**Yuri A. Mezenov**

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<https://www.researchgate.net/profile/Yury-Mezenov>

**SUMMARY**

Final-year PhD student (PhD defense will be in the end of November, 2022). Skilled in a range of scientific areas including inorganic and organometallic chemistry, materials science and nonlinear optics. Experienced in managing research projects, from inception to publication.

Education

09/2018 – 11/2022 *ITMO University, Saint Petersburg, Russia*

PhD in Optics

Thesis: The interaction of laser with tunable metal-organic frameworks: structural modification and non-linear optical emission

09/2015 – 08/2017 *Saint Petersburg State University, Russia*

Master’s Degree in Chemistry

Thesis: Smart coatings for glass based on vanadium dioxide nanoparticles

09/2011 – 08/2015 *Southwest State University, Kursk, Russia*

Bachelor’s Degree in Chemical Engineering

Thesis: Obtaining nickel-chromium alloy’s powder using electro-erosion dispersion method

**WORK EXPERIENCE**

09/2018 – Present Researcher

*The Department of Physics and Engineering, ITMO University, Saint Petersburg, Russia*

11/2021 – 09/2022 Invited researcher

*Jean Lamour Institute,* *University of Lorraine, Nancy, France*

03/2021 – 08/2021 Intern

*Jean Lamour Institute,* *University of Lorraine, Nancy, France*

10/2017 – 08/2018 Quality Control Chemist

*GalenoPharm (pharmaceutical company), Saint Petersburg, Russia*

**RESEARCH EXPERIENCE**

09/2018 – Present Researcher

*ITMO University, Saint Petersburg, Russia*

*Jean Lamour Institute,* *Université de Lorraine, Nancy, France*

The influence of high-intensity radiation on metal-organic frameworks: fundamental and applied aspects of these processes. Synthesis of new and well-known 2D and 3D metal-organic frameworks, as well as the creation of new functional materials based on them under laser and electronic beam irradiation. In-situ investigation of fundamental aspects of growing nanoparticles at nano-level. Member of the Russian-French research group on porous materials.

09/2015 – 08/2017 Researcher

*Saint Petersburg State University, Russia*

Obtainment of nanoscale objects and characterization of them via various methods (powder X-ray diffraction, infrared and raman spectroscopies, thermogravimetric analysis, differential scanning calorimetry, laser diffraction particle sizing and scanning electron microscopy). Development of methods for obtaining nanoparticles of vanadium dioxide with a given crystal structure using the hydrothermal method and their further modification with organic and inorganic compounds. Creation and optimization of approaches to obtaining coatings for glass based on vanadium dioxide nanoparticles.

09/2013 – 08/2015 Researcher

*Southwest State University, Kursk, Russia*

Recycling of nickel-chromium waste using electro-erosion dispersion in an aqueous solution.

**INTERNSHIPS & GRANTS**

11/2021 – 07/2022 Visiting PhD student

03/2021 – 08/2021 *Jean Lamour Institute,* *Université de Lorraine, Nancy, France*

12/2020

Recipient of a scholarship from the Ministry of Science and Higher Education of the Russian Federation to study abroad (2021, 2022) and the Ostrogradski scholarship from the French government (2020).

12/2019 Visiting PhD student

*Karolinska Institutet, Stockholm, Sweden*

09/2019 – 09/2022 Awarded a grant (no. 20-33-90318) by the Russian Foundation for Basic Research to

study ‘Fundamental features of nucleation and growth of nanoparticles in porous

coordination polymers.’

**PUBLICATIONS & CONFERENCES**

Since 2018 I have had results published in a number of top-rated scientific journals including *Advanced Science, Nanomaterials, Angewandte Chemie International Edition* and *Nanoscale.* For more details please visit my personal account on ResearchGate.

I have been an active participant in scientific conferences since 2016. In the past year I presented scientific results at the METANANO and EuroMOF conferences.

**ADDITIONAL SKILLS**

Languages

* Russian (native)
* English (advanced)

Mastery of the following analytical methods at both the theoretical and practical levels

* dynamic light scattering on particles (Mastersizer 3000)
* FTIR spectroscopy (IRAffinity-1)
* infrared spectrophotometry (UV-3600)
* energy dispersive spectrometry (Shimadzu EDX-800P)
* high-performance liquid chromatography (Shimadzu Prominence LC-20)
* raman spectroscopy
* scanning electron microscopy
* transmission electron microscopy
* monocrystal and powder X-ray diffraction analysis

Software

* OriginPro
* Gatan Microscopy Suite 3
* ImageJ
* VESTA
* MS Office