

Job Specification

Post Date: August 16, 2018

The Carrow Lab in the Department of Chemistry at Princeton University has openings for two postdoctoral researchers. You will be a part of a NIGMS-funded project on transition metal catalysis for new synthetic organic methods.

The general theme of this project is to exploit the exceptional reactivity of metals with low electron counts and vacant orbitals in catalysis, particularly in the context of manifesting unique elementary mechanisms. One thrust of this project is to leverage attractive van der Waals forces in catalyst structures to enhance *both* reactivity and stability of coordinatively unsaturated organometallic species. To do so, we target fundamentally new ancillary ligand structures with large polarizability, which requires creation of new synthetic methodologies. Another thrust of this project is to transfer the ligands and structure-activity knowledge we have built to overcome mechanistic challenges associated with the use of earth-abundant metal complexes in coupling chemistry. Research will span the discovery of new transition metal catalysts, studies of reaction mechanisms, development of new methods for organophosphorus compound syntheses, and development of base metal-catalyzed carbon-carbon and carbon-heteroatom bond forming methods.

What you will do:

- Catalysis, organic synthesis, and methods development
- Mechanistic organometallic chemistry
- Mentorship of junior researchers

What is required:

- Ph.D. in chemistry with a strong background and interest in organic, organometallic, and/or catalysis chemistry.
- Demonstrated technical writing ability.
- Ability to work independently with a high level of initiative.
- Excellent organizational and science communication skills.

The appointment will be for two years. Interested applicants should forward their curriculum vitae and contact information for references to Brad Carrow by email (bcarrow@princeton.edu). The appointment could, and preferably would, begin ASAP. Salary for this position aligns with NIH guidelines:

<https://grants.nih.gov/grants/guide/notice-files/NOT-OD-16-134.html>.

Additional information about the Carrow Lab can be found through the following link:

<https://chemists.princeton.edu/carrow>

Applications will be reviewed as received and until the positions are filled.