



INSTYTUT MASZYN PRZEPŁYWOWYCH

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JOB OFFER IN INTERNATIONAL M.ERA.NET PROJECT

HerAqua: Innovative nano-carbon based electrochemical monitoring of female hormones.

Financed by the National Science Centre and realized in the Laboratory of Functional Materials IMP PAN and coordinated by K. Siuzdak

[<https://www.ncn.gov.pl/sites/default/files/listy-rankingowe/m-era-2024-siuzdak-pl.pdf>]

PhD Student/Scholar

Requirements:

- Knowledge in the fields of materials engineering and/or nanotechnology and/or electrochemistry, as well as research techniques such as UV-Vis and Raman spectroscopy, SEM, AFM, cyclic and linear voltammetry.
- A Master's degree in chemistry, physics, nanotechnology, mechanics, materials engineering, or related fields, or enrollment as a final-year student in one of these disciplines is highly welcome.
- Aptitude for experimental laboratory work.
- Ability to communicate in English, both spoken and written, at least at an intermediate level.
- Accuracy, passion for science, and openness to taking on new challenges.
- Ability to work in a team.
- Experience with data analysis software (e.g., Origin) will be an additional asset.
- Previous scientific activity, such as participation in science festivals, conferences, summer schools, or scientific publications, will be a plus.

Working conditions:

- Salary before mid-term evaluation is 4400 PLN gross, and after mid-term evaluation 5340.90 PLN gross.
- Implementation of doctoral research in an active research group, and cooperation with scientists from numerous national and international teams.
- Access to unique research facilities (including those for electrochemical-hydrothermal synthesis and material characterization using various spectroscopic techniques).
- Opportunity for an internship at a foreign research unit and to gain extensive experience through close collaboration with scientific teams from the University of São Paulo in Brazil, the National Institute of Materials Physics in Romania, and MICRUX FLUIDIC in Spain—institutions participating in a scientific consortium under the M.ERA-NET project.
- Presentation of research results at national and international conferences and in scientific publications.

Scope of work:

- Development of methods for fabricating carbon electrode materials, including electrochemical synthesis of MXene-type materials and carbon quantum dots.
- Biofunctionalization for selected hormones in artificial body fluids such as saliva, sweat, and serum, and investigations towards the use of the resulting structures as electrochemical sensors for detecting selected hormones.
- Characterization of electrode materials using various solid-state physics and electrochemical techniques (linear voltammetry, chronoamperometry, impedance spectroscopy).
- Active participation in the preparation of publications and conference abstracts.

If you are interested, please send your CV including your scientific achievements and a motivation letter to the following address: ksiuzdak@imp.gda.pl, do 31.08.2025 r.

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