

Kraków, 25<sup>th</sup> April 2025

**PhD position in an Opus 26/LAP international project financed  
by Polish National Science Centre (NCN)**

**Project title:** Unlocking Lithium's Potential: Dynamic Flow-Through Lithium Extraction from Challenging Aqueous Environments with Engineered 3D-Shaped Layered Double Hydroxide Adsorbents

**PI:** Prof. Jakub Matusik (AGH Kraków)

**Research Group:** Mineral-based Architectures Group

<http://www.mba-group.agh.edu.pl>



**International cooperation:** Prof. Pegie Cool (University of Antwerp),  
Dr. Elena Mihaela Seftel (VITO NV Flemish Institute for Technological Research)

**Location:** Faculty of Geology, Geophysics and Environmental Protection AGH

**Project abstract:** [http://www.mba-group.agh.edu.pl/?page\\_id=1415](http://www.mba-group.agh.edu.pl/?page_id=1415)

**Candidates should submit appropriate documents to the AGH Doctoral School according to the recruitment rules:** <https://sd.agh.edu.pl/en/candidates>

Before submitting documents in the e-Recruitment system of the AGH Doctoral School (SD AGH), **please contact the project PI not later than 1<sup>st</sup> July 2025:** [jmatusik@agh.edu.pl](mailto:jmatusik@agh.edu.pl) (Jakub Matusik)

**Deadline for applications to the AGH Doctoral School:** 1<sup>st</sup> July to 8<sup>th</sup> August 2025

**Starting date of education in SD AGH and work in the project:** 1<sup>st</sup> October 2025

**Planned period of education in the AGH Doctoral School:**

1<sup>st</sup> October 2025 to 30<sup>th</sup> September 2029 (4 years)

**A PhD student of the AGH Doctoral School will receive a doctoral scholarship for 4 years of education in accordance with the information:**

<https://sd.agh.edu.pl/en/doctoral-students/doctoral-scholarships>

**Scholarship per month:**

**3 466.90 PLN** - before the mid-term evaluation (1<sup>st</sup> and 2<sup>nd</sup> year)

**5 340.90 PLN** – after the mid-term evaluation (3<sup>rd</sup> and 4<sup>th</sup> year)

**In addition, the PhD student will receive a NCN research scholarship from the Opus 26/LAP project in the period:**

1<sup>st</sup> October 2025 to 31<sup>st</sup> December 2028 (39 months)

**NCN scholarship per month: 5 000 PLN**

**Requirements:**

- the position is addressed to students who are graduates of studies carried out at Universities in Poland or abroad, giving the right to apply for a doctoral degree in Poland
- completion of studies in fields related to Earth sciences, environmental engineering, materials engineering, environmental protection or related
- experience in laboratory work, solid state analysis using XRD, FTIR, SEM/TEM methods as well as analysis of liquid samples using AAS and/or ICP methods
- skills in using software for data analysis/visualization e.g. Origin, Grapher
- very good knowledge of English, both spoken and written
- professionalism in the approach to research work: diligence, punctuality, ability to work in a team and responsibility

**Description of tasks:**

- Active participation in research related to the project, in particular: synthesis of hydrotalcite-like materials (LDH), characterization of the structure, texture and chemical composition of LDH and testing their properties in lithium adsorption/desorption reactions for various aqueous media
- Analysis and interpretation of the obtained results
- Participation in the preparation of scientific publications and conference presentations

**For more information, please contact the project PI:** [jmatusik@agh.edu.pl](mailto:jmatusik@agh.edu.pl),  
tel. +48 12 617 5233.

