

2014 WEEKLY BULLETIN
DEPARTMENT OF CHEMISTRY, NORTHWESTERN UNIVERSITY
EVANSTON, ILLINOIS
June 16, 2014

Tuesday June 17: *Faculty Lunch Seminar: Eric Weitz*
Tech K140
12:00 – 1:00pm

Wednesday June 18: *Faculty Meeting*
Tech K140
12:00 - 1:00pm

Friday June 20: *Special Seminar: Axel H.E. Muller*
Tech M152
1:30 – 2:30pm

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

BIP

Meets every Friday at 3:00pm in Tech K140

Arrivals

Mohammed Algaradah joined the Stoddart Group

Announcements

2014 Midwest Theoretical Chemistry Conference:

The 46th Midwest Theoretical Chemistry Conference will be held at Northwestern June 15-17. This is the 3rd time we have hosted this meeting, and the first time since 1995. Toru Shiozaki, Matt Reuter and Tory Helgeson put a huge amount of work into making this meeting possible. There are over 180 attendees. While it is too late to register, anyone who wishes to attend the poster session in Silverman or the oral sessions in Harris Hall is invited. The web site provides the complete program. <http://mwttcc.org/>

Toru Shiozaki was awarded The Distinguished Teacher Award for the 2013-2014 academic year. The Undergraduate Chemistry Council (UCC) presented the award to Professor Shiozaki on June 9th in recognition of his outstanding teaching and dedication to undergraduates.

Opportunities

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.

Pure Oleochemicals, Inc. is seeking qualified candidates to fill the position of a Senior Chemist/Chemical Engineer for our growing technology company. This person is responsible for the fabrication of polymeric membranes, completing separation experiments, and characterizing the results using different spectroscopic techniques. Experience with polymer chemistry, membranes, and separations is highly desired. This person will work closely with others in the company to design experiments and to interpret the results. Furthermore, this person is responsible for managing the day-to-day activities in the Pure Oleochemicals lab, including management of personnel, stewardship of lab equipment, publishing test results, and assisting in the successful commercialization of the Pure Oleochemicals membrane technology for molecular purification and separation as directed by the management team.

Pure Oleochemicals is a new start-up company that launched in late 2013 out of the University of Iowa. This company has proprietary membranes for the separation of key organic molecules used in numerous industrial applications. This company is head-quartered in the Iowa City/Coralville area.

The essential job functions for this position include:

- Will conduct research and experiments as directed by company management
- Will incorporate systems and controls necessary to assure integrity of all test results and quality control
- Will follow acceptable organic chemistry laboratory procedures as well as safety protocols
- Participation in meetings with the research team, management team, customers and other parties to ensure that his colleagues are aware of relevant issues related to technological and other developments in the lab
- Will use several instruments like nuclear magnetic resonance spectroscopy and gas chromatography in order to analyze materials and results of tests conducted in lab
- Will be responsible for lab maintenance and test equipment maintenance

Qualified candidates will meet these requirements:

- A Masters degree in chemistry, chemical engineering, or a related field as required is a minimum requirement.
- A PhD in either chemistry, chemical engineering, or a related field is desirable and preferred.
- Should have experience working with organic chemicals, membranes, polymers, and/or oleochemicals.
- Understands relevant safety and governmental issues surrounding safe and compliant operation of a lab engaged in organic chemistry experiments and tests.

Qualified candidates should send a cover letter explaining why they would like to be considered as a candidate for this position, their resume, letters of reference, and any other supporting information to Human.Resources@PureOleochemicals.com.

The Department of Chemistry, University of York Applications are invited for a postdoctoral fellowship for 13 months to work with Professor Robin Perutz, FRS in the Department of Chemistry. The project is funded by EPSRC (UK Engineering and Physical Sciences Research Council) to carry out research on halogen bonding and hydrogen bonding. You will join an on-going project running in collaboration with Professors Lee Brammer and Christopher Hunter, FRS in the University of Sheffield with the aim of developing a quantitative scale for halogen bonding and hydrogen bonding

encompassing inorganic and organic substrates. The successful applicant will work in new state-of-the-art laboratories that opened in 2012.

You should have a PhD degree in chemistry and hands-on experience in NMR spectroscopy and synthesis of coordination or organometallic complexes and a quantitative approach to your research. You will have the ability to play a leading role within the research team; you will collaborate extensively with members of the research project based in Sheffield.

This position is available from 1 August 2014.

Informal enquiries may be made to Professor Robin Perutz (E-mail robin.perutz@york.ac.uk)
The Department of Chemistry holds an Athena SWAN Gold Award and is committed to supporting equality and diversity for all staff and students.

Full details will be available at www.jobs.ac.uk from June 2.

