

Postdoctoral position in ultrafast chemical dynamics and x-ray science

Apply for a Physical Chemistry postdoctoral position based at the [Stanford PULSE Institute](#) at the SLAC National Accelerator Laboratory and sponsored by the [Physical Sciences Division](#) of the Pacific Northwest National Laboratory (PNNL).

Through fundamental research supported by DOE Basic Energy Sciences, we seek to understand ultrafast photoinduced chemical processes in liquid environments, that are relevant for light-harvesting and artificial photosynthesis. **The proposed research effort focuses on developing and utilizing advanced time-resolved x-ray spectroscopy and scattering methods to probe with atomic scale resolution the photoinduced electronic and structural dynamics in solvated molecular complexes and assemblies.** These experiments will be strongly coupled with state-of-the-art theoretical efforts for the interpretation and modeling of the data.

As a postdoctoral researcher in the PNNL [Chemical Physics group](#), you will investigate challenging molecular-scale science questions, such as the mechanisms of charge transfer and proton coupled electron transfer processes. You will specialize in conducting time-resolved x-ray scattering and spectroscopy experiments in the area of condensed-phase physical chemistry using the [LCLS X-ray Free Electron laser](#) (XFEL) at the SLAC National Accelerator Laboratory and related XFELs and synchrotron facilities around the world. You will be mentored by Dr. [Elisa Biasin](#) and collaborate with other senior investigators in a multi-institutional team, including researchers at PNNL (e.g. Dr. [Niri Govind](#), Dr. [John Fulton](#)), University of Washington (e.g. Prof. [Munira Khalil](#)), and SLAC (e.g. Prof. [Kelly Gaffney](#), Dr. [Robert Schoenlein](#)). This position is based at SLAC (Menlo Park, CA).

The Ideal Candidate: If you are ready to test your talents, train in experimental ultrafast chemical dynamics and x-ray science, and hone your skills at national laboratories widely recognized for their work in the physical sciences, we want to connect with you. We encourage all qualified applicants to apply; you do not need to meet all the Preferred Qualifications to be considered.

Please apply at the following [link](#) by uploading your CV and including a cover letter indicating your research interests and preferred start date. Please also provide the names of at least two references who could, upon request, provide a letter of recommendation.

Responsibilities

- Propose and lead ultrafast x-ray experiments to investigate photoinduced chemical dynamics processes at large scale x-ray light source facilities.

- Lead data analysis method development, data analysis and interpretation through comparison with state-of-the art calculations.
- Become an integral part of PNNL and SLAC fundamental chemical physics project teams, taking advantage of world-class expertise and capabilities to perform your research.
- Work independently, take initiative, and work on team assignments.
- Lead and contribute to manuscript development.
- Interact, communicate, and problem solve with the research staff within the multi-institutional collaboration.
- Present research at technical conferences and project/program review meetings.

Qualifications

Minimum Qualifications:

Candidates must have received a PhD within the past five years (60 months) or within the next 8 months from an accredited college or university.

Preferred Qualifications:

- Ph.D. in Physical Chemistry, Physics, Materials Sciences, or related fields.
- Experience with x-ray spectroscopy and/or scattering at synchrotrons or XFELs and/or experience with tabletop ultrafast spectroscopy methods.
- Strong ability to analyze data and develop appropriate models, working closely with theorists; familiarity with coding languages such as python.
- Excellent written and verbal communication skills.
- Strong leadership abilities to work as part of an interdisciplinary team of scientists across multiple institutions.
- Ability to travel from SLAC to PNNL for regular meetings with PNNL researchers; and to synchrotrons and XFEL facilities around the world to perform experiments.