

2017 WEEKLY BULLETIN
DEPARTMENT OF CHEMISTRY, NORTHWESTERN UNIVERSITY
EVANSTON, ILLINOIS
November 27, 2017

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

Tuesday, November 28th: *Faculty Lunch Seminar: Lin Chen*
12:00-1:00pm
Tech K140

Friday, December 1st: *State of the Department Address:*
Department Chair, Peter Stair
4:00-5:00pm
Tech Ryan Family Auditorium L165

BIP

BIP meets every Friday in Tech K140 at 10:00am

Arrivals

Yuanyuan Zhang joined the Farha Group

Announcements

One Heart Source is currently accepting applications for our 2018 Service Learning Programs. We are offering 2 and 4 week Health Innovation programs in South Africa!

As an OHS Volunteer you will:

- Gain international experience on the ground in global health initiatives.
- Mentor students who strive to become healthcare professionals and cultivate lifelong relationships.
- Immerse yourself in diversity through service and excursions.
- Collaborate with groups of university students from around the world.
- Develop leadership and entrepreneurial skills through the pursuit of social justice.
- Enhance health care skills in real-world environments

Apply here for our Volunteer Programs: [2018 Application](#)

Application Deadline: November 30, 2017 Learn more about our Health [Program](#) here.

Opportunities

Roosevelt University's Department of Biological, Chemical and Physical Sciences seeks a non-tenure track position in Biochemistry to begin August 2018. Primary teaching responsibilities include introductory biochemistry with laboratory, advanced biochemistry and upper-level courses in the candidate's specialty. Scholarly interests in biophysical or bioanalytical chemistry would particularly complement existing strengths of the department. The successful candidate will have a Ph.D., knowledge of modern techniques in biochemistry, strong verbal and written communication skills and a documented

commitment to teaching. Post-doctoral research, experience with evidence-based pedagogies and diverse student populations, and interests in collaborative research, and teaching are preferred.

Roosevelt University is a private, non-sectarian university with 4,500 students studying at campuses in Chicago's south Loop, suburban Schaumburg and online. Founded on the principles of inclusion and social justice, Roosevelt is the fourth most ethnically diverse college in the Midwest, with a mission to prepare students to assume roles as leaders in their professions and communities.
Special Instructions Summary

Candidates should request references to send letters directly to Dr. Joshua Telser, jtels@roosevelt.edu.

<https://jobs.roosevelt.edu/postings/4212>

Rice University, located in Houston, Texas, seeks a new assistant or associate professor, starting on July 1, 2018, in the broad area of molecular nanotechnology (MolNan). The successful candidate will drive a dynamic, innovative, and independent research program and will excel in teaching at the graduate and undergraduate levels, while embracing Rice's culture of excellence and diversity. The MolNan faculty hire is expected to make original and impactful contributions in nanotechnology and in chemical engineering as an enabling discipline. The search will consider applicants from all engineering and science disciplines, with emphasis on those with research programs in sustainable energy (carbon-based, electron-based, water-based), catalysis, and polymers/soft-matter. The ideal candidate will pursue research with strong intellectual overlap with chemistry, physics, materials science, mechanical engineering, electrical engineering, and other related disciplines.

Candidates should submit the following: (1) cover letter; (2) curriculum vitae; (3) research plan (not to exceed six pages including figures); (4) teaching plan; and the names, professional affiliations, and email addresses of three references.

Applications will be evaluated beginning on December 1, 2017. Those submitted by January 15, 2018 will receive full consideration. Later applications may still be considered at the discretion of the faculty search committee. Recommendation of candidates or questions regarding this opportunity can be directed to the committee at RiceMolNanSearch@rice.edu.

