

Ilya Deriy

PROFILE

Born: 07.10.1997.

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EDUCATION

Bachelor's degree: Saint-Petersburg Electrotechnical University "LETI", Faculty of Electronics; Speciality - "Electronics and Nanoelectronics" — 2015 - 2019.

Master's degree: ITMO University, School of Physics and Technology; Speciality - "Nanophotonics and Metamaterials" — 2019 - 2021 (honours degree).

PhD: ITMO University, School of Physics and Technology; Speciality - "Theoretical Physics" — 2021 - present.

SCIENTIFIC EXPERIENCE

Engineer, ITMO University, School of Physics and Technology — 2019 - present.

Work in the field of theoretical physics: optics, acoustics, optomechanics, metamaterials.

TEACHING EXPERIENCE

ITMO University:

- Photonics (Master's students, 1'st year) - autumn 2019-2021.
- Numerical methods in electrodynamics (Master's students, 1'st year) - autumn 2020.
- Electrodynamics of continuous media (Bachelor's students, 3'rd year) - autumn 2021.
- Optomechanics (Master students) - spring, 2022.

PUBLICATIONS

1. Deriy, I., & Bogdanov, A. (2020, December). Radiation outcoupling efficiency from hyperbolic metamaterial resonators of various shapes. In AIP Conference Proceedings (Vol. 2300, No. 1, p. 020021). AIP Publishing LLC.
2. Mazanov, M., Yermakov, O., Deriy, I., Takayama, O., Bogdanov, A., & Lavrinenko, A. V. (2020). Photonic Spin Hall Effect: Contribution of Polarization Mixing Caused by Anisotropy. *Quantum Reports*, 2(4), 489-500.
3. Deriy, I., Toftul, I., Petrov, M., & Bogdanov A., (2021). Bound States in the Continuum in Compact Acoustic Resonators. arXiv preprint arXiv:2104.05539 (currently at review in Physical Review Letters).
4. Deriy, Ilya, et al. "Elastic Trapped Modes in Solid Acoustic Resonators of Various Shapes." *Journal of Physics: Conference Series*. Vol. 2015. No. 1. IOP Publishing, 2021.
5. Pidgayko, Dmitry, et al. "Second harmonic generation in hybrid GaP/Au nanocylinders." *Journal of Physics: Conference Series*. Vol. 2015. No. 1. IOP Publishing, 2021.

FUNDINGS AND GRANTS

- NIRMA – ITMO University inner grant, 2021.

ONLINE COURSES AND SCIENCE SCHOOLS

- METANANO Summer School 2021, Online, **TOP 10% result** – shorturl.at/eDJ26
- Exploring Quantum Physics (University of Maryland) – shorturl.at/jxzEO

AWARDS AND SCHOLARSHIPS

- Best poster award “Elastic Trapped Modes in Solid Acoustic Resonators of Various Shapes” - VI International Conference on Metamaterials and Nanophotonics METANANO 2021