



UNIVERSITY
OF WARSAW

Faculty of Chemistry



Work offer for PhD candidates

A work offer for a PhD student in the project OPUS-29

„Analysis of multiphase transformations of secondary atmospheric aerosols using machine learning” funded by the Polish National Science Centre.



NATIONAL SCIENCE CENTRE
POLAND

PI: Prof. Dr hab. Tomasz Gierczak (email: Gierczak@chem.uw.edu.pl),
University of Warsaw, Faculty of Chemistry, Warsaw, Poland.

Terms of employment

A monthly stipend of ca. PLN 5000 (gross, low tax-rate) for 4 years, after passing the exam into the Doctoral School of Exact and Natural Sciences at the University of Warsaw (registration closes May 21th, 2026).

We offer participation in an interesting research project related to climate change and atmospheric chemistry, the opportunity to be part of a productive and dynamic research team, and the opportunity to present at domestic and international conferences.

This project aims to advance the current understanding of the climate and air quality impacts of monoterpene secondary organic aerosol (SOAs) by integrating new experimental data with chemical modeling. This research will investigate the multiphase atmospheric chemistry of SOA formed from α -pinene, the most abundant monoterpene in the atmosphere, focusing on oxidation processes in clouds and deliquesced aerosols. This interdisciplinary project combines atmospheric, physical, and analytical chemistry with cheminformatics and will be carried out through international collaboration between experimental and modeling teams.

The proposed work directly addresses long-standing uncertainties in multiphase aerosol chemistry and is expected to advance the predictive capabilities of current atmospheric models.



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Requirements

- Master's degree in analytical, organic, or physical chemistry, or related
- Practical experience working in a chemical laboratory
- Good command of English or Polish language
- Self-reliance, ability to quickly acquire new skills, and strong motivation for professional development

Additional skills that will be greatly appreciated

- Hands-on experience with analyzing organic compounds with gas and liquid chromatography coupled with mass spectrometry: sample preparation, method development and optimization, and data analysis
- Experience with non-target analysis methods, and analyzing the mechanisms of chemical reactions of organic compounds
- Basic knowledge about: chemical kinetic modeling and structure-activity relationships, multiphase chemical models utilizing air-water partitioning coefficients, and interactions of organic molecules with electromagnetic irradiation

Recruitment procedure

The candidate shall submit the application for admission to the Doctoral School of Exact and Natural Sciences at the University of Warsaw only in the system of **Internet Recruitment of Candidates (IRK)** - <https://szkolydoktorskie.uw.edu.pl/en/recruitment-2026-2027/?school=sdnsip>