

Postdoc in Stable Isotopes and Reaction Kinetics

Posting Details

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Title	Postdoc in Stable Isotopes and Reaction Kinetics
Appointment Status	Non-Tenure Track
Department	IU Bloomington Earth and Atmospheric Sciences
Position Summary	<p>Applications are invited for a Postdoctoral Research Associate at Indiana University Department of Earth and Atmospheric Sciences.</p> <p>The project aims to use non-traditional stable isotopes to measure reaction rates and understand the mechanisms of mineral-aqueous solution reactions. See our recent publications for details (Zhu et al., 2016, Chemical Geology; Zhu et al, 2020, 2021, GCA). The project will employ a combined experimental, analytical, theoretical, and modeling approach.</p> <p>The successful candidate will hold a Ph.D. in earth sciences or a closely related field by date of appointment. A strong background in either stable isotopes or kinetics and thermodynamics is required. Experience performing aqueous geochemical experiments and using geochemical equilibrium and kinetics models is highly desirable.</p> <p>Salary is competitive and includes fringe benefits. The initial appointment will be for one year, with the possibility of renewal for another two years, subject to performance and funding availability. The candidate will be based on the Bloomington campus of Indiana University, and will have access to an extensive suite of analytical tools, including MC-ICP-MS, TIMS, ICP-OES, ICP-MS, FESEM, and FETEM. Indiana University has some of the most powerful high-performance computing facilities in the nation that are free for faculty and students to use. The position requires excellent communication and interpersonal skills, intellectual curiosity, and a willingness to explore unfamiliar aspects of earth sciences.</p> <p>More information about ongoing research in Zhu's group may be found at: www.hydrogeochem.earth.indiana.edu</p> <p>Major Duties/Responsibilities:</p> <ul style="list-style-type: none"> • Perform batch, mixed flow reactor, and column experiments examining the interactions between minerals and aqueous solutions • Analyze experimental run products using analytical techniques geared toward both solid and fluid characterization • Perform spreadsheet computations and geochemical modeling to interpret the experimental results • Develop and apply theoretical models to decipher the thermodynamics of isotope fractionation and reaction mechanisms • Present and report research results and publish scientific results in peer-reviewed journals in a timely manner
Basic Qualifications	<p>A completed Ph.D. degree by appointment date and within the last five years</p> <p>Firm grasp of aqueous geochemistry and/or isotope geochemistry</p> <p>Excellent written and oral communication skills</p>
Department Contact for Questions	Professor Chen Zhu (chenzhu@indiana.edu)
Additional Qualifications	<p>Research experience in an aqueous geochemical laboratory, preferably performing experiments and analyses</p> <p>Research experience in stable isotope geochemistry</p>
Salary and Rank	45,000 - 55,000
Special Instructions	Please attach a 1-page cover letter expressing interest and qualifications, a CV with a list of all publications and research grants, a 1-page research statement summarizing previous research experience, and the names and contact information of at least 2 referees with knowledge of your research and academic experience.
For Best Consideration Date	10/20/2021
Expected Start Date	01/01/2022
OAA #	22108-24

Supplemental Questions

Required fields are indicated with an asterisk (*).

Applicant Documents

Required Documents

1. Curriculum Vitae
2. Letter of Application
3. Research Agenda
4. List Of References

Optional Documents