

2015 WEEKLY BULLETIN
DEPARTMENT OF CHEMISTRY, NORTHWESTERN UNIVERSITY
EVANSTON, ILLINOIS
July 13, 2015

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

BIP

Meets every Friday at 2:45pm in Tech K140

Arrivals

Hannah Reese joined the VanDuyne Group

Announcements

NU Researchers win ACS Physical Chemistry Division Postdoctoral Research Awards:

Dr. Alona Furmanchuk, a postdoc in the Schatz research group, Dr. Idan Hod, a postdoc in the Hupp research group, and Dr. Brett Savoie, a former graduate student in the Ratner and Marks research groups, have won the 2015 ACS Physical Chemistry Division Postdoctoral Research Awards. The winners have been invited to speak about their research in August at the ACS National Meeting and Exposition in Boston.

VISITING SCHOLARSHIPS AT THE TEL-AVIV UNIVERSITY AND THE WEIZMANN INSTITUTE OF SCIENCE CALL FOR PROPOSALS

APPLICATION DEADLINE: October 1, 2015

SYNOPSIS OF PROGRAM

Northwestern University has executed Memoranda of Understanding (MOU) with both the Tel-Aviv University (TAU) and the Weizmann Institute of Science (WIS) to lay a foundation for research collaborations and outcomes.

Within this framework, the Materials Research Science and Engineering Center (MRSEC), the International Institute for Nanotechnology (IIN), and the Weinberg College of Arts and Sciences (WCAS) Jointly with the Nanoscience Centers at our partner institutions, support an exchange program for faculty, postdoctoral associates, and graduate students engaged in research in science or engineering. We invite applications for \$5,000 fellowships to support visits to Tel-Aviv University or the Weizmann Institute by all members of the Northwestern community. Visits to Northwestern are supported by our partner institutes.

APPLICATION REQUIREMENTS

- Proposal for collaborative research (up to 2 pages long)
- Curriculum vitae
- Invitation from the host researcher

- Letter of support from the research advisor (students and postdoctoral fellows only)

PLEASE SEND ALL APPLICATION MATERIALS TO
Professor Tamar Seideman seideman-ofc@northwestern.edu

REPORTING REQUIREMENTS

Within 3 weeks of their return to the US, the travelers are requested to submit a short report describing their research experience.

SUPPORT INCLUDES

- Maximum individual award amount \$5,000
- US airline carrier at a coach rate should be used
- Per Diem requires pre-approval and can be approved only for travel of 15 days and longer duration (receipts are required for lodging only)
- For trips less than 15 days, original detailed receipts are required for lodging, meals and local transportation
- NSF and NU travel guidelines are applicable

Opportunities

Stanford ChEM-H at Stanford University Tenure-track Faculty Position: Stanford ChEM-H is an independent institute at Stanford University, formed in partnership with the Schools of Humanities and Sciences, Engineering and Medicine. More information about the institute can be found on <https://chemh.stanford.edu/>. The Institute is seeking applicants for a tenure-track faculty position at the junior level (Assistant or untenured Associate Professor). Applicants are expected to have earned a Ph.D. or M.D. degree in any discipline of science, engineering or medicine.

We will consider applicants knowledgeable in any frontier area of research at the interface between chemistry, biology, engineering, and medicine. In general, we give higher priority to the overall originality and promise of the candidate's work than to the sub-area of specialization.

The successful candidate will have his/her primary appointment in a department within the School of Humanities and Sciences, Engineering or Medicine. He/she will be expected to teach and/or perform clinical service within this department in a manner that is consistent with standard practices for tenure-track faculty within that department. The candidate will also be expected to develop a world-class research program. Applicants should be seeking a stimulating interdisciplinary environment in which to pursue teaching and research. We anticipate that the faculty member will develop interactions with faculty not only in his/her home department but also in other departments and Schools at Stanford and/or the Stanford Synchrotron Radiation Laboratory.

Applications should be addressed to Professors James Chen and Justin Du Bois, Search Committee Co-Chairs, and include a curriculum vitae (including research accomplishments, teaching experience, and publications), a description of future research plans, a teaching statement, and at least three letters of reference. All materials should be submitted online at <https://academicjobsonline.org/ajo/jobs/5672>. To ensure full consideration, applications should be submitted by October 15, 2015. Questions should be addressed to Professors Chen or Du Bois at chemh_info@stanford.edu

The Department of Chemistry at Wayne State University in the laboratory of Dr. Mary Kay H. Pflum is accepting applications for a Postdoctoral Research Associate.

