

Position Title: Post-Doctoral Researcher

Location: Advanced Light Source, Lawrence Berkeley National Laboratory, Berkeley, CA, USA

Context: The “Synchrotron Earth and Environmental Science” or SEES project was funded by the National Science Foundation to support Earth and Environmental Science (EES) research at U.S. Department of Energy synchrotron facilities. At the Advanced Light Source, the “SYnergy of Soft and Tender X-rays for Earth Research” or SYSTER project will focus on soft and tender X-ray spectromicroscopy and ptychography for EES applications. The SYSTER program will be funded through a SEES sub-contract to the University of Minnesota-Twin Cities.

The Post-Doctoral Researcher hired for this new position will be an employee of the University of Minnesota-Twin Cities stationed at the Advanced Light Source in Berkeley, CA. This position is a full-time appointment for one year, renewable for a second year. The Post-Doctoral Researcher will be supervised and mentored by Dr. Brandy Toner (University of Minnesota) and Dr. David Shapiro (Advanced Light Source). The person hired will focus on the physical and chemical properties of marine colloids and particles and have the following responsibilities (estimated percentages of time on tasks provided):

- (1) develop and apply X-ray spectromicroscopy and ptychography methods for EES research (50%);
- (2) develop a workshop series and related online resources to support EES users in scientifically productive use of the Advanced Light Source’s X-ray microscopes (20%);
- (3) communicate regularly with supervisors, mentors, and project collaborators (10%); and
- (4) prepare research findings for peer review publication (20%).

Required Qualifications:

- Ph.D. in aquatic, soil, or marine chemistry, low-temperature geochemistry, or related Geosciences or EES discipline.
- Three or more years training in the application of synchrotron approaches to the study of EES materials.
- Demonstrated scientific publication record.
- Demonstrated effective communication skills in a variety of settings (daily workplace interactions, project planning and outcomes, collaborative interactions, written reports, and presentations).
- Ability to work with and maintain professional relationships with scientific collaborators and coworkers.
- Ability to manage competing priorities and provide quality work on schedule.
- Excellent organization and problem solving skills.

Preferred Qualifications:

- Prior experience with synchrotron X-ray microscopy, ptychography, or advanced electron microscopy.
- Prior experience with development of training materials, leading workshops, or mentoring related to synchrotron applications to EES topics.
- Ability to write and maintain Python software packages.

Salary and Benefits: Base annual salary in year 1 is \$65,000. See additional information about benefits at the official application website (<https://hr.myu.umn.edu/jobs/ext/358786>).

Duration: Appointment is 1 year full-time and renewable for a 2nd year upon satisfactory progress.

To Apply: Applications must be submitted online. To apply, visit this website <https://hr.umn.edu/Jobs/Find-Job> and access Job Opening ID 358786.

Anticipated Start Date: Approximately February 15, 2024

Questions About the Position: Contact Professor Brandy Toner at toner@umn.edu.