ANNOUNCMENT OF AN OPEN POSITION OF A DOCTORAL SCHOLARSHIP RECIPIENT UNDER THE NCN MAESTRO 15 RESEARCH PROJECT „PYROLYSIS-INTEGRATED BIOREFINERIES FOR HOLISTIC WASTE UPCYCLING"

Department: Silesian University of Technology (SUT), Faculty of Energy and Environmental Engineering, Department of Technologies and Installations for Waste Management
Location: Konarskiego Street 18, Gliwice, Poland
Project Title: Pyrolysis-Integrated Biorefineries for Holistic Waste Upcycling
Funding: MEASTRO 15, National Science Center (NCN) Poland
Grant Number: UMO-2023/50/A/ST8/00512
Internal Grant Number: 08/030/PBU24/0141
Position: Graduate PhD-student
Scholarship period: 3 years from 1st March 2025
Scholarship amount: 3500 PLN per month before midterm evaluation (18 months) and 5500 PLN per month after midterm evaluation (next 18 months)

Position Overview:
In this project, biochar production from biorefinery waste will be explored as a sustainable and innovative approach for environmental applications. By converting organic residues into carbon-rich biochar through thermochemical processes like pyrolysis, the project aims to address pressing environmental challenges while valorizing waste streams. The resulting biochar, particularly when functionalized, can exhibit enhanced properties such as improved adsorption capacity, pollutant immobilization, and soil amendment capabilities. These features make it a versatile material for applications including heavy metal immobilization, soil remediation, and carbon sequestration. Through this research, the project contributes to advancing circular economy principles and developing scalable solutions for environmental sustainability.

Key Responsibilities / tasks description:
The selected student will participate in the implementation of the tasks of the project "Pyrolysis-Integrated Biorefineries for Holistic Waste Upcycling" (UMO-2023/50/A/ST8/00512), headed by Prof. PŚ Balal Yousaf, PhD. The tasks include:

- Conducting experiments on biochar production, surface functionalization, and characterization using advanced analytical techniques.
- Evaluating the stability and interactions of biochar in contaminated environments.
- Developing and optimizing experimental setups to assess the environmental performance of biochar applications.
- Performing in-depth chemical and physical analysis of soil-biochar-plant interactions, focusing on contaminant mitigation.
- Designing and implementing mechanistic models to predict the behavior of biochar functionalities in dynamic systems.
- Preparing publications and presentations to disseminate research findings in high-impact journals and international conferences.

Position Requirements:

1. PhD-student status
2. A Master's degree in Environmental Science and Engineering, Agriculture, Chemical Engineering, or a related discipline.

Additional Requirements:

1. Strong interest in sustainable energy, waste management, environmental applications.
2. Prior experience in thermochemical processes, biochar production and its use is a plus.

Research Facilities:

The selected candidate will have access to state-of-the-art research facilities, including: Pyrolysis unit, FTIR, py-GCMS and other routine use equipments.

Application Process (deadline and how to apply): 10.02.2025 23:59. All the required documents must be sent to the PI at the following email ID: balal.yousaf@polsl.pl in single PDF file. Awarding deadline: 13.02.2025.

Required documents:

- A cover letter explaining research experience, interests, and fit for the project
- A detailed CV (in English) with a list of publications, in CV, please include RODO clause regarding the consent to the processing of personal data for the purposes of the recruitment process in accordance with the Act of 29 August, 1997 on the Protection of Personal Data (Journal of Laws of 2015, item 2135, as amended)
- Two academic references, who should send recommendation letters directly to the PI at balal.yousaf@polsl.pl
- Information about completed internships, courses and certificates
- Confirmation of Ph.D. student status

The PhD student intern will be selected by a competition committee appointed by the Vice Rector for Science and International Cooperation.

Only shortlisted candidates will be contacted for further steps in the selection process.

This is an excellent opportunity to join an innovative and dynamic research group that is addressing critical challenges in waste management and environmental sustainability. If you are passionate about waste-to-energy technologies and want to contribute to net-zero emission solutions, we encourage you to apply. For any inquiries, please contact: balal.yousaf@polsl.pl.

Incomplete or late offers will not be considered.
Please be informed that we will contact only with the candidates that meet formal requirements.

Informative clause

According to art. 13 of the Regulation on Personal Data Protection of 27 April 2016, please be informed:

1. The controller of your personal data is the Silesian University of Technology with its registered office at .Akademicka 2A St, 44-100 Gliwice,
2. The Silesian University of Technology has appointed the Data Protection Officer who can be contacted via the email address: iod@polsl.pl,
3. Your personal data will be processed in order to carry out the recruitment process for work at the Silesian University of Technology,
4. the basis for the processing of your personal data is art. 221 of the Labour Code and, if you agree to use your CV in future recruitments at the Silesian University of Technology, art. 6 clause 1 point a of the GDPR Regulation shall apply,
5. only employees authorized to process personal data to the necessary extent will have access to your personal data within the organizational structure of the Silesian University of Technology,
6. Your personal data shall not be disclosed to other entities, except in cases provided for by law,
7. Your personal data shall be stored for the period necessary to carry out the recruitment process or for the next 9 months from the end of the recruitment process, if you authorize the processing of personal data in future recruitment processes,
8. You have the right to request the access to the content of your data and, to the extent provided for by applicable regulations, the right to: rectify, delete, limit processing, raise objections; if you consent to the processing of data, you have the right to withdraw your consent at any time,
9. You have the right to lodge a complaint with the President of the Office for Personal Data Protection, if you feel that the processing of your personal data violates the provisions of the General Data Protection Regulation,
10. providing data is voluntary, but necessary to achieve the purposes for which they are collected.

DZIEKAN
prof. dr hab. inż. Mariusz Dudziak