Education Required PhD or other Doctoral Degree

Specify Concentration / Degree Type : A PhD or PhD requirements fulfilled by July 1 of the year employment commences is required. <https://jobs.rice.edu/postings/12306>

University of San Diego is accepting applications for a Postdoctoral Researcher Position in biological soft matter physics. Excellent candidates are invited to apply for a postdoctoral researcher position in the Robertson-Anderson lab in the Physics and Biophysics Department at the University of San Diego. The Robertson-Anderson lab specializes in understanding the molecular-level dynamics that give rise to novel physical properties present in soft biological materials. We develop and use force spectroscopy and fluorescence microscopy techniques to characterize molecular transport and microrheological properties of these materials. We also aim to develop new bio-inspired composite materials with novel emergent properties. The open position is for a cutting-edge Air Force project to elucidate the molecular dynamics governing DNA-based composite biomaterials. The postdoc will be responsible for developing instrumentation/techniques as well as DNA purification and fluorescence assays; and designing and executing microrheology experiments and analysis. Candidates should have experience with force spectroscopy and image analysis and be well-versed in Matlab and Labview. Knowledge/experience with soft matter physics and molecular biochemistry techniques is preferred. University of San Diego is a primarily undergraduate institution so the postdoc will be expected to help advise undergraduate

researchers, and will have opportunities to teach depending on interest and research progress. Candidates should have a PhD in physics although related doctoral degrees will be considered. Applications should include a cover letter, CV, and 3 letters of recommendation. All materials should be emailed to randerson@sandiego.edu. Applications will be considered until the position is filled.

Physics and Biophysics Department at the University of San Diego. Excellent candidates are invited to apply for a postdoctoral researcher position in the Robertson-Anderson lab in the Physics and Biophysics Department at the University of San Diego. The Robertson-Anderson lab specializes in understanding the molecular-level dynamics that give rise to novel physical properties present in soft biological materials. We develop and use force spectroscopy and fluorescence microscopy techniques to characterize molecular transport and microrheological properties of these materials. We also aim to develop new bio-inspired composite materials with novel emergent properties. The open position is for a cutting-edge Air Force project to elucidate the molecular dynamics governing DNA-based composite biomaterials. The postdoc will be responsible for developing instrumentation/techniques as well as DNA purification and fluorescence assays; and designing and executing microrheology experiments and analysis. Candidates should have experience with force spectroscopy and image analysis and be well-versed in Matlab and Labview. Knowledge/experience with soft matter physics and molecular biochemistry techniques is preferred. University of San Diego is a primarily undergraduate institution so the postdoc will be expected to help advise undergraduate researchers, and will have opportunities to teach depending on interest and research progress. Candidates should have a PhD in physics although related doctoral degrees will be considered. Applications should include a cover letter, CV, and 3 letters of recommendation. All materials should be emailed to randerson@sandiego.edu. Applications will be considered until the position is filled.

The Chemours Titanium Technologies Process Control Group located in Wilmington, DE has a Process Analyzer Engineer/Scientist position available. This is a key role within the Company and the process control function of the Titanium Technologies business. This position will report to the Process Control Group Manager and will require significant interaction with scientists, engineers, and technicians located at manufacturing facilities throughout the world

The responsibilities of the position include, but are not limited to, the following:

- Develop and design improvements to existing process analyzer systems to support their reliability, uptime, and enable process control.
- Work with vendors and project engineering to specify, setup, configure, and startup process analyzers.
- Work closely with plant sites to manage PM, reliability, and lifecycle plans for process analyzer systems.
- Training of plant site technical staff, as well as providing remote and direct support to the sites for process analyzer systems.
- Identify opportunities to improve process performance through implementation of new or different process analyzers.

To be qualified for this role, you *must possess* the following:

****CHEMOURS DOES NOT SPONSOR INDIVIDUAL WORK VISAS

- BS in Chemical or Electrical Engineering with 5+ years of experience, or a MS in Chemical or Electrical Engineering with 3+ years of experience in process instrumentation or analyzers. A PhD in Physical/Analytical Chemistry or Chemical/Electrical Engineering with a focus on instrumentation/measurement is also acceptable for this role.
- Strong capability in measurement and calibration
- Experience in mathematical & statistical data analysis (preferably in Chemometrics)
- Requirement to travel 25% (plant sites, vendors, etc.) both domestically and internationally.
- Exceptional computer skills including the ability to customize PC based operating systems

The following skill sets are *preferred* by the business unit:

- Demonstrated technical skills in a broad range of process analytical technologies including (FTIR, NIR, IR, UV/VIS, TDLAS, MS, etc.)
- Experience in specification and operation of process analyzers, industrial control systems communication protocols (e.g. Modbus, OPC, etc.)
- Experience with industrial sample system design and operation,
- Experience with the development of Chemometric models using Matlab/PLSToolbox, Grams PLS/IQ, or Pirouette.
- Experience with the use of scripts and compiled program code to customize and add functionality to Process Analyzer Systems

https://chemours.wd5.myworkdayjobs.com/en-US/Chemours/job/US---DE---Wilmington-Experimental-Station/Principal-Investigator_JR1485

The Department of Chemistry at Ball State University is accepting applications for tenure-track assistant professor of Chemistry, Chemistry Education position who will teach undergraduate and graduate classes in their discipline as well as teach general chemistry courses. The faculty member will also develop an active research program in chemical education which complements the department's existing research programs.

