

**2017 WEEKLY BULLETIN**  
**DEPARTMENT OF CHEMISTRY, NORTHWESTERN UNIVERSITY**  
**EVANSTON, ILLINOIS**  
**December 18, 2017**

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

Thursday, December 21<sup>st</sup>:      *Chemistry Department Seminar:*  
   *Professor Joseph S. Francisco, University of Nebraska-Lincoln*  
   11:00am-12:00pm  
   Tech L211

**BIP**

BIP on break for holidays. First BIP of 2018 will be on Friday January 12th

**Arrivals**

Dingdi Wang joined the Weitz Group

**Opportunities**

**The College of Lake County** is currently searching for one full-time faculty member to be housed in the Biological & Health Sciences division. Responsibilities for this position include teaching courses in the chemistry department. This position will be involved in the instruction of first and second year college level courses to a diverse student body during daytime, evening, and Saturday classes at our main campus, extension sites and local business and industry sites. The faculty member will develop, prepare, and revise instructional materials as well as participate in program evaluation and curriculum planning and development. The instructor will participate in department, division, and general faculty meetings, serve on division and college committees, and participate in other forms of college service. Instructors are required to maintain an active program of professional development related to institutional objectives. The instructor will utilize appropriate technology to deliver instructional materials, maintain grades, provide timely communications with students, etc. The instructor shall maintain appropriate office hours for student access. Maintains current knowledge of subject matter via professional organization membership, attendance of seminars, conferences and classes, and professional publications. There is potential for the instructor to lead efforts for increasing course offerings and growing enrollments at the Lakeshore Campus. More information can be found at: <https://jobs.clcillinois.edu/postings/9842>.

**The University of Delaware** invites applications and nominations for the Director of the DuPont Interdisciplinary Science Learning Laboratories (ISLL) (<https://www.isll.udel.edu/>). The successful candidate will have a scholarly record commensurate with appointment as a tenured faculty member in an appropriate STEM department at the University of Delaware. The position is open to candidates with a scholarly specialization in any area of laboratory science or science education, especially those dedicated to interdisciplinary science. The start date of the position is September 1, 2018.

The successful candidate will exhibit a strong record of scholarship and teaching, evidence of academic leadership experience, and the desire to lead an innovative program of undergraduate foundational science education at the University of Delaware. Knowledge and experience with discipline based education research, including assessment and evaluation, is preferred. The Director will bring visionary leadership

and management to the Interdisciplinary Science Learning Laboratories and nurture the academic growth of a diverse student body and teaching team. The Director will work collaboratively with faculty and staff from partner departments including Biological Sciences, Chemistry & Biochemistry, and Physics, and other affiliated campus units including University staff and administrators. We are particularly interested in applicants who have a demonstrated commitment to excellence by promoting diversity and equal opportunities through leadership in research, inclusive teaching, and public engagement or outreach. Scholars and leaders from underrepresented groups are especially encouraged to apply.

The Patrick T. Harker Interdisciplinary Science and Engineering Laboratory (Harker ISE Lab) is a hub of teaching and research on the University of Delaware's campus. The 194,000-square-foot facility brings together students and faculty from various disciplines to teach, learn, and conduct research in a collaborative environment. Research provides content for the curriculum and students learn through the exploration of real-world problems. The laboratories are housed in the University of Delaware's Patrick T. Harker ISE Lab. Harker ISE Lab's four problem-based learning instructional laboratories form the heart of ISLL and feature lab spaces adjoining classrooms so students can discuss a problem and then immediately test a solution. University of Delaware faculty and staff are continually designing and assessing innovative curricula to optimally utilize these rooms. The building's eight general instruction classrooms and the four problem-based learning instructional laboratories all include the latest in educational technology. Students in need of supplemental instruction in math and science courses can find assistance in the ISLL Learning Center located on the third floor.

Using the online system at the University of Delaware Interfolio. Applicants should submit a cover letter outlining their interest in the position and relevant experience, a statement of leadership philosophy, a current CV, and contact information for at least three references. Candidates will be notified before references are contacted.

