

**2018 WEEKLY BULLETIN**  
**DEPARTMENT OF CHEMISTRY, NORTHWESTERN UNIVERSITY**  
**EVANSTON, ILLINOIS**  
**December 17, 2018**

*For full schedule, including Center events, please see the Department Calendar:*  
<http://www.chemistry.northwestern.edu/events/calendar.html>

**Arrivals**

Ziheng Ji joined the Harel Group

**BIP**

BIP every Friday at 10:00am in Tech K140

**Opportunities**

**Pacific Northwest National Lab** is accepting applications for a Chemist. As a researcher in the Catalysis Science group, you will join a talented, multi-investigator team to explore the molecular-level basis for determining kinetic and thermodynamic parameters for chemical transformations important for the next generation of materials to store energy in chemical bonds. You will work closely with prominent researchers as you develop a line of experimental research, working to understand the physicochemical properties that control the uptake and release of hydrogen from materials ranging from physisorption to chemisorption. You will also help to develop novel experimental methods to better understand fundamental aspects of materials and catalyst design, synthesis, and utilization.

If you are a researcher ready to test your talents and training in the study of chemical transformations and hone your skills at a national laboratory widely recognized for its work in the physical sciences, we want to connect with you. Will conduct independent research and work on project team assignments, including the following responsibilities:

- Lead manuscript development and maintain a strong overall publication record in the peer-reviewed scientific literature.
- Interact, communicate, and problem solve with a diverse team of research staff within the Catalysis Science, PSD, and across PNNL.
- Present research at technical conferences and project/program review meetings.
- Participate in the development of research proposals.

**Minimum Qualifications**

BS/BA with 2 years of experience; MS/MS with 0 years of experience; PhD with 0 years of experience

**Preferred Qualifications**

- Ph.D. in Chemistry, Chemical Engineering, Materials Sciences or related field
- Training in and aptitude for thermodynamics and kinetics
- Strong verbal and written communications skills
- Knowledge of/experience with multi-method experimental and analytical characterization of liquids, solids or solid interfaces with aqueous solutions and solid interfaces with gases for the purpose of understanding chemical reactions, thermodynamics and kinetics
- Proficiency in wet chemical analytics, solution preparation and handling, design and execution of batch and/or mixed flow reactor experiments

- A background in one or more of the following techniques to determine both thermodynamic and kinetic parameters: solid state and solution phase nuclear magnetic resonance spectroscopy, X-ray diffraction, XAFS, Raman and/or IR vibrational spectroscopies, neutron scattering, reaction calorimetry, pressure-composition-temperature (PCT), or temperature-programmed desorption-mass spectroscopy
- A functional grasp of thermodynamic and kinetic concepts to determine mechanisms of chemical transformations
- The ability to adapt, refine, or innovate experimental tools as needed

#### Equal Employment Opportunity

Battelle Memorial Institute (BMI) at Pacific Northwest National Laboratory (PNNL) is an Affirmative Action/Equal Opportunity Employer and supports diversity in the workplace. All employment decisions are made without regard to race, color, religion, sex, national origin, age, disability, veteran status, marital or family status, sexual orientation, gender identity, or genetic information. All BMI staff must be able to demonstrate the legal right to work in the United States. BMI is an E-Verify employer. Learn more at [www.jobs.pnnl.gov](http://www.jobs.pnnl.gov)

**The Wellman Center for Photomedicine at Massachusetts General Hospital (MGH) and Harvard Medical School (HMS)** is seeking outstanding candidates for faculty positions at the Assistant or Associate Professor levels.

As a pioneer in light-based biomedical research, the Wellman Center has created many impactful technologies used in medicine today and has trained numerous leaders in the field. With 13 core faculty members and over 150 staff, postdoctoral fellows, and graduate students, the Wellman Center conducts cutting-edge research in areas that include optical diagnostics and imaging, novel light sources, advanced microscopy, light-activated tissue repair and regeneration, immunology, genetics, and phototherapy. These research programs are supported by a combination of federal grants, private foundations, industry, and philanthropy. The center also receives substantial royalties from licensed intellectual property that support the operation of the Center and provide other benefits to Wellman faculty members.

To continue this tradition of excellence, we seek exceptionally innovative individuals who will push the boundaries of biomedical research. Candidates from any background who aspire to make an impact in the field of biomedicine with an interest in building strong ties to photomedicine are encouraged to apply. Potential broad topics of interest include but are not limited to novel diagnostics and therapeutics, sensing and imaging, artificial intelligence, nanotechnology, robotics, optogenetics, photoacoustics, microfluidics, organogenesis, precision medicine, computational biology, and systems biology. Successful candidates will be expected to promote and foster multidisciplinary research within Wellman and the larger MGH, MIT, and Harvard research communities. A competitive start-up package will be provided that includes custom-designed research space and access to state-of-the-art core facilities.

