

## FORM FOR EMPLOYERS

INSTITUTION . Jerzy Haber Institute of Catalysis and Surface Chemistry, Polish Academy of Sciences

CITY . Krakow

POSITION Research Assistant (post-doc)

DISCIPLINE .

- Chemistry > physical chemistry;

POSTED December 1<sup>st</sup> 2025

EXPIRES December 31<sup>st</sup> 2025, 3:00 pm GMT+1

WEBSITE [www.ikifp.edu.pl](http://www.ikifp.edu.pl)

KEY WORDS nanoparticles for drug delivery, functionalization of nanoparticles, protein corona, biological membrane, oncological and neuroprotective drugs

DESCRIPTION (field, expectations, comments):

Jerzy Haber Institute of Catalysis and Surface Chemistry Polish Academy of Sciences, Krakow, Poland invites applications for a position of a Research Assistant (post-doc) in the “Adsorption” research group. The successful Candidate will take part in research activities, which are a part of the NCN (National Science Centre) research project OPUS 21 2021/41/B/ST5/02233 “Structure and Function of Protein Corona at the Nanoparticles Interface”.

The candidates who meet the conditions stated in the act “Ustawa o Polskiej Akademii Nauk” dated 30 April 2010 (Dz.U. 2018 poz. 1475 z póź. zm.), art 89. Ust. 4 for the position of Research Assistant are encouraged to apply for the position.

The successful Candidate, under a supervision of the project leader, will work on developing active nanocarriers based on nanoparticles for oncological and neuroprotective therapy. The project implementation includes extensive cooperation with research centers in Poland and abroad.

The Research Assistant will be responsible for:

- Development of active nanocarriers based on nanoparticles for oncological and neuroprotective therapy;
- Conducting experimental studies on the characteristics of the model membrane using a wide range of physicochemical methods;

- Controlling the effectiveness of nanoparticle internalization in model membrane systems;
- Control of the structure and function of the protein corona for selected nanocarriers and its impact on the effectiveness of internalization in dedicated cell systems;
- Archiving and processing of experimental data, as well as preparation of publications in high-impact factor journals;
- Handling bibliographic databases (eg. Mendeley);
- Cooperation with other project contractors and supervision over M.Sc. and Ph.D. students.

### **Required education level:**

Ph.D. in one of the following disciplines: chemistry, chemical engineering, biochemistry, biophysics, materials engineering, or related.

### **Skills/Qualifications**

- Experience in conducting scientific research in the field of physicochemistry, especially related to the stability of colloidal systems (proteins, peptides, polyelectrolytes), confirmed publication record the journals from the Journal Citation Reports lists (0-10 points). The minimum required: 3.
- Experience in the field of advanced physicochemical methods for characterization of nanoparticle systems (among others DLS, FTIR, NMR, CD, SAXS)(0-10 points). The minimum required: 3.
- Experience in experimental studies on the characteristics of the structure of functional layers (among others AFM, TEM, SEM, SPR, QCM-D, EIS, CV) (0-10 points). The minimum required: 3.
- Knowledge of programming basics ( Python, Matlab, Linux) will be an asset (0-5 points)
- Fundamental knowledge of the theoretical description of the protein systems. Knowledge of computational techniques (Molecular Dynamics Simulations) will be an asset (0-5 points).
- Experience as a leader (manager) of a research project (0-5 points).

The minimum number of points of the successful Candidate: 30.

### **Specific requirements:**

An application should contain:

- a letter of application;
- “Consent to the processing of personal data for the needs necessary to carry out the recruitment process” in accordance with the Act of 29 August 1997 on the protection of personal data (t.j. Dz. U. z 2016 r. poz. 922, z 2018 r. poz. 138, 723.) [[FORM](#)] and “Information obligations – recruitment of a perspective employee/collaborators”

confirming acquainting with its content [[FORM](#)] (both documents filled and signed by the Candidate);

- a copy of Ph.D. degree certificate;
- full CV (including information on maternal leaves, voluntary work, and periods of work in the industry);
- at least two current opinions on the Candidate given by previous supervisors, preferentially an independent researcher;
- list of scientific achievements (scientific papers, research and implementation projects, grants, conferences etc.).
- report on the Candidate's scientific interests and research aims taking into consideration reference to the subject of the project (an A4 page).

**Languages:**

Fluent in written and spoken English;

**Research experience:**

- at least 4-10 years of experience in the field of physical chemistry of colloidal systems.
- working knowledge of nanomaterials physicochemical characterization methods.

**Remuneration:**

The gross salary **8000** PLN/month (roughly **1700** Euro/month) depending on the Candidate's experience.

During the employment period, the candidate shall not receive any other remuneration from the funds allocated as direct costs of research projects financed under NCN calls and from another employer pursuant to an employment contract, including an employer with its registered office outside of Poland.

**Eligibility criteria:**

- Research experience documented by scientific publications in journals enlisted in JCR or patents and conference presentations.
- Ph.D. in one of the following disciplines: chemistry, chemical engineering, biochemistry, biophysics, materials engineering, or similar obtained not earlier than 7 years before the engagement in the project (this period might be longer due to family reasons (according to NCN rules)).\*

\* A new postdoc contract is reserved for a person who has obtained their Ph.D. within 7 years of joining the project. This period may be extended by a period of long-term (in excess of 90 days) documented sick leaves or rehabilitation leaves granted on account of 13 being unfit to work. In addition, the period may be extended by the number of months of childcare leave granted pursuant to the Labour Code and, in the case of women, by 18 months for every child born or adopted, whichever manner of accounting for career breaks is preferable.

- Ph.D. degree has been awarded by another institution than the one planned to employ them at this post or they have completed a continuous and evidenced post-doctoral fellowship of at least 10 months in another institution than the host institution for the project and in another country than the one in which they have been conferred a Ph.D. degree.

### **Selection process:**

Applications should be sent in electronic form to: [jobs@ikifp.edu.pl](mailto:jobs@ikifp.edu.pl) with the subject title „**Adsorption– post-doc – KSN 10/2025**”

Deadline for applications: **31.01.2025 at 15:00 GMT+1**. The competition will be settled by 07.01.2026. The candidates will be notified of the results.

The employment will be proceeded with accordance to the rules of Labour Code for 6 months.

If you are interested, please contact the project manager, who can provide additional information: prof. Barbara Jachimska, e-mail: [barbara.jachimska@ikifp.edu.pl](mailto:barbara.jachimska@ikifp.edu.pl)

In the case of candidates with equivalent qualifications or a need for further clarification of information provided selected candidates will be asked to participate in an on-line interview.

### **Additional information**

The Institute has been adapted to the needs of the disabled. The Institute does not provide accommodation.

Jerzy Haber Institute of Catalysis and Surface Chemistry, Polish Academy of Sciences, awarded the HR Excellence in Research Award by the European Commission in recognition of ongoing commitment to adopt the principles of The European Charter for Researchers (ECR) and a Code of Conduct for the Recruitment of Researchers (CCRR) fully supports and applies open, transparent and merit-based recruitment (OTM-R) procedures. The Institute is dedicated to implementing and strengthening the [OTM-R policy](#) as one of the pillars of the ECR and CCER and one of the crucial components of the Human Resources Strategy for Researchers ([HRS4R](#)).