

Lidia Mikhailova

✉ lidia.mikhailova@metalab.ifmo.ru | ☎ +79233753406

EDUCATION

Siberian federal university, School of Engineering Physics and Radio Electronics, Krasnoyarsk, Russia Sep 2016 - Jul 2020
Bachelors of Physics GPA: 4.64

ITMO University, Faculty of Physics, Saint Petersburg, Russia Sep 2020 - Aug 2022
Masters of Applied physics, Speciality - Nanophotonics and Metamaterials GPA: 4.55

ITMO University, Faculty of Physics, Saint Petersburg, Russia Sep 2022 - present time
PhD student, Speciality - Optics

EXPERIENCE

ITMO University, Faculty of Physics Dec 2021 - Present time
Engineer Saint Petersburg, Russia

- Targeted drug delivery.
- Laser physics.
- Photothermal therapy.
- Plasmonic nanoparticles.
- Hybrid materials.

Siberian federal university Jul 2019 - Aug 2019
Tutor in Physics and Maths for school students Krasnoyarsk, Russia

- Travelling school scientific projects.
- Exam preparations.

Siberian federal university, Laboratory of Biophotonics Dec 2019 - Aug 2020
Researcher Krasnoyarsk, Russia

- Absorption spectroscopy.
- Absorption theory.
- Polyelectrolyte complexes.

PUBLICATIONS

1. Gerasimova, E. N., Yaroshenko, V. V., Talianov, P. M., Peltek, O. O., Mikhailova, L. V., Baranov, M. A., ... Zyuzin, M. V. (2021). Temperature monitoring during light-induced release of cargo using polymer capsules modified with gold nanoparticles and nanodiamonds. *Journal of Physics: Conference Series*, 2015(1), 012045. DOI: 10.1088/1742-6596/2015/1/012045 [Q4, IF = 0.21 (2023)]
2. Gerasimova, E. N., Yaroshenko, V. V., Mikhailova, L. V., Dolgintsev, D. M., Timin, A. S., Zyuzin, M. V., Zuev, D. A. (2022). Thermally induced mechanical switching of the second-harmonic generation in pni-pam hydrogels-linked resonant Au and Si nanoparticles. *Advanced Optical Materials*, 10(24), 2201375. DOI: 10.1002/adom.202201375 [Q1, IF = 8 (2023)]
3. Arabuli, K. V., Kopoleva, E., Akenoun, A., Mikhailova, L. V., Petrova, E., Muslimov, A. R., ... Zyuzin, M. V. (2024). On-chip fabrication of calcium carbonate nanoparticles loaded with various compounds using microfluidic approach. *Biomaterials Advances*, 161, 213904. DOI: 10.1016/j.bioadv.2024.213904 [Q1, IF = 7.9 (2022)]
4. Gerasimova, E. N., Fatkhutdinova, L. I., Vazhenin, I. I., Uvarov, E. I., Vysotina, E., Mikhailova, L., ... Zyuzin, M. V. (2024). Hybrid plasmonic nanodiamonds for thermometry and local photothermal therapy of melanoma: a comparative study. *Nanophotonics*. DOI: 10.1515/nanoph-2024-0285 [Q1, IF = 6.5 (2024)]
5. Rodimova S.A., Kozlov D.S., Krylov D.P., Mikhailova L.V., Kozlova V.A., Gavrina A.I., Mozherov ..., Elagin V.V., Kuznetsova D.S. Nanoparticles for Creating a Strategy to Stimulate Liver Regeneration. *Sovremennyye tehnologii v medicine* 2024; 16(3): 31, DOI: 10.17691/stm2024.16.3.04 [Q3, IF = 1.387 (2023)]

CONFERENCES

1. **All-Russian Scientific Conference with International Participation 'ENISEISKAYSKAYA PHOTONICS - 2022'**, Krasnoyarsk, 19-24 September 2022. Oral presentation: 'Investigation of nonlinear optical effects of hybrid thermosensitive platforms modified by plasmonic and dielectric nanoparticles'.
2. **Annual international conference THE XXVII SARATOV FALL MEETING 2023**, Saratov, 25-29 September 2023. Oral report: "Investigation of nonlinear optical effects of hybrid thermosensitive platforms modified with plasmonic and dielectric nanoparticles"

3. **XIII ITMO Young Scientists' Congress**, St. Petersburg, 08-11 April 2024 Oral presentation: "Therapeutic photosensitive delivery systems based on targeting peptides for melanoma treatment" (Winner in the nomination "Best Young Scientist's Report")
4. **The 31st international conference Advanced Laser Technologies (ALT 2024)**, Vladivostok, 23-27 September 2024. Oral report: "Optimizing Photothermal Therapy for Melanoma: The Role of Peptide-Coated Gold Nanorods and Laser Irradiation Parameters"

FUNDINGS AND GRANTS

1. **RFBR grant №18-43-242003 (executor), 2018-2020:** Submicron polyelectrolyte complexes based on chitosan and arabinogalactan extracted from Siberian larch for effective wastewater treatment
2. **RPMA - ITMO inner grant (executor), 2021-2022:** Creation of optical sensors based on thermoresponsive polymer
3. **Russian Science Foundation №21-75-10044, (executor), 2021-2024:** Development of a combined method of breast cancer treatment using targeted radionuclide therapy in combination with immunotherapy
4. **Clover Programme, (executor), 2023-2024:** Light-sensitive carriers as a versatile platform for targeted drug delivery and photo-mediated drug release for the effective treatment of skin melanoma
5. **Russian Science Foundation №24-75-10006, (executor), 2024-2027:** Development of a method for breast cancer treatment by chemically initiated release of drugs from hybrid redox-sensitive carriers

AWARDS AND SCHOLARSHIPS

ITMO University increased scholarship for successful scientific research (2022)

METANANO Summer School on Optical Biosensing - successful completion, awarded with 3 ECTS (2022)

SKILLS

•**Computer skills:** C++, Python, OriginPro, MatLab, LabVIEW, LaTeX, Microsoft Office

•**Languages:** Russian (native speaker), English (fluent), German (brief)