



Warsaw 28.05.2019

Recruitment No. 31/2019

Functional Polymers Group

PhD student – scholarship positions. Number of positions available: 1

Job summary: The Functional Polymer group at the Institute of Physical Chemistry PAS Warsaw is offering 1 PhD position within the National Science Center (NSC) **OPUS 15 Project No. 2018/29/B/ST5/02335** entitled “Metal containing polymers for electrocatalysis and electrochemical sensing” (Polimery zawierające jony metali do zastosowań w elektrokatalizie i wykrywaniu elektrochemicznym) (leader dr. Piyush Sindhu Sharma).

Metal-containing polymers are obtained by the incorporation of transition metals into network forming polymer chains, either as main chain constituents or included in side groups. Despite the fact that many functional materials based on metal containing polymers have been reported for development of heterogeneous catalyst, the fundamental knowledge and development of new polymerization techniques with suitable metal containing polymers are still primary concerns.

In the proposed project, we propose the replacement of most commonly used block polymer based catalysts with metal containing conducting polymers, which can provide more efficient electrocatalysis. Moreover, conducting polymers based matrix will be beneficial for the electrochemical immobilization of these metal catalysts on any conducting surface.

The goal of current project is to electrochemically synthesize different heterogeneous catalysts based on metal-containing polymers. In the current project careful tuning of chemical structure of metal-containing polymers will be performed to improve their properties in such a way that they will show electrocatalysis and sensing properties.

Position PhD student (Organic Synthesis/Electroanalytical chemistry)

Responsibilities:

- Syntheses and characterization of structures of different metal containing polymers.
- Electrosynthesis and physico-chemical characterization of metal containing polymers.
- The study of electrocatalytic towards chosen organic synthesis.
- Preparation of scientific publications as well as presentations of the results at scientific and popular science conferences.
- Cooperation with team members.

Requirements:

- Master of Science (or equivalent) degree preferably in Chemistry, Physics or similar sciences. awarded not earlier than three years before the deadline of the present recruitment.
 - The average grade obtained in the course of study is not less than 4.5.
 - Ability to work independently as well as in a group.
 - Basic knowledge of physical chemistry, supramolecular chemistry, organic chemistry, electrochemistry and spectroscopy.
 - Experience in purification and characterization of synthesis products (NMR, FTIR, LC, and HPLC, etc).
 - Basic knowledge of nanotechnology will be appreciated.
 - Proficiency in English speaking and writing.
- **Research Profile:** First Stage Researcher (R1)
 - **Main Research Field:** Supramolecular chemistry, Organic synthesis, Electrochemistry, Polymer chemistry, Computational science

What we offer

- **Benefits:** We offer 4000 PLN per month scholarship financed by the NCN OPUS 15 Project No. 2018/29/B/ST5/02335. The project is scheduled to last 36 months. The position is for 35 months with possible extension of total 36 months in the case of an extension of the project implementation period.

A scholarship agreement will be signed with successful applicants on condition that the Institute of Physical Chemistry signs the grant agreement with NSC.

- **Career development benefits:**
 - Opportunity to work in an interdisciplinary research group with strong support from chemistry and physics group within the Institute– see details on the website: <http://groups.ichf.edu.pl/sharma>
 - Pursuing PhD degree
 - The researcher will have the opportunities, such as participation in project focused on applied research, attending and presenting research results in nationals and Internationals conferences, and visits in international partner laboratories.
 - Participation in Erasmus+ projects
- . **For additional job details:** Contact psharma@ichf.edu.pl

- **Application Details:**

- **Application Deadline: 21th of June, 2019**
 - **How to Apply:** Send an application directly to rekrutacja@ichf.edu.pl;
IMPORTANT: email title “Recruitment 31/2019”
 - Additionally, to be eligible, applicants are required to submit simultaneously their application to the online recruitment system **of Warszawska Szkoła Doktorska Nauk Ścisłych i BioMedycznych** [Warsaw Doctoral School “Warsaw-4-PhD” <http://warsaw4phd.pl>] **between 4th and 21st of June 2019** (the link will be active at the beginning of June).
- **Required Languages:** English, **Language level:** good

Recruitment procedure: Complete application should include the following documents:

- scientific curriculum vitae, including a list of scientific achievements (scholarships, publications, patents, conference presentations, etc.).
 - motivation letter
 - recommendation letter
 - a transcript of the grades/credits received during the last stage of studies and grade point average
- The best applicants who meet the competition requirements will be invited for an interview (on-site or online) for the „**Warszawska Szkoła Doktorska Nauk Ścisłych i BioMedycznych**” (**Warsaw Doctoral School**) will be carried out between **1-12 July 2019** at the IPC-PAS).

- The scholarship will be awarded in accordance with the NSC regulations: „Regulamin przyznawania stypendiów naukowych w projektach badawczych finansowanych ze środków narodowego centrum nauki”
https://www.ncn.gov.pl/sites/default/files/pliki/uchwaly-rady/2016/uchwala96_2016-zal1.pdf
and in accordance with the Employment policy of the Institute of Physical Chemistry PAS (http://ichf.edu.pl/employment_policy.pdf)
- The Commission will take into account the following criteria:
 - a) competences of candidates for specific tasks in a research project,
 - b) previous scientific achievements of candidates,
 - c) awards and distinctions of the candidate resulting from the conducted research.
- The commission will evaluate applications on a point scale.
- The results of the competition are made public.
- The competition will be settled after the Doctoral School recruitment results are published.
- Scheduled date of starting work within the Project: **October 1st, 2019**

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