

## JOB OFFER

Position in the project:	PhD student
Scientific discipline:	Agronomy, Environmental protection, Biology
Job type:	scholarship
Number of job offers:	1
Remuneration/stipend amount/month	3 800 PLN of full remuneration cost (scholarship)
Position starts on:	01.08.2023
Maximum period of contract/stipend agreement:	2 months
Institution:	AGH University of Science and Technology; Faculty of Geology, Geophysics and Environmental Protection / Cracow
Project leader:	Prof. Wojciech Franus
Project title:	<p><i>Fly ashes as the precursors of functionalized materials for applications in environmental engineering, civil engineering and agriculture</i></p> <p><b>Project is carried out within the TEAM-NET programme of the Foundation for Polish Science</b></p>
Project description:	<p><i>This TEAM-NET joint project assumes using fly ashes as precursors for the synthesis of novel functionalized materials with the structure of not only zeolites, but also mesoporous silica materials and metal-organic frameworks (MOFs). Then produced materials will be tested for possible applications in agriculture, civil, and environmental engineering. With the implementation of new technologies of coal combustion and flue gas treatment, new types of fly ashes with increased content of unburned carbon (up to 30%) have been produced. Such byproducts will be used in this project for the synthesis of novel zeolite-carbon composites. Previous work related to the use of this type of fly ashes was focused on the separate production of zeolites or activated carbons, which did not fully exploit the potential of the above-mentioned byproducts. Their use as a precursor to the synthesis of a zeolite-carbon-vermiculite composite in this project will also pave the way for developing a novel material to replace vermiculite raw materials in agricultural applications.</i></p>
Key responsibilities include:	<ol style="list-style-type: none"> <li>1. Characterizing of obtained materials (i.e. zeolites, mesoporous materials and MOFs, fertilizers) with advanced instrumental methods.</li> <li>2. Setting up and conducting the laboratory and pot experiments for testing innovative fertilizer formulations with extended release of macro- and micronutrients.</li> <li>3. Soil and plant sampling and sample preparation for analysis.</li> <li>4. Physicochemical, chemical and biochemical characteristics of soil and plant materials collected from experiments.</li> <li>5. Preparing and writing scientific articles for international journals.</li> <li>6. Participation in the international and national conferences.</li> <li>7. Tracking current research trends in the scientific literature.</li> </ol>
Profile of candidates/requirements:	<ol style="list-style-type: none"> <li>1. The candidate must have a confirmed by University status of PhD student in agronomy discipline.</li> <li>2. The candidate must have the skill in using scientific instruments such as: Atomic Absorption Spectrometr, Kjeldahl Apparatus CN, UV-VIS Spectrometer, Microwave Sample Preparation System).</li> </ol>

	<ol style="list-style-type: none"> <li>3. <i>Practical experience and knowledge about methods of laboratory analysis of soils and plants materials.</i></li> <li>4. <i>Ability to perform soil ecotoxicity tests: Phytotoxkit, Rapidtoxkit, Ostracodtoxkit, Microtox).</i></li> <li>5. <i>The candidate must be able to independently write publications for international journals with Impact Factor.</i></li> <li>6. <i>The candidate must have proven experience of working in scientific projects.</i></li> <li>7. <i>Preferentially, the candidate should have an experience in working at agriculture or environmental chemistry laboratories and predispositions for scientific and organizational work.</i></li> </ol>
Required documents:	<ol style="list-style-type: none"> <li>1. <i>Written application for the competition.</i></li> <li>2. <i>Curriculum vitae including (with the note "I consent to the processing of my personal data contained in the offer for the purposes of the recruitment process in accordance with the Personal Data Protection Act of 29.08.1997, Journal of Laws No. 101, item 926, as amended."):</i> <ol style="list-style-type: none"> <li>2.1. <i>A detailed description of the academic degrees and titles, titles of theses (bachelor and master, along with a short description of main achievements in each thesis – up to 300 characters including spaces), years of receiving the degree/academic title, names, and affiliation of supervisors and reviewers of each thesis.</i></li> <li>2.2. <i>List of scientific publications/monographs/books/chapters – including the full list of authors, an indication whether the candidate was the corresponding author of the given publication, title, full title of the journal and 5-year IF.</i></li> <li>2.3. <i>Participation in conferences (list of conferences in which the candidate took an active part, stating whether it was a lecture or a poster), internships abroad (research stays), and most important trainings.</i></li> <li>2.4. <i>List of awards and distinctions, including their range (international/national)</i></li> </ol> </li> <li>3. <i>Recommendation letter from the last employer (direct supervisor).</i></li> <li>4. <i>Copies of obtained diplomas.</i></li> <li>5. <i>Documented information about completed courses and trainings.</i></li> <li>6. <i>Other activities (scientific clubs/circles, student conferences).</i></li> </ol> <p><i>All documents must be prepared in the English language</i></p>
Please submit the following documents to:	<a href="mailto:mierzwa@agh.edu.pl">mierzwa@agh.edu.pl</a> and <a href="mailto:bajda@agh.edu.pl">bajda@agh.edu.pl</a>
Application deadline:	27.07.2023
For more details about the position please visit (website/webpage address):	<a href="https://www.fnp.org.pl/oferta_pracy">https://www.fnp.org.pl/oferta_pracy</a> <a href="http://wbia.pollub.pl/pl/praca">http://wbia.pollub.pl/pl/praca</a> <a href="https://www.wggios.agh.edu.pl/wydzial/oferty-pracy/staze">https://www.wggios.agh.edu.pl/wydzial/oferty-pracy/staze</a> <a href="https://www.biol.uw.edu.pl/ogloszenia-praca/">https://www.biol.uw.edu.pl/ogloszenia-praca/</a>
Euraxess job/stipend offer (in case of PhD and postdoc positions):	<a href="https://euraxess.ec.europa.eu/jobs/121657">https://euraxess.ec.europa.eu/jobs/121657</a>
Appeal	<i>Possible appeals against the decision should be sent to prof. Wojciech Franus (project coordinator, <a href="mailto:w.franus@pollub.pl">w.franus@pollub.pl</a>) no later than 7 days after receiving the decision, i.e. the date of results announcement. In the protest an explicit justification have to be included.</i>