X-ray Characterization of Fast Charging Degradation in Li-ion Batteries

The Stanford Synchrotron Radiation Lightsource (SSRL), a Directorate of the SLAC National Accelerator Laboratory, Stanford University seeks a Ph.D. Postdoctoral Scholar with research interest and experience in X-ray characterization of Li-ion batteries (LiBs) and/or X-ray/neutron tomography. 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 to build toward a future teaching career.

This position will involve in situ X-ray imaging and ex situ X-ray microscopy aimed at understanding cathode degradation in LiBs under extreme fast charging (≥ 6C). This position will be part of a larger DOE effort at developing fast charging LiBs, involving Stanford University, SLAC, Argonne National Laboratory (ANL), National Renewable Energy Laboratory (NREL), and Idaho National Laboratory (INL). For more information on current energy research performed by the Weker group see https://sites.slac.stanford.edu/wekergroup/.

Qualifications:

- Ph.D. in physics, materials sciences, chemistry, or related fields.
- Experience with X-ray, neutron, or electron microscopy. Excellent candidates with other X-ray experience may be considered.
- Experience with Li-ion batteries
- Strong experimental, analytical and computation skills.
- Effective written and verbal communication skills.
- Ability to work and communicate effectively with a diverse population; good interpersonal skills are essential.
- 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 jlnelson@slac.stanford.edu.