PhD degree in Chemical Education or closely related area from an accredited college or university at the time of application: evidence of potential for excellence in teaching and in research. Teaching experience at the collegiate level, e.g. teaching assistant, instructor, Assistant Professor, postdoctoral research experience or equivalent; research interests that focus on an area which enhances the department's existing research programs.

For more information about the position and application requirement can be found on the website: <https://bsu.peopleadmin.com/postings/10991>

National Bioenergy Center in Golden, Colorado has several postdoctoral opportunities available in the following areas:

Biological lignin valorization - we are looking for multiple candidates with expertise in synthetic biology, metabolic engineering, microbiology, or biochemistry. These positions will focus on conversion of lignin-derived aromatic compounds to value-added products in non-model hosts and understanding the mechanistic basis of enzymatic lignin depolymerization and catabolism.

Chemical synthesis and analytical chemistry for lignin - we have a need for a postdoctoral associate skilled in organic synthesis to design new routes to lignin model compounds and to develop rapid analytics for lignin using NMR and/or MS-based methods.

Interested candidates should send a cover letter and CV to Gregg Beckham at gregg.beckham@nrel.gov .

Pacific Northwest National Laboratory A postdoctoral researcher is needed in the Catalysis Science Group for experimental research. The position will be focused on the reduction of CO₂ using catalysts based on inorganic and organometallic complexes. The planned research will involve the design, synthesis, and characterization of new metal complexes, including thermochemical and mechanistic studies, leading to new molecular catalysts in the area of reduction of CO₂ to fuels.

Equal Employment Opportunity

PNNL is an Equal Opportunity/Affirmative Action Employer that is committed to hiring a diverse, talented workforce. EOE Disability/Vet/M/F/Sexual Orientation/Gender Identity. Staff at PNNL must be able to demonstrate the legal right to work in the United States.

Minimum Qualifications

Candidates must have received a PhD within the past five years (60 months) or within the next 8 months from an accredited college or university.

Preferred Qualifications

Experience in synthetic and mechanistic organometallic/inorganic chemistry and handling air-sensitive materials is required. Excellent oral and written communications skills are mandatory. Proficiency with a range of spectroscopic techniques, particularly NMR, is essential. Experience in kinetic measurements of catalytic reactions is desirable but not required. Must have the ability to work in a highly collaborative environment.

The perfect candidates would have these 3 characteristics:

Expertise in preparing and handling highly air-sensitive complexes

Experience in NMR and kinetics of catalysis

Independent and highly motivated

Ph.D. in organometallic chemistry or inorganic chemistry

<https://pnnl.jibeapply.com/jobs/306986/Post+Doctorate+RA++Catalysis+Science?lang=en-US>

The Department of Chemistry at the University of Wyoming invites applications for an extended term Academic Professional Lecturer (APL) in organic chemistry. The successful candidate will teach at the undergraduate organic chemistry level and manage the undergraduate organic teaching labs.

Responsibilities for the organic teaching labs will include experiment development and testing, supply purchasing, weekly lab setup, managing teaching assistants and maintenance of instruments and labs. The organic lab facilities are comprised of three labs with associated instrument rooms and computer analysis rooms in the recently completed Enzi Undergraduate Lab Facility

(<http://www.uwyo.edu/chemistry/building/>). The successful applicant will also be required to contribute to departmental and university services.

Review of applications will begin January 15, 2018 and continue until suitable candidates are identified. The position will start Fall 2018 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. *Minimum Qualifications:* Ph.D. or equivalent in chemistry

Desired Qualifications: a strong background in practical organic laboratory operations, teaching experience at the undergraduate level and a strong understanding of mechanistic organic chemistry.

