Postdoctoral Associate – Advanced Structural Characterization of Materials for Energy Generation and Storage

The Stanford Synchrotron Radiation Lightsource (SSRL), a directorate of the SLAC National Accelerator Laboratory, has an opening for a Postdoctoral Associate to utilize X-ray scattering and spectroscopy to perform advanced structural characterization of materials relevant to energy generation and storage. This position involves independent work as well as close collaboration with others at SLAC and at other institutions.

This position involves using X-ray scattering and spectroscopy approaches to understand the synthesis, operation, and failure mechanisms of energy relevant materials. This will involve detailed structural characterization across length scales of materials prepared both by the postdoctoral associate and collaborators as well as extensive *in situ* and *operando* experiments. New *in situ* or *operando* setups may need to be designed or modified as part of this effort and commissioned on beamlines. The goal of this work is to better understand the mechanisms involved in materials synthesis, structural aspects which influence the material properties and their use in real world devices, and the structural and chemical mechanisms which lead to degradation or failure of such devices. The majority of this works is expected to be conducted at SSRL although capabilities available at other user facilities in the US and around the world will be utilized as required.

Qualifications:

- Ph.D. in physics, chemistry, chemical engineering, materials sciences, or related field.
- Experience with X-ray scattering experimentation and analysis is a must, including demonstrated ability in Rietveld refinement.
- Experience with synchrotron X-ray methods development
- Experience with thin film synthesis and/or characterization desired
- Experience with programming, preferably Python
- Good interpersonal skills and strong communication skills
- Ability to work independently and in a team
- Experience working within large inter-university collaborations is strongly desired

Interested applicants should submit a cover letter, CV, and names of two potential references to Kevin H. Stone, khstone@slac.stanford.edu