Highly motivated candidates skilled in one or more of the following- chemical biology, synthetic organic chemistry, biochemistry, enzymology, mass spectrometry, cell biology- with a recent Ph.D. degree are encouraged to apply. The project entitled, "Chemical Approaches to Mapping Cell Signaling Pathways" aims to develop ATP analogs as unique probes of kinase activity to characterize cell signaling networks. The project is highly collaborative and multi-disciplinary, with excellent training opportunity for scientific development. The laboratory is located in the recently remodeled A. Paul Schaap Chemistry building and offers state-of-the art facilities. Wayne State University is located in the thriving cultural center of Detroit, within a short distance of a wide variety of museums, theatres, concert halls, and sports arenas.

For more information on the laboratory, project, and facilities visit the Pflum lab website at <http://chem.wayne.edu/pflumgroup> .

To apply, please send a cover letter, CV, and the names and contact information of at least three references via email to pflum@wayne.edu . Review of applications will commence immediately and continue until the position is filled. Wayne State University offers a competitive salary and benefits package.

Department of Chemistry and Biochemistry at The University of Southern Mississippi seeks applicants for a full-time, 12-month position as senior laboratory coordinator and instrumentation manager in the Department of Chemistry and Biochemistry in the College of Science and Technology to begin July 15, or August 1, 2015.

The person selected for this position will supervise the operation of and instruct the junior/senior-level chemistry teaching laboratories; work with faculty to develop and implement new laboratory activities; maintain and repair, and instruct personnel and students in the operation of major departmental instrumentation.

Duties include the following:

- Adheres to University and department policies, procedures and regulations, and actively participates in initiatives designed to foster student success and retention
- Instructs junior/senior-level chemistry teaching laboratories in analytical chemistry, instrumental analysis, inorganic chemistry and physical chemistry; collects and provides faculty with requisite assessment data; maintains safe and clean teaching lab facilities
- In consultation with the respective lecture course instructors, reviews laboratory textbooks and selects experiments to be conducted in laboratory sections
- Performs experiments before they are used in the teaching labs, modifies procedures as necessary to conform to departmental safety standards and available equipment, and produces instructional written materials for use by the students
- Purchases, maintains and keeps an inventory of chemical supplies, glassware, miscellaneous consumables and small equipment required to perform the experiments in the junior/senior-level teaching labs

- Directly supervises graduate teaching assistants for junior/senior chemistry teaching laboratories and carries out supervisory responsibilities in a timely, fair and objective manner
- Maintains and repairs teaching and multi-user departmental instruments and equipment (e.g. NMR, EPR, IR, UV-VIS, mass spec and maintains safe and clean instrument lab facilities)
- Instructs faculty, staff and students in the use of multi-user departmental instruments and equipment
- Assists in the inventory control of multi-user departmental instruments and equipment

Minimum Qualifications: M.S. degree with at least 18 credit hours of graduate courses in chemistry or related discipline

- Ability to read, analyze and interpret common scientific and technical journals, financial reports and legal documents
- Ability to respond to common inquiries or complaints from customer, regulatory agencies or members of the business community
- Ability to write technical laboratory protocols that conform to prescribed style and format
- Ability to effectively present information to students, university staff and faculty as well
- Ability to comprehend and apply principles of advanced calculus, modern algebra and statistical theory
- Ability to work with concepts such as limits, rings, quadratic and differential equations, and proofs of theorems
- Ability to apply principles of logical or scientific thinking to wide range of intellectual and practical problems
- Ability to deal with nonverbal symbolism (formulas, scientific equations, graphs, etc.) in its most difficult phases
- Ability to deal with a variety of abstract and concrete variables
- Maintain safe and clean teaching and instrumental lab environment

Preferred Qualifications: Experience with operation and repair of instrumentation such as NMR, IR, UV-Vis, EPR, Mass Spe.

Experience with junior/senior-level chemistry laboratory teaching

Special Instructions to Applicants: Official transcripts are required before an offer can be made.

