

Dr. Olha Popova

popovao@ornl.gov • LinkedIn • Google Scholar • ORCID

RESEARCH INTERESTS

nanotechnology, neuromorphic computing, thin films, electronic and magnetic properties of onsurface architectures, memristive materials, nanoelectronics, practical innovation, surface polymers, thin film coatings, bionics, medical devices

EDUCATION

University of Basel, Basel, Switzerland	2015-2019
PhD	Experimental and Applied Physics
Taras Shevchenko National University of Kyiv, Ukraine	2013-2015
Masters degree	Radiophysics and Applied Physics
Taras Shevchenko National University of Kyiv, Ukraine	2009-2013
Bachelor degree	Radiophysics and Electronics

RESEARCH EXPERIENCE

Oak Ridge National Laboratory | *Postdoctoral research Associate* Nov 2021 - Present

- Device characterization with the use of advanced surface sensitive techniques
- Neuromorphic materials characterization for future implementation in ECRAM devices

Catalysis Research Center | *Researcher* 2020 - 2021

- Installation and customization of new laboratory equipment
- Performed basic experiments for the functional nanomaterial investigations (thin films, clusters deposition)

University of Basel and Paul Scherrer Institute | *Research Assistant* 2015 - 2019

- Lead seven different research projects in surface catalysis, onsurface polymers, materials optical measurement and modeling (metals and chemical compounds deposition/etching and surface characterization);
- Main proposer of 6 and coproposer of 11 accepted beamtime proposals at the Swiss Light Source synchrotron; participation in more than 25 beamtimes.
- Effectively worked with crossfunctional teams including a mechanical engineers, an electronic engineers, beamline scientist, theoretical physicists and synthesis chemists
- Technical research industry oriented project in collaboration with a startup company granted by Comission for Technology and Innovations (CTI Federal Department of Economic Affairs, Education and Research EAER)
- Technical training at TOFwerk AG (Thun, Switzerland) for development, installation and operation of the customized laboratory equipment.
- Organized, built and maintained lab instruments and equipment
- Generated complete, accurate and concise documentation using electronic systems and laboratory notebook

Paul Scherrer Institute, Villigen, Switzerland | *Intern* 2014 - 2015

- Research projects concerning magnetic properties of organometallic compounds on a ferromagnetic surface in UHV
- Developed and wrote an internal report detailing the experimental procedure

Nanosurf Lab, Academy of Science of Czech Republic | *Intern* 2014

- Learning SPM technique on the base of qPlus sensors
- Attended lab group meetings and developed presentations

Taras Shevchenko National University of Kyiv, Ukraine | *Research Associate* 2013

- Developed and build novel nanopositioning micro system on the base of piezoelectrics (First place at all Ukraine competition among young scientist in the section 'Instrument development')
- Successfully developed an advanced nanopatterning technique for light trapping in silicon solar cells

OUTREACH

AReMS *web, communication, community engagement* 2023-now

Tennessee Valley Chapter, AVS *web, communication, community engagement, project lead* 2022-now