Applications submitted before December 31, 2018, will be given full consideration and will be reviewed immediately upon receipt of a complete application. Please email curriculum vitae, a statement of research interest and goals, copies of 3-5 key recent publications, and the names of three references to the faculty search chair, Prof. Charles Lin, at [WCPFacultySearch@mg.harvard.edu](mailto:WCPFacultySearch@mg.harvard.edu). *Massachusetts General Hospital and Harvard Medical School are Equal Opportunity/Affirmative Action Employers. Women and minorities are encouraged to apply.*

**The University of Washington Tacoma** invites applications for a tenure-track Assistant Professor in Organic Chemistry in the Division of Sciences and Mathematics within the School of Interdisciplinary Arts & Sciences (SIAS). We expect the successful candidate to actively seek extramural support to develop and maintain an excellent research program involving undergraduates.

At the University of Washington-Tacoma, we value excellence, community, diversity, innovation and access. We are seeking candidates in the area of Organic Chemistry with a focus on synthetic chemistry, medicinal chemistry, pharmaceutical chemistry, or some related field with applications that will contribute to our B.S. in Biomedical Sciences. We especially encourage candidates with expertise in synthetic approaches to biomolecules and pharmaceuticals, medicinal chemistry, and/or environmental health to apply.

The successful candidate will be committed to creating an inclusive classroom and laboratory environment with diverse and underrepresented populations using innovative undergraduate teaching and research experiences. Curricular responsibilities include developing and teaching lecture and laboratory courses in our core science curriculum in organic chemistry as well as upper division elective courses.

This position primarily supports a rapidly growing B.S. in Biomedical Sciences and an interdisciplinary B.S. in Environmental Science. It also provides courses required for admission to graduate and professional programs in health sciences, biology or chemistry, and environmental sciences and contributes to other majors at UW Tacoma such as Nursing and Health Care Leadership.

The position begins September 16, 2019, requires an earned doctorate (or foreign equivalent) in a related field, and is contingent on funding. This is a full-time position with a nine-month service period. Candidates in the final stages of their dissertation will be appointed on an acting basis.

As a campus of the University of Washington, we offer substantial opportunities to collaborate on innovative and interdisciplinary research, teaching and community engagement. SIAS offers a range of innovative interdisciplinary majors. We especially welcome applicants representing diverse perspectives and approaches. The Tacoma campus of the University of Washington was established in 1990 with an interdisciplinary approach to education at its foundation. Our thriving downtown campus serves students with a wide range of ages and backgrounds. Faculty have access to the resources of a major research university, including an extensive library system, but work and teach within a small (5000 student) campus setting. Consistent with our urban-serving mission, our campus provides a unique environment for the development of creative teaching, research and community collaborations. The campus commitment to diversity is central to maintaining an atmosphere where students, staff, and faculty find abundant opportunities for intellectual, personal and professional growth within our campus and broader community. For more information about UW Tacoma, visit <http://www.tacoma.uw.edu/>.

To apply, please submit:

- A detailed cover letter delineating your interests and qualifications, a description of planned and existing research projects that involve undergraduate students, and your teaching experience. Applicant statements also should detail how their teaching, service and/or scholarship has supported the success of students from underrepresented groups; applicants who have not yet had the opportunity for such experience should note how their work will further UW Tacoma's commitment to diversity and inclusivity.
- A curriculum vitae, including a list of courses you have taught or are qualified to teach
- A statement of your teaching philosophy
- Evidence of teaching effectiveness (e.g., quantitative student evaluations, peer or supervisor teaching evaluation, or equivalent)
- An article length writing sample (e.g. a journal article for which you are primary author), and

6) Names and contact information for three professional references, with letters available upon request.

Submit all application materials through [Interfolio](#). Application materials, including letters of recommendation, received via email will not be considered. Screening of applicants will begin on December 15, 2018 and will continue until the position is filled. For further information, contact Dr. Edward Kolodziej at [koloj@uw.edu](mailto:koloj@uw.edu).

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.

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>).