Required Materials: Complete the online application using the below link and upload as one document: a CV listing relevant organic laboratory experience, graduate level organic coursework, any teaching experience and include a statement of teaching philosophy.

https://jobs.uwyo.edu/psp/EREC/UWEXTERNAL/HRMS/c/HRS_HRAM.HRS_CE.GBL?Page=HRS_CE_JOB_DTL&Action=A&SiteId=6&JobOpeningId=9143&PostingSeq=1

Additionally, applicants should also arrange for three letters of recommendation to be submitted on their behalf to chemistry@uwyo.edu.

Duke's Chemistry Department is accepting applications for the Director of the Department's Shared Instrument Facility. The Director is responsible for the overall operation of the Facility, which includes but is not limited to instrument monitoring and maintenance, oversight of sample analyses, user training, administration for the Facility, and working with faculty to maximize the Facility's impact on the Department's research output. The facility houses instrumentation for mass spectrometry and a variety of spectroscopies. The Director will work with the Chemistry Department's Infrastructure Committee to define and implement the strategic goals of the Facility and to plan, direct, manage and lead the execution of scientific and research strategies, collaborations and operations of the Facility. A PhD degree is required as is experience with LC-MS/MS. Interested individuals should submit a CV and two letters of recommendation to <https://academicjobsonline.org/ajo/jobs/10037>.

Honeywell UOP, headquartered in Des Plaines, Illinois, USA, is a leading international supplier and licensor of process technology, catalysts, adsorbents, process plants, and consulting services to the petroleum refining, petrochemical, and gas processing industries.

An excellent career opportunity is available for a Sr. Engineer/Scientist within the Catalysis and Materials Research department of UOP's Research and Development organization located in Des Plaines, IL. This position represents a unique and visible opportunity to participate in the development of improved catalysts and adsorbents across a variety of UOP technology fields.

Responsibilities:

Maintain an active project portfolio of 2-4 research projects in the areas of catalyst and adsorbent research and development. Supervise laboratory technicians on carrying out required experimental plans. Ensure alignment of goals of research projects with business objectives. Interface with other UOP departments including Pilot Plants, Analytical and Advanced Characterization to ensure robust catalyst development programs. Stay current on patent and open literature as they relate to research programs. Participate in all departmental safety activities and conduct all work with a high degree of attention to safety. Ph.D. candidates and postdocs in Chemistry and Chemical Engineering are encouraged to apply.

Interested candidates should email resumes to Qianjun.Chen@Honeywell.com

The University of Nevada, Reno is searching for a continuing full-time non-tenure-track Chemistry Lecturer. Duties include lecturing at the introductory and intermediate levels including physical chemistry, general chemistry, and analytical chemistry; overseeing the physical chemistry and instrumental analysis instructional laboratory programs and coordinating with departmental lecture courses; curriculum development and implementation; and undergraduate advising.

The successful applicant for this position will be encouraged to develop new laboratory experiments, with possibilities for incorporating modern physical chemistry laboratory experiments and computational chemistry. Applications for internal instructional enhancement funding and contributions to proposals for external instructional funding will also be encouraged.

This position requires training, evaluating and organizing the activities of graduate level teaching assistants; working effectively with chemistry stockroom staff; coordinating activities with other faculty; and working effectively with the department's Director of Laboratories/Safety Officer.

This is a 9-month full-time continuing position, with the potential for further summer opportunities including teaching, research, student advising, curricular development, and/or laboratory management.

The University of Nevada, Reno has a growing and increasingly diverse student population of approximately 21,000, including over 2,800 graduate students. The city of Reno offers an excellent quality of life, with entertainment and cultural opportunities in excess of most cities of similar size. The

city lies one hour from Lake Tahoe and four hours east of San Francisco in the valley of the Truckee River on the eastern slope of the Sierra Nevada, and has a mild high desert climate. A highly rated location for living and outdoor recreation, the Reno area also enjoys a flourishing and diverse intellectual, artistic, and cultural community.

The University of Nevada, Reno recognizes that diversity promotes excellence in education and research. We are an inclusive and engaged community and recognize the added value that students, faculty, and staff from different backgrounds bring to the educational experience.

Required Qualifications

Doctoral degree in Chemistry or closely related field and teaching experience.

