

Motivated and ambitious postdoctoral researchers and graduate research assistants (GRA) are invited to join Prof. Yang Zhang's research group in the area of Physics and Chemistry of Liquids under Extreme/Interfacial/Non-equilibrium Conditions at University of Illinois at Urbana-Champaign.

The research of our group focuses on the physics and chemistry of liquids, especially under extreme/interfacial/non-equilibrium conditions. We synergistically combine and push the boundaries of accelerated atomistic simulation methods that are based on statistical and quantum mechanical theories and neutron and X-ray scattering experiments. By studying a variety of liquids and liquid-like systems, the goal is to unravel the emergent principles that govern a much wider range of long timescale phenomena and rare events.

Immediately, we have one postdoc and several GRA positions to work on the following projects. Outstanding postdoc candidates can be considered for the Beckman fellowships (<http://beckman.illinois.edu/research/fellows-and-awards/postdoctoral>).

The positions immediately available are as follows:

- **Post-doc:** *Study of the emergent properties (solvation, transport, kinetically-trapped structures) of liquids at interfaces, especially in redox flow battery environment, using neutron and X-ray scattering experiments and first-principle and accelerated atomistic simulations.*
- **GRA:** *Study of the collective excitations in liquids (metallic, water, ionic) and liquid-like matter, at and away from equilibrium, using neutron scattering experiments, kinetic theory, and atomistic simulations.*
- **GRA:** *Development of accelerated atomistic simulation and rare event sampling methods (with applications to long timescale phenomena such as supercooled liquids and glass transition, nucleation and crystal growth, molecular self-assembly, materials aging and degradation, etc.).*

The experiments are usually performed at the neutron and synchrotron user facilities at national laboratories around the world. Solid background in theories and programming are essential. Physics, Chemistry, and EECS majors are preferred, but other majors are also welcome.

For more information, please contact (with a CV, and contact information of two references (for postdoc position)):

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