Mariia Ivanchenko

Fairfax, VA | mivanch@gmu.edu | Mariia Ivanchenko

Skills

- nanoparticle synthesis, plasmonics, UV-vis spectroscopy, FTIR spectroscopy, fluorescence spectroscopy, TEM and SEM imaging, EDS analysis and mapping, PXRD, Raman spectroscopy and SERS, DLS (particle size analyzer), melting point apparatus
- Microsoft Office, OriginLab, ImageJ, SMILE VIEW Map, PDXL-2, The Materials Project, EndNote, scientific databases (SciFinder, PubMed, Science Direct)

Education

George Mason University. *2023*
Ph.D. in Chemistry.

Taras Shevchenko National University of Kyiv. *2015*
Master of Science in Chemistry. Physical Chemistry.

Taras Shevchenko National University of Kyiv. *2013*
Bachelor of Science in Chemistry.

Work Experience

Graduate Researcher *June 2020 – present*
George Mason University – Fairfax, VA.

- Researched and reviewed literature relevant to the area of research and performed experiments for ongoing research projects, managing several projects simultaneously.
- Developed synthetic protocols for hetero-structured and alloy nanomaterials using surfactants to control crystal growth with desired geometries, dimensions, and properties.
- Characterized obtained materials using modern instrumentation (UV-vis, TEM, SEM, EDS, PXRD, ICP-OES).
- Investigated the performance of nanomaterials in prospective applications (e.g., photocatalysis and SERS).
- Complied with Environmental Health & Safety (EHS) requirements.
- Prepared reports, publications, and presentations.
- Mentored undergraduate students, advised them during proposal submissions and presentation preparation.

Graduate Teaching Assistant *August 2019 – May 2022*
George Mason University – Fairfax, VA.

- Instructed general chemistry, including honors sections, and quantitative analysis laboratory.
- Supervised up to 24 students during the experiment and troubleshooted issues they encountered.
- Developed instructional materials, such as lab practicum, problem sets, worksheets, quizzes, exams.
- Prepared a small lecture and PowerPoint slideshow related to an experiment.

- Graded quizzes, exams, lab reports, and other assignments.
- Utilized learning management system (LMS, Blackboard) to record grades, monitor progress and attendance.
- Proctored exams and held office hours.

Research Assistant *July 2011 - June 2015*

National Academy of Science. L. Pisarzhevsky Institute of Physical Chemistry – Kyiv, Ukraine.

- Collaborated with the principal investigator on background and status of current project.
- Performed synthesis of colloidal quantum dots stabilized by polymers in water.
- Analyzed optical properties of nanoparticles by using UV-visible spectroscopy and fluorescence spectroscopy.
- Researched parameter-control influence on the NPs' properties.
- Collected, processed, organized, and summarized project data.
- Reported experimental results using the software program OriginLab.

R&D Laboratory Chemist (Summer Internship Program) *July 2014 - August 2014*

Kievmedpreparat, JSC. – Kyiv, Ukraine.

- Worked as part of a team in an R&D laboratory.
- Assisted in the design of laboratory experiments, techniques, and protocols.
- Prepared analytes for GC and HPLC according to protocols, performed dissolution testing, calibrated pH-meters.
- Attended GMP guidelines training and passed safety regulations test for the laboratory.

Publications

- **Ivanchenko M.**, Jing H. Chem. Mater., Chem. Mater. 2023, 35, 12, 4598–4620. https://doi.org/10.1021/acs.chemmater.3c00346
- **Ivanchenko M.**, Carroll A.L., Brothers A.B., Jing H. RSC Advances, 2023, 13, 31569-31577. https://doi.org/10.1039/D3RA06712B
- **Ivanchenko M.**, Nooshnab V., Myers A. F., Large N., Evangelista A. J., Jing H. Nano Res., 2022, 15 (2), 1579-1586. https://doi.org/10.1007/s12274-021-3705-4
- **Ivanchenko M.**, Evangelista A. J., Jing H. RSC Advances, 2011, 11, 40112-40119. https://doi.org/10.1039/D1RA06109G
- **Ivanchenko M.**, Jing H. Nanoscale Adv., 2022, 4, 2632-2636. https://doi.org/10.1039/D2NA00126H
- **Ivanchenko M.**, Carroll A.L., Brothers A.B., Jing H. Nanoscale Adv., 2023, 5, 88-95, https://doi.org/10.1039/D2NA00606E
- Evangelista A. J., **Ivanchenko M.**, Jing H. Nanomaterials, 2021, 11(12), 3237; https://doi.org/10.3390/nano11123237
- Evangelista A. J., **Ivanchenko M.**, Myers A. F., McAnulty L. N., Payne G. K. M., Jing H. J. Mater. Chem. C, 2020, 8 (17), 5692-5703. https://doi.org/10.1039/d0tc00902d
- Raevskaya, A. E., **Ivanchenko, M. V.**, Skoryk, M. A., Stroyuk, O. L. J. of Luminescence, 2016, 178, 295-300. https://doi.org/10.1016/j.jlumin.2016.06.011

- Raevskaya, A. E., **Ivanchenko, M. V.**, Stroyuk, O. L., Kuchmiy, S. Y., Plyusnin, V. F. J. Nanopart. Res., 2015, 17 (3), 1-12 https://doi.org/10.1007/s11051-015-2953-1
- **Ivanchenko M. V.**, Rayevska O. E., Stroyuk O. L., Kuchmiy S. Y. Materials Research Society Symposium Proceedings, 2013, 1617 (1), 163-169. https://doi.org/10.1557/opl.2013.1180.

Conferences & Presentations

- Oral presentation. The First Annual Mid-Atlantic Regional Microscopy & Microanalysis Symposium. UD, Newark, DE, *May 2023*
- Poster presentation. ACS Spring 2023 National Meeting "Crossroads of Chemistry", Indianapolis, IN, USA, *March 2023*
- Poster presentation. Department of Chemistry, GMU, Fairfax, VA, USA. *September 2022*
- Poster presentation. Department of Chemistry, GMU, Fairfax, VA, USA. *May 2022*
- Poster presentation. Department of Chemistry, GMU, Fairfax, VA, USA. *November 2021*
- Oral presentation. International Undergraduate and Graduate Students Conference "Modern Problems of Chemistry" Department of Chemistry, KNU, Kyiv, Ukraine. *May 2013*

Honors & Awards

- Outstanding PhD Student Award, Department of Chemistry, GMU, *October 2023*
- Summer 2023 Fellowship, Office of the Provost, GMU, *May 2023*
- Strategic Initiative Travel Award, MSA Student Council, *April 2023*
- Graduate Student Travel Fund, Office of Graduate Education, GMU, *January 2023*
- 2022-23 Doctoral Research Scholarship, Office of the Provost, GMU, *July 2022*
- Graduate Student Teaching Award, Department of Chemistry, GMU, *May 2022*
- International Undergraduate and Graduate Students Conference "Modern Problems of Chemistry" - *2nd diploma*, *May 2013.*

Professional Affiliation

Member, American Chemical Society
Member, Microscopy Society of America
Member, Microanalysis Society