

## JOB OFFER

|                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Position in the project:                      | <i>Adjunct (experienced researcher)</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Scientific discipline:                        | <i>geology, applied chemistry</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Job type (employment contract/stipend):       | <i>employment contract (0.33-time job)</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Number of job offers:                         | <i>1</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Remuneration/stipend amount/month             | <i>2 825 PLN of full remuneration cost, i.e. expected net salary at 1 600 PLN</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Position starts on:                           | <i>01.07.2020</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Maximum period of contract/stipend agreement: | <i>36 months</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Institution:                                  | <i>AGH University of Science and Technology; Faculty of Geology, Geophysics and Environmental Protection / Cracow</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Project leader:                               | <i>Prof. Wojciech Franus</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 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><i>Project is carried out within the TEAM-NET programme of the Foundation for Polish Science</i></b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Project description:                          | <p><i>This TEAM-NET joint project assumes using fly ashes as a 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><i>1. Sorption experiments of organic and inorganic compounds on the porous materials from fly ash (zeolites, mesoporous materials and MOFs).</i></li> <li><i>2. Using of advanced instrumental methods (GC, GC-MS, QMS) for determination sorbates concentration and characterizing sorbent materials.</i></li> <li><i>3. Physicochemical and geochemical characteristics of materials before and after sorption.</i></li> <li><i>4. Preparing and writing scientific articles for international journals.</i></li> <li><i>5. Tracking current research trends in the scientific literature.</i></li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Profile of candidates/requirements:           | <ol style="list-style-type: none"> <li><i>1. The candidate must have the PhD diploma from Earth sciences.</i></li> <li><i>2. The candidate must have documented experience (scientific articles in JCR list – minimum 10 articles) in the geology, organic geochemistry, analytical chemistry and geochemistry.</i></li> <li><i>3. The candidate must be fluent in English (both speaking and writing) enabling communication and understanding of publication texts.</i></li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

|                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                             | <ol style="list-style-type: none"> <li>4. The candidate must know the advanced methods which will be used for geochemical and physico-chemical characteristics of porous materials (mass spectrometer, pyrolysis reactor)</li> <li>5. The candidate must know the methods which will be used for concentration of sorbates analysis (GC, GC-MS, GC-FID, GC-TCD, GC-FPD)</li> <li>6. Preferentially, the candidate should have an experience in obtaining funds for the researches from external project-funding agencies.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Required documents:                                                         | <ol style="list-style-type: none"> <li>1. Written application for the competition.</li> <li>2. Curriculum vitae including: <ol style="list-style-type: none"> <li>2.1. A detailed description of the academic degrees and titles, titles of theses (master and doctoral), years of receiving the degree/academic title, names and affiliation of supervisors and reviewers of each thesis.</li> <li>2.2. The academic career – chronological indication of places of employment with the indication of posts and contact details of the direct supervisor.</li> <li>2.3. List of scientific publications/monographs/books/chapters – including the full list of authors, indication whether the candidate was the corresponding author of the given publication, title, full title of the journal and 5-year IF.</li> <li>2.4. List of conducted scientific projects (as the coordinator/principal investigator) funded by external project-funding agencies – entries should be provided with the project title, project number, the amount of funding, time of project realization, all documents (including patents, patent applications, know-how, etc.) produced in the course of project realization.</li> <li>2.5. List of supervised bachelor, engineer, master (with the indication of the unit) and list of supervised PhD students as an assist supervisor.</li> <li>2.6. Participation in conferences (list of conferences in which the candidate took active part, stating whether it was a lecture or a poster), internships abroad (research stays) and most important trainings.</li> <li>2.7. List of awards and distinctions including their range (international/national).</li> </ol> </li> <li>3. Copies of obtained diplomas.</li> <li>4. Documented information about completed courses and trainings.</li> <li>5. Other activities.</li> </ol> <p>All documents must be prepared in the English language</p> |
| Please submit the following documents to:                                   | <a href="mailto:bajda@agh.edu.pl">bajda@agh.edu.pl</a> and <a href="mailto:mierzwa@agh.edu.pl">mierzwa@agh.edu.pl</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Application deadline:                                                       | 17.06.2020                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 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><br><a href="http://wbia.pollub.pl/pl/praca">http://wbia.pollub.pl/pl/praca</a><br><a href="http://www.wggios.agh.edu.pl/pracownicy">http://www.wggios.agh.edu.pl/pracownicy</a><br><a href="https://www.biol.uw.edu.pl/pl/index.php?option=com_content&amp;view=category&amp;layout=blog&amp;id=148&amp;Itemid=317">https://www.biol.uw.edu.pl/pl/index.php?option=com_content&amp;view=category&amp;layout=blog&amp;id=148&amp;Itemid=317</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Appeal                                                                      | <p>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.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |