



May 26, 2023

### **Application of Advanced X-ray Spectroscopy Methods to Metalloenzymes**

SLAC National Accelerator Laboratory invites, effective immediately, applications for a 2-year advanced X-ray spectroscopy post-doctoral fellow (PD) position at the Stanford Synchrotron Radiation Lightsource (SSRL) with senior scientist Dr. Ritimukta Sarangi. The PD will work on applying advanced spectroscopy methods to some of the metalloenzyme systems involved in the Wood-Ljungdahl pathway and correlate the datasets with theoretical tools. This is part of a research program at SLAC to understand the geometric and electronic structure of carbon monoxide dehydrogenase and acetyl CoA synthase (both of which contain bimetallic metallocusters at their active sites) and correlate structure to function. As a national laboratory PD, the candidate will also get to work on other metalloenzyme systems over their tenure.

#### **Required Qualifications**

A Ph.D. in inorganic, bioinorganic/biomimetic chemistry with applications to biological or homogeneous catalysis systems **OR** a Ph.D. in *any* area of science focusing on applications of advanced spectroscopy tools (XES, HERFD and RIXS). Experience with DFT and TD-DFT methods for the modeling of spectral data, especially X-ray spectroscopy data is strongly favored. Demonstrated ability in data analysis, modeling and interpretation of EXAFS data and its correlation to electronic structure from XANES and/or other spectroscopic techniques is a plus.

1. Knowledge of how electronic properties tune spectral shapes and the ability to translate this knowledge to molecular level interpretation is preferred.
2. Willingness to learn and bridge knowledge/experience gaps.
3. Ability to work independently and in a team environment.
4. Strong organizational skills is a must.
5. Ability to work and communicate effectively with a diverse population; good interpersonal skills are essential.
6. Effective multitasking skills and the ability to switch between several scientific projects.
7. Ability to interact and communicate with non-experts in theory applications is essential.
8. Effective written and verbal communication skills.

If you are a postdoctoral researcher ready to test your talents in this field of research and hone your skills at a national laboratory widely recognized for its work in the physical, chemical, and environmental sciences, we want to connect with you. SLAC is committed to fostering a work environment that promotes inclusion, diversity, equity and accountability. We encourage all qualified applicants to apply; you do not need to meet all the Preferred Qualifications to be considered.

**Please send a letter with CV and list of publications to Dr. Ritimukta Sarangi, email: [ritis@slac.stanford.edu](mailto:ritis@slac.stanford.edu)**