

SSRL Postdoctoral Scholar for Advanced X-ray Characterization of Li-metal and Li-ion Batteries

The Stanford Synchrotron Radiation Lightsource (SSRL), a Directorate of the SLAC National Accelerator Laboratory, Stanford University, and a national research facility, seeks a Ph.D. Postdoctoral Scholar with experience in electrochemical energy storage and/or X-ray characterization. This position will involve working in two different parallel but related projects in Li-metal and Li-ion batteries. The first project is supported by the Battery500 Consortium and will focus on using X-rays to characterize high-energy, low-cost Li-metal batteries for the next generation energy storage for electric vehicles. Battery chemistries may include Li||NMC and Li||S. The second project is supported by the Extreme Fast Charge Cell Evaluation of Lithium Batteries (Xcel) project and will focus on X-ray characterization of Li-ion cells during extreme fast charging to investigate the impacts of proposed solutions to increasing fast charging performance. Spectroscopic and diffraction-based mapping will be used to visualize the degradation mechanisms. Both projects will require close collaboration with scientists from other national labs and universities.

The postdoc will work within a rich scientific environment at SLAC and Stanford University and will have opportunities to cross-train in electrochemistry and X-ray characterization. They will have the opportunity to publish lead-author manuscripts and to build a career in energy storage technologies or a future teaching career.

For more information on current energy research at SSRL performed by the Weker group see <https://sites.slac.stanford.edu/wekergroup/> . This position will be partially funded by the Battery500 Consortium. For more information on Battery500 see <https://www.pnnl.gov/projects/battery500-consortium>.

Qualifications:

- Ph.D. in physics, materials sciences, chemistry, or related fields.
- Experience in synchrotron-based X-ray characterization preferred. Excellent candidates with other characterization experience may be considered.
- Willingness to learn any knowledge/experience gaps in X-ray characterization techniques and/or electrochemistry.
- Demonstrated effective written and verbal communications skills.
- Demonstrated ability to work and communicate effectively with a diverse population.
- Demonstrated ability to work independently and in a team environment.

This is a two-year appointment available to begin immediately.

Interested candidates should submit a current CV to Johanna Nelson Weker via email at jnelson@slac.stanford.edu.