

Curriculum Vitae (CV)

Fedyanina Mariya

(4 h-index, 26 citations, Scopus April 2025)

Current affiliation: National Research University of Electronic Technology (MIET)
Bld. 1, Shokin Square, Zelenograd, Moscow, Russia
Email: mahamaha1996@gmail.com

Personal information

Date and place of birth: 19.07.1996, Tambov, Tambov region, Russia

Nationality: Russian

Area of scientific interests

- Thin films for optical applications
- Thin film deposition
- Materials science
- Optical properties

The most significant publications for the last 5 years (11 publications):

1. Low-loss Se-based phase-change materials for infrared photonics / Burtsev A.A., Kiselev A.V., **Fedyanina M.E.**, Eliseev N.N., Mikhalevsky V.A., Nevzorov A.A., Ionin V.V., Grebenev V.V., Maliutin A.M., Glebov V.N., Novodvorsky O.A., Lotin A.A. // Optical Materials, 2024, 157 (Part 1), 116117.
2. Laser Beam Structure Influence on Optical and Structural Modification of Phase-Change Materials / Smayev M.P., Smirnov P.A., Budagovsky I.A., **Fedyanina M.E.**, Glukhenkaya V.B., Romashkin A.V., Lazarenko P.I., Kozyukhin S.A. // 2024 International Conference Laser Optics (ICLO), Saint Petersburg, Russian Federation, 2024, P. 274.
3. On the Crystallization of $\text{Ge}_2\text{Sb}_2\text{Te}_5$ Thin Films Using a Thin-Film Resistive-Heating Element for Creating Optoelectronic and Integrated-Optical Elements and Devices on Their Basis / V. B. Glukhenkaya, Pestov G. N., Gulidova A. I., Saurov M. A., Smirnov P. A., **Fedyanina M.E.**, Kozlov A. O., Savitskiy A. I. // Semiconductors, 2024, 58, pp. 1070–1076.
4. Cylindrical laser beams for a- $\text{Ge}_2\text{Sb}_2\text{Te}_5$ thin film modification / Smayev M.P., Smirnov P.A., Budagovsky I.A., **Fedyanina M.E.**, Glukhenkaya V. B., Romashkin A.V., Lazarenko P.I., Kozyukhin S.A. // Journal of Non-Crystalline Solids, 2024, 633, 122952.
5. Photoinduced Crystallization of Sb_2Se_3 and $\text{Ge}_2\text{Sb}_2\text{Te}_5$ Chalcogenide Films / Lebedeva Y.S., Smayev M.P., Budagovsky I.A., **Fedyanina M.E.**, I.S. Sinev, Kunkel T.S., Romashkin A.V., Smirnov P.A., Sherchenkov A.A., Kozyukhin S.A., Lazarenko P.I. // Journal of Surface Investigation, 2023, 17(Suppl 1), pp. S339–S348.
6. Controlled Optical Contrast Caused by Reversible Laser-Induced Phase Transitions in GeTe and $\text{Ge}_2\text{Sb}_2\text{Te}_5$ Thin Films in the Spectral Range from 500 to 20,000 nm / Burtsev A.A., Kiselev A.V., Ionin V.V., Eliseev N., **Fedyanina M.E.**, Mikhalevsky V.A., Nevzorov A., Novodvorsky O.A., Lotin A.A. // Journal of Russian Laser Research, 2023, 44(6), pp. 700–706.
7. Photocatalytic reduction of CO_2 over TiO_2 nanowires catalyst / Tarasov A., Dubkov S., Vigdovich E., **Fedyanina M.E.**, Ryazanov R., Sirotina A., Gromov D. // MATEC Web of Conferences, 2023, 376, 01011.
8. Formation of periodic two-phase structures on the surface of amorphous $\text{Ge}_2\text{Sb}_2\text{Te}_5$ films under the action of ultrashort laser pulses of different durations and repetition rates // Smayev M. P., Lazarenko P. I., **Fedyanina M.E.**, Budagovsky I. A., Raab A., Sagunova I. V., Kozyukhin S. A. // Optics and Spectroscopy, 2023, 131(2), pp. 186-190.

9. Phase-change periodic surface structures for engineering of excitonic photoluminescence in WS₂ monolayers / Trofimov P.I., Ivanova T.V., Lazarenko P.I., **Fedyanina M.E.**, Sinev I.S. // St. Petersburg State Polytechnical University Journal: Physics and Mathematics, 2022, 15(3.2), pp. 113–117.
10. Laser-induced periodic surface structures formation and reversible crystallization in amorphous Ge₂Sb₂Te₅ thin films as a result of femtosecond irradiation / Kolchin A.V., Zaboltnov S.V., Shuleiko D.V., Presnov D.E., **Fedyanina M.E.**, Kuzmin E.V., Kashkarov P.K. // St. Petersburg State Polytechnical University Journal: Physics and Mathematics, 2022, 15(31), pp. 237–242.
11. Temperature activated conductivity of Ge₂Sb₂Te₅: Connection to the variation of Fermi level and implications on resistance drift / Vorobyov Y., Ermachikhin A., Yakubov A., Trusov E., **Fedyanina M.**, Lazarenko P., Kozyukhin S. // Journal of Physics D: Applied Physics, 2021, 54(31), 315302.