University of Chicago, Department of Chemistry The Dickinson Lab with the University of Chicago is currently seeking postdoctoral fellows to begin several new research initiatives. Research in the Dickinson lab focuses on the development and application of novel molecular probes that report on chemical reactions in living systems. This work is centered at the interface of chemistry, biology, and engineering, to spawn biological discovery through the development and application of new technology. Postdoctoral fellows will have opportunities to pursue their projects in a highly multidisciplinary environment, providing ample opportunities for the acquisition of new skillsets and expertise. We are currently seeking candidates with a background in either synthetic chemistry or molecular biology:

- Candidates with Ph.D. training related to synthetic organic chemistry and/or methodology would be considered for a project concerning the synthesis and application of novel small molecule fluorescent probes for the analysis of biochemical events in live mammalian cells. The candidate should have extensive experience in synthetic chemistry practices, strong lab skills, and a willingness to learn new techniques.
- Candidates with Ph.D. training related to molecular biology, protein engineering, directed evolution, or other related biotechnology areas would be considered for projects concerning the development and application of new protein-based research tools. This project will involve both protein design and the application of novel molecular evolution techniques. The candidate should have experience with cloning and biochemistry practices, strong lab skills, and a willingness to learn new techniques.

To apply, please email a single pdf containing a cover letter, CV, contact information for references, and reprints of manuscripts published or submitted during graduate school to Professor Dickinson.

Dickinson@uchicago.edu or form more info go to: www.dickinsonlab.uchicago.edu

Working in a new research group can be an exciting and rewarding experience, so please contact us to learn more about opportunities in the lab.

The National Energy Technology Laboratory in Pittsburgh Our work focuses on developing materials for separation of CO₂ from industrially relevant gas streams associated with power generation. Typically, this includes separation of CO₂ from N₂, H₂, and CH₄. We are currently looking for a post-doctoral candidate to enhance our MOF synthesis capabilities. This position would focus on the development of MOF materials for inclusion in polymeric membranes to improve overall separation performance. We would like to hire by the end of summer. For more information about the position or how to apply please contact Erik J. Albenze at Erik.Albenze@CONTR.NETL.DOE.GOV

The Materials Research Science and Engineering Center (MRSEC) at the University of Utah (Salt Lake City) is seeking an outstanding, highly motivated postdoctoral research candidate. The position will be within the Spin Injection Focused Research Group of the Organic Spintronics IRG. The successful candidate must have extensive experience in the synthesis and characterization of molecular materials (organic/organometallic/coordination compounds) for study and evaluation as component materials for a variety of molecular-based spintronic devices. Expertise to synthesize thin films is not essential, but desired. The successful candidate is expected to work in a very multidisciplinary environment provided by the active collaboration with experimental and theoretical physicists and materials scientists and contribute to advancement of these areas.

The position is effective immediately, and open for candidates with a Ph.D. (or equivalent degree) in chemistry and materials science and engineering, and only candidates possessing extensive experience in complex syntheses of organic and/organometallic compounds that are very air sensitive should apply. Applications materials (cover letter, detailed CV, contact information of three references) should be sent to Prof. Joel S. Miller (jsmiller@chem.utah.edu). The attached Cover Sheet must be completely filled out. For more information about the Utah MRSEC, see <http://www.mrsec.utah.edu/>

The University of Utah is an Equal Opportunity/Affirmative Action employer and educator. Minorities, women, and persons with disabilities are strongly encouraged to apply. Veterans preference. Reasonable accommodations provided. For additional information: <http://www.regulations.utah.edu/humanResources/5-106.html>. The University of Utah values candidates who have experience working in settings with students from diverse backgrounds, and possess a [strong or demonstrated] commitment to improving access to higher education for historically underrepresented students.

The Georgia Institute of Technology, School of Chemistry and Biochemistry seeks to fill a tenure-track faculty position in the development of any aspect of chemistry or biochemistry related to feedstocks from renewable and sustainable sources. Research areas of interest include, but are not limited to, functional biomaterials, catalysis, energy harvesting and storage, efficient syntheses and processes, and plant bioengineering and synthetic biology. Opportunities for significant interaction with and support from the Institute for Paper Science and Technology at Georgia Tech (ipst.gatech.edu) will be available. Candidates with interdisciplinary research programs may be considered for joint appointments with other campus units.

Exceptional candidates at all levels are encouraged to apply. Assistant Professor candidates should submit a cover letter, curriculum vitae, description of research plans, description of teaching interests and philosophy, and arrange for the submission of three letters of recommendation. Candidates at advanced levels should submit a cover letter, curriculum vitae, and the names and contact information of three references. All materials and requests for information should be submitted electronically, as per the instructions found at:

<https://academicjobsonline.org/ajo/jobs/4045>

The application deadline is September 15, 2014, with application review continuing until the position is filled. Georgia Tech is an equal education/employment opportunity institution.

The Chemistry Department at Valparaiso University invites applications for a Visiting Assistant Professor position in chemistry, beginning in August 2015. A PhD is required; previous teaching experience is desirable but not necessary. The teaching responsibilities of this position will be a non-majors Introductory Chemistry course (mostly general chemistry with some organic and biochemistry) and the associated laboratory. Applicants must have a strong commitment to excellence in undergraduate teaching. Research is not a necessary part of this position, but the opportunity will be available to engage in research with undergraduate students if the candidate so desires. The position is potentially renewable for up to three years.

We expect that this position will be attractive to recent PhD's who wish to teach at a predominately

undergraduate institution and are interested in gaining experience in such a setting.

