

PhD in experimental mineralogy / REE geochemistry

Institution: AGH University of Science and Technology in Kraków, Poland. Faculty of Geology, Geophysics and Environmental Protection

Position: PhD student with a stipend

Requirements:

The candidate will be evaluated primarily in terms of competence to perform the tasks specified in the project in accordance with the Polish NCN Regulations for Awarding Doctoral Grants within PRELUDIUM BIS 3 Projects (Appendix No. 2 to the Rules for Funds Granting), including the following requirements:

- 1) the applicant is currently completing a master's degree or has completed a master's degree in the field of Earth sciences or related,
- 2) the applicant shows a very good spoken and written English,
- 3) the applicant has a very good knowledge of mineralogy and geochemistry including mineral-water interactions,
- 4) the applicant shows readiness to complete a foreign internship (5 months) related to the implemented project,
- 5) the applicant has a strong motivation for scientific work, demonstrates commitment to the implementation of planned research, is creative in solving problems, independent but team-oriented, reliable, and responsible,
- 6) the applicant shows experience in experimental work and experiment planning,
- 7) research experience will be an additional advantage (participation in scientific activities, conferences, publications, awards, scholarships, etc.).

Required documents:

- 1) a cover letter (a letter of motivation),
- 2) CV highlighting the qualifications towards the experimental research,
- 3) copies of certificates (language certificates, trainings, awards) and co-authored publications,
- 4) copies of diplomas (degrees) with diploma supplements if any,
- 5) one letter of recommendation commenting, among others, on the required skills, **sent directly** to the head of the Evaluation Committee (by mail): prof. Maciej Manecki, gpmmanec@cyf-kr.edu.pl.

Job Description:

The scholarship is offered as a part of a project financed by Polish National Science Center: "*Low temperature transformation of monazite (Ce,U,Th)PO₄ into pyromorphite Pb₅(PO₄)₃Cl – basic study for future technologies*". This basic research is oriented for future applications. The aim of the project is to test the hypothesis that in the presence of Pb²⁺ and Cl⁻ ions the dissolution of monazite (and possibly other REE minerals like xenotime YPO₄, bastnasite CeCO₃(OH,F) etc.) proceeds differently than in pure aqueous solutions, that it can be accompanied by crystallization of REE-rich pyromorphite Pb₅(PO₄)₃Cl which would act as a sink for REEs. The aim of the research is to work experimentally on the processes and to study the structures of precipitated REE-containing phases, the formation of layers, coatings, pseudomorphs and other forms. The foreign internship (financed by Polish NAWA program, to be applied for) will cover a synthesis of pyromorphite analogs in the presence of Ce, Y, as well as trace U and Th.

Key responsibilities include:

- designing and conducting laboratory experiments on mineral dissolution,
- designing and conducting laboratory experiments on the synthesis of new phases,
- characterizing solids and solutions, quantifying the results,
- preparing manuscripts of publications and presentations for scientific conferences,
- applying for additional funds including but not limited to the internship abroad through NAWA (Polish National Agency for Academic Exchange).

Application Deadline: August 5th, 2022 (05.08.2022)

Form of application: by email: gpmmanec@cyf-kr.edu.pl

Terms of Employment:

Workplace: AGH Doctoral School, AGH University of Science and Technology in Kraków; Faculty of Geology, Geophysics and Environmental Protection; Department of Mineralogy, Petrography and Geochemistry; al. Mickiewicza 30; 30-059 Kraków, Poland

Type of contract: scholarship (PhD stipend)

The stipend worth of PLN 5,000 (gross amount) for the first two years, then PLN 6,000 (gross amounts) for the last two years (after mid-term evaluation of PhD students at the AGH Doctoral School)

Starting date: October 1st, 2022 (01.10.2022)

Period of employment with the scholarship: 48 months

Application and admission to the AGH Doctoral School required after acceptance by the Evaluation Committee. Information on the recruitment procedure is provided at:

<https://www.sd.agh.edu.pl/en/doktoranci/doctoral-schools/agh-doctoral-school/admissions-20222023/>

In the event of a negative result of the recruitment to the AGH Doctoral School, the contract will not be signed.

Additional Information:

Please include the following statement in your CV:

"I hereby give consent for my personal data included in my application to be processed for the purposes of the recruitment process under the Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation). I also consent to processing of my personal data by AGH University of Science and Technology in Kraków for the purposes of any future recruitment processes."

The deadline for applications (sent by e-mail to gpmmanec@cyf-kr.edu.pl): August 5th, 2022 (05.08.2022)

Interviews with selected candidates (if necessary) are planned remotely on: August 11th, 2022 (11.08.2022)

The results will be announced by August 12th (12.08.2022)

The recipient of the scholarship will be selected by the Evaluation Committee chaired by the Principal Investigator of the project. Additional information available from the Principal Investigator prof. Maciej Manecki by mail (gpmmanec@cyf-kr.edu.pl). Positive admission to the AGH Doctoral School required for signing the contract. Information on the recruitment procedure is provided at: <https://www.sd.agh.edu.pl/en/doktoranci/doctoral-schools/agh-doctoral-school/admissions-20222023/>