NCN RESEARCH SCHOLARSHIP - JOB OFFER

OPUS-29 National Science Centre, Poland (NCN), proposal no. 2024/55/B/ST5/02894

Position code: OPUS-29 / MSc-1 / EN

Position: Student (NCN scholarship holder)

Principal Investigator: Dr. hab. Michał Wójcik

Host institution: Laboratory of Synthesis of Organic Nanomaterials and Biomolecules, Faculty of Chemistry, University of Warsaw

Project title:

Advanced structural control and long-range organization of magnetic and magnetically doped nanoparticles in liquid crystal systems for adaptively tuned, multi-stimuli responsive reconfigurable materials

About the project

The RESPO-MAG project addresses the synthesis and study of a new class of hybrid magnetic materials in which magnetic nanoparticles (including SPIONs, Fe, Co, Mn-doped ZnO) are coated with functional organic ligands: pro-mesogenic (liquid-crystalline), photoswitchable (spiropyrans) and supramolecular (crown ethers). The goal is to obtain long-range ordered thin-film systems capable of reversible reconfiguration under temperature, UV light and chemical stimuli — with applications in spintronics, quantum technologies and optomagnetic materials. The project is carried out in collaboration with the group of Prof. Vasily Temnov (Institut Polytechnique de Paris, CNRS).

About the position

We are seeking a student to take part in the synthetic and analytical workstream of RESPO-MAG. The position covers the synthesis of organic precursors and simpler ligand building blocks together with routine spectroscopic characterization of the obtained compounds. The position offers a natural route to undertake an MSc thesis in the PI's group.

Scholarship amount: PLN 3,000 per month (NCN research scholarship)

Funding period: up to 36 months (contract granted for periods of up to 12 months with possibility of extension, total maximum 36 months within the project)

Scope of duties

- synthesis of organic precursors and simpler functional ligands relevant to the project (core compounds for pro-mesogenic ligands, anchoring group fragments);
- routine physicochemical characterization: TLC, FT-IR, UV-Vis, fluorimetry, NMR (sample preparation);
- compound purification by column chromatography (FCC) and crystallization;
- maintaining laboratory documentation (lab notebook, spectra and results archiving) to ensure reproducibility;

- supporting PhD students and the postdoc in ongoing synthetic work;
- participation in weekly group meetings and internal presentations of results.

Mandatory requirements

- status of a 1st-cycle (BSc, from year 3) or 2nd-cycle (MSc) student in chemistry or a related field (mandatory under the NCN Regulations for awarding research scholarships);
- basic hands-on experience in organic synthesis techniques (laboratory courses, BSc thesis, student projects);
- basics of FT-IR, UV-Vis and NMR spectra interpretation;
- ability to maintain orderly laboratory documentation;
- good command of English (reading scientific literature);
- high motivation and ability to organize laboratory work independently.

Preferred qualifications (additional assets)

- experience with multi-step synthesis (e.g. BSc thesis in organic chemistry);
- experience with liquid or column chromatography;
- prior experience in a research group, scientific student associations, undergraduate research projects;
- documented achievements (awards, scholarships, student conference contributions).

What we offer

- place of work: Faculty of Chemistry, University of Warsaw, Pasteura 1;
- NCN research scholarship of PLN 3,000 per month;
- funding period: up to 36 months within the project;
- scholarship start: from 1 July 2026;
- opportunity to carry out an MSc thesis in the PI's group;
- funding for participation in national and international conferences;
- work in an experienced team with a publication record in leading journals (ACS Nano, Adv. Mater., Angew. Chem. Int. Ed., Small, among others);
- opportunity to participate in the international collaboration with the partner group (Institut Polytechnique de Paris).

Required documents

- cover letter (max. 1 page) explaining motivation and interest in the project topic;
- academic CV including educational background and prior research experience;
- summary of scientific achievements (publications, conference contributions, awards, internships, participation in research projects);
- confirmation of student/PhD student status (certificate from the dean's office or doctoral school) - may be provided before signing the scholarship agreement;
- signed consent for processing personal data for recruitment purposes Klauzula-informacyjna-przy-rekrutacji-do-pracy_11_2019_EN.docx .

Deadline and submission procedure

Application deadline: **17 May 2026 (end of day).**

Applications should be submitted electronically to: **mwojcik@chem.uw.edu.pl** with the position code and the candidate's surname in the subject line, e.g. "OPUS-29 [CODE] - Smith".

All documents should be combined into a single PDF file.

Recruitment procedure and evaluation criteria

The competition is conducted in accordance with the NCN Regulations for awarding research scholarships in research projects funded by the National Science Centre, Poland (Council of NCN Resolution no. 25/2019 of 16 May 2019, as amended).

Applications are evaluated in two stages: (1) formal evaluation - completeness of documents and fulfilment of formal requirements; (2) substantive evaluation by a recruitment committee appointed by the PI (committee of at least three members including the PI and two persons indicated by the PI, holding a PhD or higher academic degree, with research experience relevant to the project area).

Substantive evaluation criteria: (1) scientific achievements of the candidate, including publications, conference contributions, awards, prior research work (50%); (2) substantive and technical competences relevant to the position (30%); (3) prior research scholarships, awards and distinctions (10%); (4) the cover letter and a possible interview (10%).

Selected candidates may be invited to an interview (in person or remotely).

Candidates will be informed of the results of the competition by e-mail within 14 days of the application deadline.

The competition may be cancelled without giving reasons or may be left without a final selection.