Georgii Zmaga

+7 9180314055
georgii.zmaga@metalab.ifmo.ru
https://physics.itmo.ru/ru/personality/georgiy_zmaga

My research interests cover a wide range of topics in the field of applied nanophotonics, with a particular focus on the physical modeling of plasmonic nanostructures for use in surface-enhanced Raman spectroscopy. To this date, I have already co-authored one scientific contribution published in peer reviewed journal paper and several submitted works.

Education

2021-date **School of Physics**, *ITMO University*, Russia
Third year bachelor student

Educational courses
Quantum mechanics, Physics of the solid state, Electrodynamics, Optics of waveguides and resonators

Collaborators
Prof. Song Yanlin's research group at the Institute of Chemistry, Chinese Academy of Sciences

Work

2023-date **Optical Laboratory, School of Physics**, *ITMO University*, Russia
Laboratory assistant

Skills

Languages Strong reading, writing and speaking competencies for English, Russian
Experiments Dark-field, Raman, reflection, transmission
Simulations CST Microwave Studio – scattering, near-field distribution, radiation pattern
Programming Matlab, Python, LaTeX typesetting

Scholarships

2021-2023 University Scholarship

Publications

2023 Huadong Wang, Yali Sun, Zeying Zhang, Xu Yang, Bobing Ning, Pavel Senyushkin, Bogdan Bogdanov, **Georgii Zmaga**, Yonggan Xue, Jimei Chi, Hongfei Xie, Sisi Chen, Tingqing Wu, Zewei Lian, Qi Pan, Bingda Chen, Zhiyu Tan, Xiangyu Pan, Meng Su, and Yanlin Song, "Molecular Recognition-Modulated Hetero-Assembly of Nanostructures for Visualizable and Portable Detection of Circulating miRNAs", Analytical Chemistry 2023 95 (31), 11769-11776

2024 Pan, Xiangyu; Zhang, Zeying; Yun, Yang; Zhang, Xu; Sun, Yali; Zhang, Zixuan; Wang, Huadong; Yang, Xu; Tan, Zhiyu; Yang, Yaqi; Xie, Hongfei; Bogdanov, Bogdan; **Zmaga, Georgii**; Senyushkin, Pavel; Wei, Xuemei; Su, Meng; Song, Yanlin, "Machine learning-assisted high-throughput identification and quantification of protein biomarkers with printed heterochains", J. Am. Chem. Soc. 2024, 146, 28, 19239–19248

Submitted Papers

2024 **G.V. Zmaga**, A.A. Kuzmin, Y. Sun, Q. Pan, M. Su, Y. Song, D.A. Zuev, P.A. Belov, "Molecular detection using plasmonic nanostructures of particular geometry", 21st International Conference Laser Optics ICLO 2024