

## FORM FOR EMPLOYERS

INSTITUTION: Institute of Organic Chemistry of the Polish Academy of Sciences

CITY: Warsaw

POSITION: Post-doc

DISCIPLINE: Chemistry

POSTED: 09.10.2024

EXPIRES: 25.10.2024, 23:59

WEBSITE: <https://www.icho.edu.pl/en/>

KEY WORDS: *organocatalysis, asymmetric synthesis, automation, chemical robotics*

**Project/Grant title:** *“Autonomous discovery, development and optimization of organocatalytic reactions through intelligent chemical robots”*

**Number of positions available:** 1

**Researcher profile:** R2

### **Job description:**

Chirality plays an important role in nature, as molecules of different chirality can exhibit vastly different properties. A large part of the field of chemical catalysis, and in particular of organocatalysis, is devoted to the selective synthesis of chiral molecules. However, despite the huge progress made in recent decades, we are still far from being able to efficiently design the synthesis of any chiral molecule. Usually, the development of new (organo)catalytic methods requires extensive and time-consuming optimization, which is usually performed manually. Therefore, new enabling technologies are needed to speed up this process. Automation and robotic approaches have started to play an important role in the chemical sciences. The use of automated approaches can speed up the research process, make the experiments more repeatable and free researchers from repetitive tasks, so they can focus on the design of new transformations. In this project, we aim to investigate the field of organocatalysis with chemical automation and robotics that will ultimately be guided by artificial intelligence methods.

The successful Candidate will work on several goals:

- the design and construction of high-throughput automated robotic platform
- automated optimization of selected transformations
- autonomous searching for new transformations with robotic platform

- synthesis of starting materials, catalysts, and building blocks
- mechanistic investigation of selected transformations as well as probing their scope and limitations
- **Envisaged job starting date: 01.02.2025 r.**

#### **Offer:**

- **Terms of employment:** Salary: 10,000 PLN (including employer costs, ~8300 PLN gross), 9 month contract (with possibility to extend the contract)
- **Benefits:** *private medical care package, co-financing of sports cards*
- **Career development opportunities:** *Possibility of working in a young, dynamic team with access to top research infrastructure. During the project, the prospective Postdoc will acquire skills and experience in chemical robotics, which are essential in the pharmaceutical and chemical industries. As well as the opportunity for further professional development at the IOC PAS.*

#### **Requirements:**

##### **required competences**

- PhD in organic chemistry
- Have practical experience in synthetic organic chemistry
- Analytical, methodological problem-solving skills and logical, objective thinking
- Be highly motivated and have a strong commitment to research
- Be willing to play a role in keeping the laboratory running by assuming a share of group responsibilities
- Have willingness to supervise and support junior co-workers
- Experience in organocatalysis, especially in chiral phosphoric acid catalysis

##### **desirable competences**

- any programming skills is a plus and/or experience with DIY projects

##### **Candidate evaluation criteria:**

- scientific achievements measured by the quality and quantity of scientific publications or granted/pending patents
- Candidate's professional experience
- creativity and independence in conducting research
- career mobility (research internships, work in industry, change of scientific profile)
- ability to work in a team/ability to transfer knowledge/managerial predispositions
- awards or distinctions
- opinions about the Candidate contained in the letters of recommendation
- language knowledge enabling conducting scientific research

**The evaluation of Candidates will be based on the submitted documents.**

**List of required documents:**

- Candidate's *Curriculum Vitae*
- research summary, including a list of publications, ongoing projects, etc.
- diplomas and certificates confirming qualifications, completed courses, completed training, etc.
- cover letter
- two letters of recommendation and references from previous employers/supervisors

Along with the required documents, please send a scan of a signed consent to the processing of personal data available at: <https://www.icho.edu.pl/en/cooperations/career/>

**Deadline for submitting applications:** 2024-10-25 23:59

**Competition settlement date:** 2024-11-08

**The form of submitting applications:** e-mail: [rekrutacja@icho.edu.pl](mailto:rekrutacja@icho.edu.pl)

**Additional information:**

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**ATTENTION! In the title of the e-mail, please enter "Recruitment – Jaroslaw Granda"**