”, *The Materials of the Electronics Technics*, 3, 23–33, 2008.
46. I.A. Belogorokhov, **Yu.V. Ryabchikov**, E.V. Tikhonov, V.E. Pushkarev, M.O. Breusova, L.G. Tomilova, and D.R. Khokhlov, “Photoluminescence in Semiconductor Structures Based on Butyl–Substituted Erbium Phtalocyanine Complexes”, *Semiconductors*, 42(3), 321–324, 2008. <https://doi.org/10.1134/S1063782608030147>
47. **Yu.V. Ryabchikov**, I.A. Belogorokhov, A.S. Vorontsov, L.A. Osminkina, V.Yu. Timoshenko, P.K. Kashkarov, “Dependence of the Singlet Oxygen Photosensitization Efficiency on Morphology of Porous Silicon, *Physica Status Solidi A*, 204(5), 1271–1275, 2007. <https://doi.org/10.1002/pssa.200674306>
48. V.Yu. Timoshenko, L.A. Osminkina, A.S. Vorontsov, **Yu.V. Ryabchikov**, M.B. Gongalskiy, A.I. Efimova, E.A. Konstantinova, T.Yu. Bazulenko, P.K. Kashkarov, A.A. Kudriavtsev, “Silicon Nanocrystals as Efficient Photosensitizer of Singlet Oxygen for Biomedical Applications”, *Proc. SPIE*, 6606, 66061E, 2007. <https://doi.org/10.1117/12.729523>
49. **Yu.V. Ryabchikov**, P.A. Forsh, E.A. Lebedev, V.Yu. Timoshenko, P.K. Kashkarov, B.V. Kamenev, L. Tsybeskov, “Charge Carrier Transport in a Structure with Silicon Nanocrystals Embedded in Oxide Matrix”, *Semiconductors*, 40(9), 1052–1054, 2006. <https://doi.org/10.1134/S1063782606090119>

50. E.A. Konstantinova, V.A. Demin, A.S. Vorontsov, **Yu.V. Ryabchikov**, I.A. Belogorokhov, L.A. Osminkina, P.A. Forsh, P.K. Kashkarov, V.Yu. Timoshenko, “Electron Paramagnetic Resonance and Photoluminescence Study of Si Nanocrystals – Photosensitizers of Singlet Oxygen Molecules”, *Journal of Non-Crystalline Solids*, 352(9–20), 1156–1159, 2006. <https://doi.org/10.1016/j.jnoncrysol.2005.12.017>
51. V.Yu. Timoshenko, A.A. Kudryavtsev, L.A. Osminkina, A.S. Vorontsov, **Yu.V. Ryabchikov**, I.A. Belogorokhov, D. Kovalev, P.K. Kashkarov, “Silicon Nanocrystals as Photosensitizers of Active Oxygen for Biomedical Applications”, *JETP Letters*, 83(9), 423–426, 2006. <https://doi.org/10.1134/S0021364006090128>
52. S.V. Zaboltnov, L.A. Golovan, I.A. Ostapenko, **Yu.V. Ryabchikov**, A.V. Chervyakov, V.Yu. Timoshenko, P.K. Kashkarov, “Femtosecond Nanostructuring of Silicon Surfaces”, *JETP Letters*, 83(2), 69–71, 2006. <https://doi.org/10.1134/S0021364006020056>
53. E.A. Konstantinova, **Yu.V. Ryabchikov**, L.A. Osminkina, A.S. Vorontsov and P.K. Kashkarov, “Effect of Adsorption of the Donor and Acceptor Molecules at the Surface of Porous Silicon on the Recombination Properties of Silicon Nanocrystals”, *Semiconductors*, 38(11), 1344–1349, 2004. <https://doi.org/10.1134/1.1823072>