**The Department of Chemistry at the University of Nevada, Reno** is hiring an Assistant Professor (9 month, tenure-track) with an anticipated start date of 07/01/2019. Primary responsibilities will include teaching undergraduate and graduate level courses and establishing an externally funded experimental research program. This position is part of a multi-year commitment to establish UNR as an international leader in Advanced Manufacturing Research. The availability of this position is contingent on funding. <http://apptrkr.com/1340323>

#### Required Qualifications

PhD in Chemistry or related field, post-doctoral research experience

The total compensation package includes a negotiable competitive salary, moving allowance (if applicable), a rich retirement plan, health insurance options that include dental and vision, life insurance, long-term disability, along with many other benefits. Additionally, there is a grant-in-aid educational benefit for faculty and dependents. For more information, please visit: <https://www.unr.edu/hr/benefits>  
Faculty Dual Career Assistance Program

The University of Nevada, Reno recognizes the importance of addressing dual-career couples' professional needs. We offer a dual career assistance program to newly hired faculty spouses/partners that provides resources and assists them to identify career opportunities in Northern Nevada.

#### Department Information

The Department of Chemistry offers B.S., M.S., and Ph.D. degrees in chemistry, as well as an interdisciplinary Ph.D. in Chemical Physics. The department has 17 full-time, tenure-track and four lecturer faculty members, housed in a four-story building with state-of-the-art research facilities. Undergraduate laboratory courses are taught in our modern instructional facilities in the nearby Davidson Mathematics and Science Center. Additional information about the department can be found on its website: <https://www.unr.edu/chemistry>

#### Contact Information for this position

Search Coordinator, Ekaterina Tsareva, [etsareva@unr.edu](mailto:etsareva@unr.edu)

#### Required Attachment(s)

Attach the following attachments to your application

- 1) Resume/CV
- 2) Cover letter with statement of qualification

- 3) Statement of teaching experience and philosophy
- 4) A detailed research proposal
- 5) Please write a brief statement (one page maximum) about how you would contribute toward our mission of creating a culturally inclusive environment in the role for which you are applying.

Applicants should also arrange for three letters of reference to be sent directly to Search Coordinator via email at [etsareva@unr.edu](mailto:etsareva@unr.edu) or hard copy to:

University of Nevada, Reno  
Department of Chemistry  
Attn: Analytical Chemist Search Coordinator  
1664 N Virginia St., MS0216  
Reno, NV 89557

Posting Close Time: This posting will close at 12:00 am on the date listed below. The posting will no longer be available to apply to after 11:59 pm the day prior. Posting Close Date: Jan 7, 2019

**Cleveland Clinic** A postdoctoral fellowship position supported by the National Institutes of Health and the Prostate Cancer Foundation are available in the laboratory of Dr. Nima Sharifi at the Cleveland Clinic. Our laboratory is focused on metabolic and molecular mechanisms of androgen synthesis and androgen receptor (AR) gain-of-function that lead to resistance to hormonal therapy.

Specific areas include:

- 1) Metabolic and genetic changes required for hormone therapy resistance in prostate cancer and tumor progression
- 2) Clinical validation in patients and clinical trials utilizing innovative approaches
- 3) Animal models of advanced prostate cancer for translational and therapeutic studies
- 4) Identifying targets for the development of new pharmacologic therapies

We discovered the first example of a gain-of-function in a steroid-synthesizing enzyme that enables prostate cancer resistance to hormonal therapy (Chang, et al. *Cell*. 2013 154(5):1074-1084) and that we have shown in a predictive biomarker of poor outcomes after hormonal therapy (Hearn, et al. *Lancet Oncol*. 2016 17(10):1435-44; Hearn, et al. *JAMA Oncol*. 2018 Apr 1;4(4):558-562). We are currently evaluating this biomarker in a clinical trial and are pursuing similar mechanisms and developing new treatment modalities based on these discoveries.

We recently also discovered that abiraterone works by conversion to a more active steroidal metabolite (Li, et al. *Nature*. 2015 523(7560):347-51), that metabolism is pharmacologically modifiable to optimize therapy (Li, et al. *Nature*. 2016 533(7604):547-51), that this is a class effect of steroidal androgen synthesis inhibitors (Alyamani, et al. *Cell Chemical Biology*. 2017 24, 1-8, July 20) and genetic determination of metabolite generation (Alyamani, et al. *J Clin Invest*. 2018 Aug 1;128(8):3333-3340).

The position will provide a unique and multidisciplinary exposure to tumor metabolism, molecular oncology, drug development and clinical trials. Further details are available at the following link:

<https://www.lerner.ccf.org/cancerbio/sharifi/#lab>

Candidates should hold a doctoral degree with a background in molecular biology, chemistry, metabolism or cancer biology. Candidates must have proficiency in verbal and written English. Candidates with an interest in the position should send their CV and contact information for 3 references to:

Nima Sharifi, M.D.