Valparaiso University is a distinguished private university of 4000 students, one hour southeast of Chicago, and offers ACS certified degrees in Chemistry and Biochemistry. Candidates should be interested in working at a university engaged in issues in Christian higher education in the Lutheran tradition.

To apply, submit a cover letter, CV, statement of research interests, statement of teaching philosophy and experience, undergraduate and graduate transcripts, and three letters of recommendation via email to Dr. Steven Engerer, Steven.Engerer@valpo.edu Review of applications will begin immediately and continue until the position is filled.

Valparaiso University does not unlawfully discriminate and aims to employ persons of various backgrounds and experiences to help constitute a diverse community. Its entire EOE policy can be found at <http://www.valpo.edu/equalopportunity/index.php>. Successful applicants will demonstrate a commitment to cultural diversity and the ability to work with individuals or groups from diverse backgrounds.

Daubert Cromwell, LLC, a leading name in corrosion prevention as an immediate opening for a Corrosion Chemist or part-time Corrosion Consultant. Ideal candidates should have a Bachelor or Master's Degree in Chemistry, Chemical Engineering, or related field and experience/education in one or more of the following areas: Corrosion, Metallurgy, Packaging, or Coatings.

Daubert Cromwell is a global manufacturer of corrosion inhibitor (VCI) packaging products used by customers in metal stamping and fabricating, heavy equipment, automotive, electronics and other industries where corrosion prevention is critical. Since 1948, quality manufacturers have trusted Daubert Cromwell to protect valuable metals during all stages of production, storage and shipment. Today its proprietary VCI chemistry is used throughout the metalworking industries. Through proven quality and years of exemplary service, the company has earned its reputation as "The leading name in corrosion prevention®."

Daubert Cromwell operates from a state-of-the art facility in suburban Chicago. This corporate center is headquarters for manufacturing, shipping, sales/marketing management, customer service support and technical functions. Regional sales managers are strategically located in geographic territories throughout the U.S. and Canada. The company has subsidiaries in Europe, China and Mexico, and a global sales team coordinating customer requirements in Japan, India, Southeast Asia, Australia, and South America.

Please email your resume/cover letter and salary requirements to Sandy Killeen, HR Manager, Daubert Cromwell, LLC @ skilleen@daubertcromwell.com.

The Dow Chemical Company BEST Symposium The 8th annual *BEST* Symposium will be held in Midland, MI on September 15-17, 2014. *BEST* (*Building Engineering and Science Talent*) introduces doctoral and post-doctoral scientists from U.S. ethnic minority groups to the wide range of rewarding careers in industrial research, particularly the many opportunities available here at Dow. This conference, developed jointly by Dow's minority scientists and Ph.D. recruiting team, supports the company's commitment to a diverse work force.

Targeted degree areas for recruitment for *BEST* are chemistry, chemical engineering, materials science, physics, biochemistry, molecular biology, microbiology, and closely related fields. Applicants should be within 18 months of degree completion by the conference date. Apply for the conference by visiting our website at <http://www.dow.com/BEST>. All applications are due by June 20th, 2014.

If you would like additional information on *BEST*, please do not hesitate to contact Joseph Atkins, 2014 *BEST* Symposium Chairperson jratkins@dow.com or best@dow.com

The Department of Chemistry and Biochemistry, University of California at San Diego has a postdoctoral position in synthetic organic and/or medicinal chemistry available in the laboratory of Prof. Seth M. Cohen www.cohenlab.ucsd.edu

The position is available immediately and will be filled as soon as a suitable candidate is identified. A highly motivated candidate is sought to pursue investigations broadly defined in the area of metalloprotein inhibitor development. This includes studies on the design and synthesis of new small molecule inhibitors, the development of inhibitor 'prodrugs', and related studies (for more information and a list of relevant publications see <http://cohenlab.ucsd.edu>). Qualified applicants are expected to have a strong record of productivity (e.g. publications), good oral and written English language skills, and should be able to provide three letters of recommendation. Extensive experience and proficiency in multi-step organic synthesis is required along with appropriate analytical, purification, and characterization methods. Such methods may include, but are not limited to: chromatography, NMR, MS, FTIR, UV-Vis, HPLC, etc. Experience in biochemical assay development, in vitro screening, and/or computational docking and structure-based drug design would be additional skills of interest. Candidates with more biochemically-oriented training (e.g. structural biology, protein expression/purification, etc.) may also be considered on a case-by-case basis.

Applicants should send a cover letter, CV, and three letters of recommendation to scohen@ucsd.edu. The candidate should clearly indicate in the cover letter their available start date and long-term career goals. In addition, a statement indicating how the candidate's training is ideally suited to our investigations on metalloprotein inhibitors is strongly encouraged – proposed research directions that the candidate would like to pursue are welcome.

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 \$45,000 - \$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: **August**; Opens June 1; Closes August 1
Review Cycle: **November**; Opens September 1; Closes November 1
Review Cycle: **February**; Opens December 1; Closes February 1
Review Cycle: **May**; Opens March 1; Closes May 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.