Evidence of ability in and strong commitment to the following areas: teaching effectively at the introductory and intermediate levels of physical, analytical and general chemistry; developing and implementing new lecture and laboratory curricula; management of an instructional laboratory program.
Contact Information for this Position

Sharee Williams (775) 682-8795 shareew@unr.edu <https://www.unrsearch.com/postings/25901>

The College of Science at Virginia Tech and the Academy of Integrated Science, through its Integrated Science Curriculum (<https://www.ais.science.vt.edu/programs/isc.html>), are placing a strong emphasis on integrated and interdisciplinary teaching. As part of this initiative, Virginia Tech has a non-tenure track faculty position for the Leader of the Integrated Science Curriculum in the Academy of Integrated Science to start in Fall 2018. The appointment will be at the rank of Collegiate Assistant Professor with an initial 3-year appointment and the possibility of multi-year renewal upon successful review.

The Integrated Science Curriculum is a two-year program that prepares students from the College of Science for their respective majors through a curriculum built around student teams working on problem-oriented exercises while mastering interdisciplinary concepts. Biology, chemistry, mathematics, and physics are intertwined, in lectures and in labs, to achieve a dynamic understanding of a wide range of fundamental principles within the modern scientific method.

We seek candidates who are passionate about interdisciplinary teaching of undergraduate students in an inclusive and integrated environment. Responsibilities include teaching undergraduate courses and laboratories related to the Integrated Science Curriculum, where successful candidates will:

- Make significant contributions to our interdisciplinary undergraduate instruction; coordinate laboratory and lecture courses, work closely with our undergraduate students, and lead efforts in curriculum enhancements and innovative pedagogy;
- Continue to develop professional capabilities and participate in scholarly activities, including travel to and participation in professional conferences and societies; and participate in department, college, and university service and governance, as well as professional service.

Applicants must have a Ph.D. in biochemistry, biology, chemistry, physics or a closely related field. Successful candidates will be expected to teach effectively at the undergraduate level and work closely with the existing interdisciplinary programs in the Academy of Integrated Science. Applications must be submitted online at <https://listings.jobs.vt.edu/postings/80232> (posting number TR0170134) and should include a cover letter, curriculum vitae, a statement of teaching philosophy that describes an integrated vision for interdisciplinary science education, a description of previous activities mentoring minorities, women, or members of other underrepresented groups as well as how the applicant will further Virginia Tech's commitment to build a culturally diverse educational environment, and contact information for three references. The review of applications will begin on January 15, 2018 and continue until the position is filled. As part of the hiring process, the successful applicant must pass a criminal background

check. Questions regarding the position can be directed by Email to Prof. Michel Pleimling, Integrated Science Curriculum Faculty Search Committee Chair, at pleim@vt.edu.

Virginia Tech is an EO/AA university, and offers a wide range of networking and development opportunities to women and minorities in science and engineering, and additionally provides a competitive dual hiring program for couples. Individuals with disabilities desiring accommodation in the application process should notify Dr. Nora Dragovic in the Academy of Integrated Science (Email: nora84@vt.edu, Tel: 540- 231-8131).

Bridgestone Americas Center for Research and Technology located in Akron, Ohio is currently seeking applications for Synthesis Chemist positions for the Synthesis Group at the Bridgestone Center for Research and Technology.

Qualified candidates should have a Ph.D. in Organic, Inorganic or Polymer Chemistry, with a strong fundamental understanding of Organic and Inorganic Chemistry as well as excellent bench synthesis skills with an interest and demonstrated ability to perform hands-on synthesis, purification, and characterization experiments. Some knowledge of and experience with polymers is preferred but not required. We are seeking candidates with 0-7 years of post-doctoral industrial experience.

Scientists will work in a multidisciplinary environment collaborating with a team of scientists and engineers to develop, optimize and scale up the production of new polymers and other materials for tire as well as non-tire applications.

The ideal candidate should be a creative individual with much initiative, a strong academic record, and have good problem-solving abilities. Solid verbal/written communication and interpersonal skills are also needed. The ability to interact effectively with other researchers locally as well as associates in other parts of the Corporation in the US and abroad is critical to success in this position.

Applicants must be authorized to work in the United States. A pre-employment drug test is required. Interested parties are invited to apply by visiting this website:

https://bebridgestone.com/en_us/job-details?id=2017-118051

Bridgestone Americas, Inc. is an Equal Employment Opportunity (EEO) employer.