

Senior Research Associate – Anomalous Small Angle Scattering (ASAXS)

The University of Chicago: Pritzker School of Molecular Engineering

Location

Chicago, Illinois

Open Date

Aug 15, 2022

Description

The University of Chicago Pritzker School of Molecular Engineering is seeking a full time Senior Research Associate (SRA) to become part of NSF's ChemMatCARS.

ChemMatCARS, affiliated with the Pritzker School of Molecular Engineering (PME), the University of Chicago and funded by NSF, is a national user facility for frontier research in chemistry and materials science using synchrotron x-rays. ChemMatCARS is located at Sector 15 of the Advanced Photon Source (APS) at Argonne National Laboratory (ANL).

Anomalous Small Angle Scattering (ASAXS) is one of the most powerful synchrotron X-ray techniques for element-specific structural study of soft matter systems. It is indispensable for understanding quantitative structural heterogeneities in soft matter systems and nanomaterials. The successful candidate will be expected to lead an ASAXS user program that will serve a general scientific user community. The candidate will be expected to originate and engage in collaborative efforts in ASAXS studies of a variety of soft matter systems with ChemMatCARS users. These efforts include, but are not limited to, conducting synchrotron experiments with users at ChemMatCARS, analyzing ASAXS data, contributing to manuscripts for publication, and, if the situation applies, contributing to grant proposal applications. In addition, this candidate will be expected to provide additional support for scientists conducting research at ChemMatCARS, as well as lead R&D efforts to expand the capabilities of ChemMatCARS in the use of ASAXS. Areas of investigation include, but are not limited to, aggregation and complexation of polyelectrolytes, interactions between charged colloids and macro-ions in solutions, and element distribution within functional nanomaterials at the length scales from a few to hundreds of nanometers.

Qualifications

A Ph.D. in Physical Sciences in the study of soft matter science with synchrotron hard x-ray techniques, preferably with Anomalous Small Angle X-ray Scattering (ASAXS), a research record in soft matter science using synchrotron hard x-ray scattering techniques, and a minimum of 8 years of relevant experiences with 3 years in leading a user science program at a synchrotron x-ray ASAXS facility. Expertise in a range of synchrotron x-ray techniques, including the use of high energy x-rays (up to 70 keV), for studying soft matter is especially beneficial. Strong computer skills, including EPICS, SPEC, and Python, as well as the ability to use these to write data acquisition software, data analysis software, instrumentation control interfaces and beamline control programs, are also required. Experience with the operation of synchrotron beamlines is

highly preferred. Moreover, the SRA will have the opportunity to serve in the role of Principal Investigator, writing proposals to federal and non-federal agencies to support such research and development.

Application Instructions

Applications must be submitted online through the University of Chicago's Interfolio website: <http://apply.interfolio.com/111717>. Review of applications will continue until position is filled.

The following materials are required:

- cover letter.
- curriculum vitae including a list of publications.
- research statement describing past and current research accomplishments
- contact information for three references who can provide confidential letters of evaluation.

Equal Employment Opportunity Statement

We seek a diverse pool of applicants who wish to join an academic community that places the highest value on rigorous inquiry and encourages diverse perspectives, experiences, groups of individuals, and ideas to inform and stimulate intellectual challenge, engagement, and exchange. The University's Statements on Diversity are at <https://provost.uchicago.edu/statements-diversity>.

The University of Chicago is an Affirmative Action/Equal Opportunity/Disabled/Veterans Employer and does not discriminate on the basis of race, color, religion, sex, sexual orientation, gender identity, national or ethnic origin, age, status as an individual with a disability, protected veteran status, genetic information, or other protected classes under the law. For additional information please see the University's [Notice of Nondiscrimination](#).

Job seekers in need of a reasonable accommodation to complete the application process should call 773-834-3988 or email equalopportunity@uchicago.edu with their request.