For more information about the position or to apply go to <https://jobs.usm.edu/>

The Dore Laboratory in the Chemistry Program of the Division of Sciences at New York University

Abu Dhabi seeks to appoint a Postdoctoral Associate starting September 2015. Applicants with backgrounds in synthetic organic, bioorganic, medicinal chemistry, or chemical biology are encouraged to apply. The research is aimed at developing new technology and tools for the study of biological function. Current projects include light-based methods to study developmental neurophysiology and small-molecule approaches to regulate CaaX proteases. For more information, visit <http://nyuad.nyu.edu/academics/faculty/timothy-dore.html>

Applicants must have received a Ph.D. in chemistry or related subject within the last three years or be within a few months from completion. We encourage applications from candidates with significant research experience in synthetic organic chemistry, bioorganic chemistry, medicinal chemistry, or chemical biology. Knowledge of photochemistry, molecular modeling, microscopy, molecular or cellular biology, biochemistry, or neuroscience is desired, but not required. Excellent communication skills in English, ability to work in multi-disciplinary teams, and scientific creativity are essential.

The terms of employment are competitive and include housing and educational subsidies for children. Applications will be accepted immediately and candidates will be considered until the position is filled. To be considered, all applicants must submit a cover letter, curriculum vitae, and a one-page summary of research accomplishments and interests, all in PDF format, through the NYUAD online application portal. Please visit our website at <http://nyuad.nyu.edu/about/careers/facultypositions.html> for instructions and information on how to apply. If you have any questions, please email nyuad.science@nyu.edu.

About NYUAD: New York University has established itself as a Global Network University, a multi-site, organically connected network encompassing key global cities and idea capitals. The network has three foundational degree-granting campuses: New York, Abu Dhabi, and Shanghai, complimented by a network of eleven research and study-away sites across five continents. Faculty and students will circulate within this global network in pursuit of common research interests and the promotion of cross-cultural and interdisciplinary solutions for problems both local and global.

Entering its sixth year, NYU Abu Dhabi has recruited a cohort of faculty who are at once distinguished in their research and teaching. Our students are drawn from around the world and surpass all traditional recruitment benchmarks, both US and global. NYU Abu Dhabi's highly selective liberal arts enterprise is complimented by an institute for advanced research, sponsoring cutting-edge projects across the Arts, Humanities, Social Sciences, Sciences, and Engineering.

Catalysis Science with Pacific Northwest National Laboratory is looking for a Post Doctorate RA

Job Description:

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 electrochemical measurements 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 electrochemistry

Independent and highly motivated

Minimum Qualifications

Candidates must have received a PhD within the past five years from an accredited college or university.

Qualifications

Ph.D. in organometallic chemistry or inorganic chemistry

Equal Employment Opportunity

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 staff at the Pacific Northwest National Laboratory must be able to demonstrate the legal right to work in the United States.

About Tri-Cities

<http://www.visittri-cities.com/>

The Tri-Cities started out with 3 main communities: Kennewick, Pasco, and Richland - but the phenomenal growth of neighboring West Richland has made the area more of a "Quad-City". Located just hours from Seattle, WA and Portland, OR, the area is embraced by the beauty of a desert landscape and connected by the Columbia, Snake, and Yakima rivers. The Tri-Cities offers a multitude of recreational, cultural, and historical activities and is a great place to visit and live. We're known for our premier golf courses, award-winning wineries, unique shopping, and abundant outdoor and water recreation. Visit the link above to learn more about the various communities. PNNL is located in Richland, WA.

Loyola University Chicago Institute of Environment Sustainability (IES) is accepting application for an Analytical Chemist. Loyola University Chicago's Institute of Environmental Sustainability (IES) is a new degree-conferring academic unit (www.luc.edu/sustainability) housed within a LEED Gold certified geothermal building which includes new state-of-the-art research laboratories with a soil and water quality analytical lab, a 3,100 sq ft greenhouse, 2 aquaponics facilities, the Searle Biodiesel Laboratory, and teaching laboratories. The research and educational opportunities in the IES are enhanced by the Loyola University Retreat and Ecology Campus (LUREC) field station where IES faculty and students engage in field courses, and have developed a sustainable farm, a biodiversity conservation program and a major wetland restoration project. The IES seeks an Analytical Chemist to fill a full time 3-year, potentially renewable staff position within the IES, reporting directly to the IES Director.

Duties and Responsibilities:

- Manages and leads the development and coordination of the new soil and water quality analytical lab in the IES, overseeing the operations and maintenance of all analytical instrumentation therein including an IC, ICPMS, GC, C:N:H analyzer, and others.
- Develops a pricing structure and run analyses of water and soil characteristics (e.g., cation exchange capacity, texture) and pollutants (industrial waste, organics, pesticides and herbicides, heavy metals), as well as nutrients (primarily N and P) on samples for IES researchers, external NGOs, researchers, and for the IES community social justice project in the Chicago south side neighborhoods.
- Responsible for the lab operating budget, which will be initially supported by a gift to the Institute, and will be able to shift to revenue funding within the first 3-5 years.
- Manages the fiscal operations of the lab, with the assistance of the IES Budget Manager.
- Mentors a small number of graduate students on using the instrumentation, and assists with faculty research projects associated with the environmental science lab and environmental toxicology courses.
- Performs other duties as required.

