

2018 WEEKLY BULLETIN
DEPARTMENT OF CHEMISTRY, NORTHWESTERN UNIVERSITY
EVANSTON, ILLINOIS
March 5, 2018

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

Monday March 5th:

Special Chemistry Department Organic Seminar:
Francois Diederich, Swiss Federal Institute of Technology
Ryan Hall 4003
2:00-3:00pm

Charles D. Hurd Lectures: Joseph DeSimone
University of North Carolina and Co-founder/CEO of Carbon
Pancoe Auditorium
4:00-5:00pm

Tuesday March 6th:

Faculty Lunch Seminar: Joe Hupp
Tech K140
12:00-1:00pm

Charles D. Hurd Lectures: Joseph DeSimone
University of North Carolina and Co-founder/CEO of Carbon
Pancoe Auditorium
4:00-5:00pm

Friday March 9th:

Department of Chemistry Colloquium:
Rodophe Clerac, Universite de Bordeaux
Tech LR3
4:00-5:00pm

Announcements:

Mercouri Kanatzidis has been selected to receive the 2018 Chemical Pioneer Award from the American Institute of Chemists.

Established in 1966, the award recognizes chemists or chemical engineers who have made outstanding contributions advancing the science of chemistry or impacting the chemical industry or the chemical profession.

Due to be receive the award in Philadelphia on 10 May 2018, Mercouri will specifically be recognized for defining the field of chalcogenide compounds (sulfides, selenides and tellurides) over the past three decades.

SAVE THE DATE: Mark A. Ratner Series of Scholars April 9, 2018

Please save the date for the inaugural *Mark A. Ratner Series of Scholars* lecture, given by Rachel Armstrong, Professor of Experimental Architecture at Newcastle University, on the afternoon of April 9th. The time and place will be determined soon.

See Prof. Armstrong's TED talk here:

https://www.ted.com/talks/rachel_armstrong_architecture_that_repairs_itself

BIP

BIP meets every Friday in Tech K140 at 11:00am

Arrivals

Cameron Rogers joined the Weiss Group

Palas Roy joined the Harel Group

Yu Xiao joined the Kanatzidis Group

Opportunities

The Department of Chemistry at Kansas State University (www.ksu.edu/chem) invites applications for a temporary faculty position in Organic Chemistry at the rank of Teaching Assistant Professor to begin in August 2018. A Ph.D. in chemistry is required. The successful candidate will be expected to teach two courses in organic chemistry per semester at the undergraduate level, to a diverse population of students. Applicants should submit their application as one (1) complete pdf file that includes a letter of interest, a curriculum vitae, a statement of teaching philosophy, and names and email contact information of three references at this website: <http://careers.k-state.edu/cw/en-us/job/503342/visiting-teaching-assistant-professor-chemistry>. Applicants must be authorized to work in the United States at the time of employment. Informal inquiries about the position can be made to the Chair of the Search Committee, Professor Stefan Bossmann (sbossman@ksu.edu), Department of Chemistry, 213 CBC Building, Kansas State University, Manhattan KS 66506. Screening of applications will begin on 04/02/2018 and will continue until the position is filled.

Kansas State University is an Equal Opportunity Employer and actively seeks diversity among its employees. In accordance with Board of Regents policy, a background check will be required for the successful candidate.

Georgia Institute of Technology College of Engineering/GWW School of Mechanical Engineering postdoctoral researcher position available. The postdoctoral researcher is primarily expected to work on developing Kinetic Monte Carlo simulations of the growth and morphology of oxide particles. In addition, the researcher is expected to have knowledge of molecular dynamics and ab initio methods. The selected candidate will work with Dr. Chaitanya Deo at Georgia Institute of Technology on a project funded by Savannah River National Laboratory to develop morphological and physicochemical properties of oxalate and oxide production. The project will provide a better understanding of crystallization and calcination dynamics at plant-scale operating conditions. A multi-scale modeling approach will provide the most accurate description of the crystallization and agglomeration phenomena for the plutonium oxalate precipitation process and of the calcination mechanism.

Applications are available through: <https://apps.itos.uga.edu/ach/position/37937>

The Chemistry Department with North Park University invites applicants for a one year visiting assistant professor position in Organic Chemistry beginning August 2018. The qualified individual will have a Ph.D. in chemistry. Successful candidates will be expected to teach Organic chemistry lecture and laboratory at both the full year and survey levels. Candidates who have experience teaching undergraduate organic laboratory will be especially considered.

The Chemistry Department resides in the Johnson Center for Science and Community Life (opened August 2014). This space includes state-of-the-art teaching labs and a fully equipped instrument laboratory which includes an ATR-FTIR, GC-MS, and a 300 MHz NMR, among other instruments. Interested candidates should review the North Park Faculty Application and submit a letter of intent, a curriculum vitae, the required essays within the Faculty Application, a summary of past teaching experiences, and should arrange for three letters of reference to be sent independently. Candidates will only be considered if all required materials are submitted. All materials should be submitted electronically to:

Dr. Isabel Larraza
Professor of Chemistry
North Park University
3225 W Foster Avenue
Chicago, IL 60625
773-244-5661
ilarraza@northpark.edu

Review of applications will begin March 15 and continue until the position is filled.

<https://www.northpark.edu/about-north-park-university/employment-opportunities>

Northland College in Ashland, Wisconsin is accepting application for an Assistant Professor of Chemistry. This is a tenure track position .

