

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

POSTED December 12th 2024

EXPIRES January 13th 2025, 3:00 pm GMT+1

WEBSITE www.ikifp.edu.pl

KEY WORDS multifunctional surfactants, adsorption, aggregation, nanostructures, polyelectrolyte complexes

DESCRIPTION (field, expectations, comments):

Jerzy Haber Institute of Catalysis and Surface Chemistry PAS invites applications for an Assistant (post-doc) in the Soft Matter Nanostructures group. 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 Assistant are encouraged to apply for the position.

The candidate will participate in research conducted in the Soft Matter Nanostructures group on multifunctional surfactants as part of the OPUS 23 research project "New generation of multi-charge surfactants of dedicated functionality" no. 2022/45/B/ST4/01184. The project concerns the development of the scientific background of a novel strategy to design and fabricate new multicharge surfactants of dedicated functionality and evaluate their usefulness. A specific focus of is based on the research hypothesis that it is essential to ascertain a link between the surfactant molecular architecture and the resulting structures - as the structural parameters and interfacial behavior of the multicharge surfactants - are essential for understanding their adsorption and aggregation properties and a variety of potential applications. Application of the molecular dynamics methods combined with the approach based on the thermodynamic models of multicharged surfactant adsorption can provide

insight into some experimentally observed phenomena and the basis for developing novel materials designated for the desired usage.

In particular, the applicant responsibilities will include:

- determination of surfactants' adsorption properties;
- determination of physicochemical properties of polyelectrolyte/surfactant complexes;
- synthesis and characterization of nanoparticles with multicharge surfactants as capping agents;
- analysis of properties of magnetic surfactants;
- preparing scientific publications.

Required education:

The candidate should have a doctoral degree in chemistry, chemical engineering or related disciplines.

Skills/qualifications:

- PhD degree in chemistry, chemical engineering or related disciplines;
- knowledge of surfactant characterization methods;
- knowledge of thermodynamic models of surfactant adsorption;
- knowledge of synthesis and nanoparticle characterization methods;
- knowledge of the English language;
- ability to conduct independent scientific work;
- The candidate must meet the requirements specified in the NCN regulations governing the principles of employment for the postdoctoral position in the OPUS competition (22rd edition).

Specific requirements:

1. An application.
2. Completed and signed "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 [\[FORM\]](#).
3. A copy of scientific degree certificate.
4. Full CV (including information on maternal leaves, voluntary work and periods of work in the industry).
5. At least one opinion on the Candidate given by an independent researcher.
6. List of scientific achievements (scientific papers, patent, patent applications, grants, etc.).
7. The Candidate's report on his/her scientific interests and research aims (an A4 page).

Languages:

Good command of the English language in speech and writing.

Research experience:

Minimum 3 years of experience in research in the field of surface chemistry or related field.

Additional information:

Remuneration:

The gross salary is **8200 PLN/month (roughly 1850 Euro/month)**, depending on the Candidate's experience.

Eligibility criteria:

- Documented experience in conducting scientific research in the field of surface chemistry, confirmed by a list of publications in journals from the Journal Citation Reports list (0-10 points). Minimum number of points required: 3;
- Knowledge of surfactant characterization methods and thermodynamic models of surfactant adsorption (0-5 points). Minimum number of points required: 2;
- Knowledge of synthesis and nanoparticle characterization methods (0-5 points). Minimum number of points required: 2.

Selection process:

Applications should be sent in electronic form to: sekretariat@ikifp.edu.pl with the subject title „**Multicharge surfactants KSN 9/2024**”

Deadline for applications: **13.01.2025 at 3:00 pm GTM+1**. The competition will be settled by **31.01.2025**. The candidates will be notified of the results.

The employment will be proceeded in accordance with the rules of the Labour Code for 12 months with a **possible extension**.

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 policy](#)) 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).