Minimum Education or Experience:

Master's degree supplemented with at least 3 years of related experience in a research or science lab. A Ph.D. of highest terminal degree is preferred.

Certificates, credentials or licenses required to perform the duties of this position:

Qualifications:

- Master's degree in Chemistry, Analytical Chemistry, Environmental Chemistry or a related field is required, and a PhD is highly preferred.

- A minimum of 3 years of experience working in an analytical chemistry lab running sample analyses of soil and water, and managing the lab is strongly preferred.
- Competence in skills including maintaining complex analytical instruments, teaching students how to use the instruments, learning new protocols for sample analyses, and managing the financial revenue and operational budgets are required.
- Ability to demonstrate reliability, professional conduct, a strong work ethic, enthusiasm for environmental sustainability and excellence in informal teaching and mentoring graduate students.

For more information or to apply please visit the Loyola website:

www.careers.luc.edu/applicants/Central?quickFind=58159

The Surface Chemistry Group in the Materials Science Division at Argonne National Laboratory is in search of a postdoctoral appointee. The successful candidate will enable high efficiency solar-to-fuels and solar-to-electricity conversion through new nanoscale thin films, precise few-atom clusters, surface chemical control, and interface engineering.

The appointee will advance the basic science of precision gas-phase surface synthesis (atomic layer deposition), in situ and ex situ chemical and materials characterization, as well as device fabrication and testing. This will be interdisciplinary and highly collaborative work (part of an Energy Frontier Research Center) that includes surface synthesis, materials fabrication, as well as device design and assessment. Candidates within three years of completion of their Ph.D. are eligible.

Interested candidates should send a detailed CV, along with a list of publications, to Alex Martinson martinson@anl.gov. Argonne is a U.S. Department of Energy laboratory managed by UChicago Argonne, LLC. Argonne is an equal opportunity employer, and we value diversity in our workforce.

Pharmaceutical Sciences group at Merck & Co. Inc has several exciting Sr. Scientist openings. The positions will be located at our Rahway NJ or West Point PA sites. We are seeking talented chemists with backgrounds in analytical, organic, physical organic, organometallic, inorganic, physical, bioanalytical, biophysical or polymer chemistry. In this role, the Sr. Scientist will work in an interdisciplinary team supporting new product development activities. Example activities include:

- Solving challenging drug development problems
- Developing innovative analytical approaches to characterize small molecules and peptides in formulation
- Elucidate drug degradation mechanisms and develop mitigation strategies
- Characterize chemical and physical properties of excipients
- Support a variety of solid oral and parenteral dosage form development from a fundamental chemistry perspective

Interested applicants should send their resume to Yun Mao, PhD, Director, Analytical Sciences, Pharmaceutical Sciences at yun_mao@merck.com.

The National Research Council of the National Academies sponsors a number of awards for graduate, postdoctoral and senior researchers at [participating federal laboratories and affiliated institutions](#). These awards include generous stipends ranging from \$42,000 - \$80,000 per year for recent Ph.D. recipients, and higher for additional experience. [Graduate](#) entry level stipends begin at \$30,000. These awards provide the opportunity for recipients to do independent research in some of the best-equipped and staffed

laboratories in the U.S. Research opportunities are open to U.S. citizens, permanent residents, and for some of the laboratories, foreign nationals.

Detailed program information, including online applications, instructions on [how to apply](#) and a [list of participating laboratories](#), is available on the NRC Research Associateship Programs [Website](#) (see link above).

Questions should be directed to the NRC at 202-334-2760 (phone) or rap@nas.edu. There are four annual review cycles.

Review Cycle: **February**; Opens December 1; Closes February 1

Review Cycle: **May**; Opens March 1; Closes May 1

Review Cycle: **August**; Opens June 1; Closes August 1

Review Cycle: **November**; Opens September 1; Closes November 1

Applicants should contact prospective Adviser(s) at the lab(s) prior to the application deadline to discuss their research interests and funding opportunities. More detailed information and an online application can be found at www.nationalacademies.org/rap.