Kendrick Family Chair for Prostate Cancer Research

[casalek@ccf.org](mailto:casalek@ccf.org)

**The Department of Chemistry at the University of Wyoming** invites applications for an extended term Academic Professional Lecturer (APL) in analytical and physical chemistry. The successful candidate will have a 1+1 teaching load in general chemistry and will manage the undergraduate analytical and

physical chemistry laboratories. The exact responsibilities for the two teaching laboratories will differ slightly but typically involve experiment development, purchasing supplies, weekly laboratory setup, managing teaching assistants including weekly meetings, composing and updating laboratory manuals, instrument maintenance, and general maintenance of the laboratory space. The successful applicant will also be required to contribute to services at the departmental, college and university levels, as well as participate in student advising and divisional meetings as needed.

Review of applications will begin January 15, 2019 and continue until suitable candidates are identified. The position will start Fall 2019 and will be filled at the Assistant APL level (6 year renewable terms via 9-month appointments).

The University of Wyoming invites diverse applicants to consider our employment opportunities. We are also especially interested in candidates who have experience working with diverse populations and/or diverse initiatives. Some of the teaching laboratories the successful candidate will be involved with are located in the recently completed state-of-the-art Enzi Undergraduate Laboratory Facility (<http://www.uwyo.edu/chemistry/building/>). In addition, we anticipate the chosen applicant to have new opportunities for modernizing the senior level analytical and physical teaching laboratories as part of the Science Initiative program (<http://www.uwyo.edu/science-initiative/>) that is currently underway at the university.

*Minimum Qualifications:*

- Ph.D. or equivalent in chemistry or a closely related field of study
- Ability to maintain safe and clean teaching and instrumental laboratory environment
- Ability to effectively present information (both verbal and written) to students, university staff and faculty

*Desired Qualifications:*

- Teaching experience at the undergraduate level
- A strong understanding of principles relevant to quantitative chemical analysis, instrumental methods, quantum mechanics, thermodynamics and spectroscopy
- A strong background in practical laboratory operations relevant to an undergraduate analytical and physical teaching laboratory. This includes experience with operation, troubleshooting and basic repair of instrumentation such as spectrophotometer, electrochemical analyzer, ICP, GC, LASER, STM/AFM, EPR etc.

*Required Materials:*

Complete the online application and upload as one document: a cover letter, a CV listing relevant analytical/physical laboratory experience, graduate level analytical/physical coursework, any teaching experience and include a statement of teaching philosophy. Additionally, applicants should also arrange for three letters of recommendation to be submitted on their behalf to [chemistry@uwyo.edu](mailto:chemistry@uwyo.edu). The online application can be completed at

[https://uwyo.taleo.net/careersection/00\\_ex/jobdetail.ftl?job=18000017&tz=GMT-07%3A00](https://uwyo.taleo.net/careersection/00_ex/jobdetail.ftl?job=18000017&tz=GMT-07%3A00)

**X-ray Crystallography Facility at the University of California, San Diego** has opening for one (possibly two) postdoc positions. The position is for a full-time crystallography associate who will integrate into the day-to-day operations of the facility. The duties of the position will ultimately include:

- 1) Data acquisition and structure solution on a range of single-crystal and powder samples from academic and industrial partners.
- 2) Training, support and oversight of UC San Diego students and postdocs for data acquisition and structure solution.
- 3) Routine and advanced maintenance of single-crystal and powder X-ray diffraction instrumentation and computing facilities.



4) Crystal-growth experiments for organic, inorganic and pharmaceutical compounds.

The X-ray Crystallography Facility at UC San Diego is a state-of-the art instrumentation facility with full-time technical staff and faculty oversight. The facility currently features nine X-ray diffraction instruments for high-throughput analysis of small-molecule, macro-molecule and powder samples. Diffraction capabilities are derived from a combination of Mo, Cu and Ga sealed-tube, rotating-anode and metal-jet sources, as well as cutting-edge X-ray detectors. The facility also maintains a robust user-focused training program for UC San Diego students and postdocs, and visitors from domestic and international institutions.

The ideal candidates should have experience with single-crystal and/or powder diffraction data acquisition and structure solution. Experience with the maintenance of scientific/research instrumentation, and/or proficiency in the upkeep and manipulation of advanced electronics, is also highly desirable. Experience with Rietveld or Multipole refinement is a plus. We intend for this opportunity to be especially appealing to individuals who desire to become crystallography facility directors as a career path.

Interested candidates should forward a cover letter, CV and the names of at least two professional references via email to Prof. Joshua Figueroa ([jsfig@ucsd.edu](mailto:jsfig@ucsd.edu)). Female candidates and individuals with under-represented persons status are especially encouraged to apply. Applications will be reviewed as they are received