Materials Science and Engineering at the College of Engineering has an outstanding opportunity for a Post-doctorate Research Associate to join their team.

As a postdoctoral researcher, you will join a multi-investigator team funded by a multi-year program, CSSAS, to explore mechanisms of bio-macromolecular dynamics, and hydration shells at solid-liquid interfaces by cutting-edge approaches, in situ atomic force microscopy (AFM), as well as other spectroscopic and microscopic characterization techniques. You will be mentored by prominent researchers as you develop a line of experimental research. You will also have the opportunity of working at DOE’s national laboratories with several unique facilities and expertise. The research requires close collaboration between materials scientists and computation scientists to elucidate how to define bio-assembly states and phases by manipulating the energy landscape with external stimuli, and to understand how interfacial water involves in the processes. The project addresses missions defined by the DOE’s Basic Energy Sciences (BES) Office.

DUTIES AND RESPONSIBILITIES:

- Develop a solid research plan to address goals defined by the program
- Conduct in situ AFM and other advanced AFM experiments to investigate bio-macromolecular assemblies at solid-liquid interfaces and resolve the role of interfacial water in the process.
- Analyze the data from AFM measurements.
- Lead manuscript development and maintain a strong overall publication record in the peer-reviewed scientific literature. Present research at technical conferences and project/program review meetings.
- Interact, communicate, and tackle problems with a diverse team of researchers. Train and mentor others.

MINIMUM REQUIREMENTS:

- Candidates must have received a PhD within the past five years (60 months) or within the next 6 months from an accredited college or university.
- Ability to efficiently multi-task and complete multiple projects in a timely manner
- Strong background in sample preparation, chemical handling and chemical safety

DESIRED QUALIFICATIONS:
• PhD degree/training in materials science and engineering, chemistry, biophysics or chemical engineering.
• Knowledge of and experience with experimental characterization of biomolecules, assembly and solid-liquid interfaces and associated data analysis.
• Understanding of fundamentals of solution chemistry, bio-assembly, thermodynamics, and kinetics, and colloidal and surface science.
• Proficiency in wet chemical analytics, solution preparation and handling.
• Long-term experiences on AFMs with good publication record.
• Experience with some of the following characterization approaches: scanning and transmission electron microscopy, x-ray absorption spectroscopy (XAS), and FTIR/Raman.
• Programming capability using python, matlab, etc.
• Track record of research as manifested by publications or patents.
• Strong verbal and written communications skills.
• Ability to plan and execute research and take initiative in the completion of tasks important to the projects. These include preparation of drafts of papers for peer-reviewed journals and technical presentations at scientific conferences.
• The ability to work with multi-disciplinary teams of scientists and technical staff.
• Willingness of conducting offsite research activities

Application Process:
The applicant should send CV/resume with publication list and 1-2 recommendation letters to Dr. Shuai Zhang, zhangs71@uw.edu.

Applicants considered for this position will be required to disclose if they are the subject of any substantiated findings or current investigations related to sexual misconduct at their current employment and past employment. Disclosure is required under Washington state law.

Committed to attracting and retaining a diverse staff, the University of Washington will honor your experiences, perspectives and unique identity. Together, our community strives to create and maintain working and learning environments that are inclusive, equitable and welcoming.

COVID-19 Vaccine Requirements and Information

Under Washington State Governor Inslee’s Proclamation 21-14.1 [governor.wa.gov], University of Washington (UW) workers must be fully vaccinated against COVID-19 and provide proof thereof, or receive a UW-approved medical or religious exemption. This requirement will be a condition of any offer associated with this recruitment. For more information, please visit https://www.washington.edu/coronavirus/vaccination-requirement/.

Commitment to Diversity

The University of Washington is committed to building diversity among its faculty, librarian, staff, and student communities, and articulates that commitment in the UW Diversity Blueprint (http://www.washington.edu/diversity/diversity-blueprint/). Additionally, the University’s Faculty Code recognizes faculty efforts in research, teaching and/or service that address diversity and equal opportunity as important contributions to a faculty member’s academic profile and responsibilities (https://www.washington.edu/admin/rules/policies/FCG/FCCH24.html#2432).

Equal Employment Opportunity Statement

University of Washington is an affirmative action and equal opportunity employer. All qualified applicants will receive consideration for employment without regard to race, color, creed, religion, national origin, sex, sexual
orientation, marital status, pregnancy, genetic information, gender identity or expression, age, disability, or protected veteran status.