



The Groups of Applied Mineralogy, Geology and Geochemistry at the GeoZentrum Nordbayern, University of Erlangen-Nürnberg, Germany are offering an interdisciplinary

PhD position

at the cutting edge/forefront research in Cement Chemistry, Stable Isotopes and Geochemistry

Are you passionate about pioneering research in sustainability and climate solutions? We're looking for a dynamic and highly motivated PhD candidate to embark on an interdisciplinary project focused on understanding CO₂-negative binders and cements, utilizing stable carbon isotopes.

About the Project

This innovative research will be conducted in state-of-the-art laboratories, employing advanced techniques such as isotopy, XRD, TGA, and more. The project's primary goal is to enhance our understanding of CO₂-negative cementitious systems through carbonation hardening. We aim to use isotopes as a powerful tool to trace and model carbonation reactions, generating fundamental data that will propel this field forward.

Project Objectives

CO₂-Negative Cementitious Systems: Investigate and develop systems through carbonation hardening.

Isotopes as a Tracking Tool: Utilize stable carbon isotopes to monitor and understand carbonation reactions.

Data Generation and Modelling: Gather essential data and develop models for isotopy fractionation based on experimental outcomes.

Why Join Us?

This is more than just a PhD project - it's an opportunity to be at the forefront of climate change mitigation research. Your work will contribute to sustainable advancements in construction materials, potentially impacting global carbon reduction efforts.

We offer:

- Interdisciplinary supervision of three research groups
- A vibrant academic environment
- Well-equipped mineralogical and stable isotope laboratories

Candidate profile:

- Master degree (or equivalent) in Natural Sciences
- Strong interest in mineralogy, isotopy and geochemistry
- Willingness to carry out highly precise laboratory experiments
- Ability to independently develop and perform experimental approaches
- Enthusiasm for scientific writing
- Scientific results are expected to be published in international journals and the candidate should also present results on conferences

Apply Now

If you're ready to make a real difference and advance your career in a cutting-edge, interdisciplinary environment, we want to hear from you. Apply today and become a part of our mission to develop innovative, CO₂-negative solutions for a sustainable future.

Starting date is as soon as possible. The salary is TVL E13 up to 60 % together with health and social security benefits for 3 years. Please address further questions and applications (cover letter, motivation statement, CV, academic transcripts & certificates, publication list and contact details of referees) **in one coherent PDF file** to Daniel.Jansen@fau.de; robert.van.geldern@fau.de; barbara.kleine-marshall@fau.de;

before 15th of October 2024.