Questions should be directed to Professor Louis F. Rossi ([rossi@udel.edu](mailto:rossi@udel.edu), 302-831-7180), Chair of the Interdisciplinary Science Learning Laboratories Director Search Committee. Review of applications will begin on January 1, 2018 and will continue until the position is filled.  
<https://apply.interfolio.com/47186>

**The University of Oregon Computer and Information Science Department** invites applications for a tenure track position of Assistant Professor in High-performance Data Science, to begin in fall 2018. We seek candidates specializing in data analytics, computational science, and/or AI applied to large scientific data, with a particular domain emphasis on Physics, Chemistry, Earth Sciences, or Psychology. We are especially interested in scholars who will enhance the department's existing strengths in machine learning, deep learning, and data mining.

This search is part of a presidential initiative to establish excellence in data science at the University of Oregon (see <https://provost.uoregon.edu/data-science>), oriented toward solving significant problems in science and society. As part of this initiative, the university is building a cross-disciplinary curricular and research data science program, which is supported by the university's recently launched High Performance Computing Research Core Facility – a supercomputing cluster with extensive computational and data storage capacity. There will also be opportunity to become involved with the university's Knight Campus for Accelerating Scientific Impact.

We are a diverse and growing department with strengths in high-performance computing, networking and distributed systems, and data science. Competitive applicants should have a record of excellence in research and potential to do outstanding teaching at the graduate and undergraduate levels.

We particularly welcome applications from scholars who are from populations historically underrepresented in the academy, and/or who have experience working with students from diverse backgrounds. The department actively recruits underrepresented groups for all cohorts: faculty, graduate students, and undergraduate students.

Minimum Requirements: Ph.D. in Computer Science or related field in hand by time of appointment.

Salary is competitive. Candidates are asked to apply on line at

<https://academicjobsonline.org/ajo/jobs/10509> by submitting an application letter, a curriculum vitae, a research statement, a teaching statement, and at least three letters of recommendation by 15 January 2018, or until the position has been filled. If you are unable to use this online resource, please contact [faculty.search@uoregon.edu](mailto:faculty.search@uoregon.edu) to arrange alternate means of submitting application materials.

The University of Oregon is dedicated to the goal of building a culturally diverse and pluralistic faculty committed to teaching and working in a multicultural environment and strongly encourages applications from minorities, women, and people with disabilities. Applicants are requested to include in their cover letter information about how they will further this goal. In particular, candidates should describe previous activities mentoring minorities, women, or members of other underrepresented groups.

**PhD Organic Medicinal Chemist—PTC Therapeutics** The expansion of discovery research at our South Plainfield, NJ research facility has resulted in the creation of additional positions for PhD Organic Medicinal Chemists. Selected candidates will be responsible for the design and synthesis of novel pharmacologically active compounds using synthetic organic and medicinal chemistry techniques. For more information about PTC Therapeutics visit [www.ptcbio.com](http://www.ptcbio.com).

Requirements:

- Recent completion/soon to be completed PhD in organic chemistry, or PhD in organic chemistry and post-doctoral position
- Thorough knowledge of the practical and theoretical aspects of synthetic organic chemistry, including reaction mechanisms, multi-step organic chemistry, modern analytical techniques for compound purification and characterization, and database searching techniques for relevant literature and reaction precedents
- Demonstrated record of achievement as reflected by publications in peer-reviewed journals or presentations at chemistry focused conferences/events

For interested applicants, please send a resume and brief research summary to Jigar Patel ([jigar.patel@ptcbio.com](mailto:jigar.patel@ptcbio.com)).

\*Please indicate your current citizenship and visa requirements

**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](mailto:jtels@roosevelt.edu).

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

**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](mailto: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](mailto: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](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>

**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 CO<sub>2</sub> 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 CO<sub>2</sub> 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](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](mailto:chemistry@uwyo.edu).

**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](mailto: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](mailto: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](mailto: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](mailto:nora84@vt.edu), Tel: 540- 231-8131).