Northland College is an environmentally-committed college on the shores of Lake Superior. The Environmental Science Program at the College invites dynamic and proven educators to apply for a tenure track assistant professor position in chemistry. A PhD or ABD-status in chemistry, or related field, is required.

<https://my.northland.edu/job/assistant-professor-chemistry-tenure-track/>

EcoLab in Naperville, Illinois has an opening for a Lead Chemist: Surface Characterization, Research Analytical, RD&E

Research Analytical, located at Ecolab's Naperville campus, part of Ecolab's Global Analytical and Microbiological Services, has an opening for a Lead Chemist focused on surface characterization.

The successful candidate must have a background in Materials Science, Chemistry, or related fields. In addition, a good understanding of analytical and characterization techniques like IR, Raman, optical spectroscopy and mechanical properties and/or electrochemical characterization are necessary to succeed in this position. The Lead Chemist will work in teams with associates across Ecolab RD&E to provide surface characterization expertise in product development, manufacturing, intellectual property and regulatory support.

For more Ecolab news and information, visit www.ecolab.com.

Follow us on Twitter [@ecolab](https://twitter.com/ecolab), Facebook at facebook.com/ecolab or LinkedIn at linkedin.com/company/ecolab.

The Department of Chemistry at Yale University (New Haven, CT) invites applications for two (2) Preceptor positions. Preceptors are PhD-level scientists who will participate in undergraduate teaching, working closely with faculty members. One position will focus on *General Chemistry* courses and the other on *Organic Chemistry* courses. Specific Preceptor responsibilities will include leading of discussion and/or laboratory sections, assisting instructors of record to design course content and assessment tasks, contributing to the training of graduate-student teaching assistants, participating in the development of

new laboratory modules, conducting regular review sessions, and grading. The positions will begin on August 13, 2018 and initially will be offered at the rank of Lecturer for a one (1) year term, which will be renewable for up to three (3) years based on performance.

Applicants should send their *curriculum vitae*, a short statement describing their teaching philosophy, and arrange for three confidential letters of recommendation. Please submit all materials through <http://apply.interfolio.com/48792>. Review of applications will commence on March 9, 2018 and continue until the positions are filled.

Yale University is an Equal Opportunity/Affirmative Action Employer and applications from women, persons with disabilities, underrepresented minority group members, and protected veterans are especially encouraged.

3M is seeking a Sr. Synthetic Chemist for the Electronics Materials Solutions Division (EMSD) located in Maplewood, MN. At 3M, you can apply your talent in bold ways that matter. Here, you go.

Job Summary:

The person hired for the position of Sr. Synthetic Chemist will primarily be responsible for synthesis of new fluorinated materials supporting 3M™ Novec™ Engineered Fluids. This is an exciting position working in an attractive technical environment. This position requires an individual with strong leadership skills, who is a good decision maker with ability to collect facts and separate symptoms from problems. Typical development activities will take place in the lab, working directly with application development engineers.

Primary Responsibilities include but are not limited to the following:

Technical Contributions.

Good working knowledge of organic synthesis and fluorine chemistry

Knowledge / prior experience of handling TFE, HFP, CTFE and other fluorochemical gasses

Techniques for handling materials in high pressure autoclaves,

Use of purification/analytical techniques for organic chemistry and synthesis (F NMR, GC etc)

Experience with Lewis acids such as SbF₅, NbF₅, etc.

Interactions. Leads interactions with cross functional global labs. Understands specific customer needs, processes, and applications. Identifies and communicates new opportunities, markets, applications and competitive information. Provides customer viewpoint and influences strategy at the business team level. Participate/lead New Product Introduction (NPI) teams as directed. Work directly with application engineers throughout development of new materials.

Leadership. Assumes leadership role for technical programs of importance within the division. Programs may include line extensions or significant new applications of existing products requiring new qualifications or claims. Programs may also include participation in the development of new industry standards, best practice guidelines, or regulations.

Intellectual Property. Review and/or generate intellectual property positions in response to customer needs at the business level, including proprietary advances, Confidential Disclosure Agreements (CDA), patents, trade secrets and documents, experimental data/observations in technical notebooks or electronic files.

Communications. Communicates results of technical tasks to business group and/or appropriate technical community. Communicates relevant findings to external parties/customers as appropriate. Generates and provides Voice of Customer and Industry trends back into the Business Unit (BU). Provides the Voice of Tech to the 3M Sales force. May establish and leverage a multi-country technical network.

Corporate Initiatives. Leads application of key corporate initiatives and appropriate tools.

Strategic Planning. May participate in technical strategic planning at the business level, providing input on customer needs and direction.

Basic Qualifications:

- Master's degree or higher in Chemistry from an accredited institution
- Minimum of one (1) year laboratory experience
- Minimum of one (1) year organic chemical synthesis experience

Preferred Qualifications:

- Ph.D. in Chemistry from an accredited institution
- Experienced fluorine synthetic chemist
- Knowledge and experience of Fluoropolymer synthesis
- Experience contributing as a team member on a global cross-functional team
- Experience with application engineering where rapid solutions and a quick turnaround are required on limited scope projects
- Successful record of customer interaction, excellent technical presentation skills, interpersonal abilities, and multi-tasking skills
- Proven behavior of combining technical requirements with commercially viable solutions to result in winning business strategy
- Excellent verbal communication skills at multiple levels of internal as well as external customer and supplier organizations
- Industry expertise, ideally with a record of publications/patents
- Microsoft Office proficient

Location: Maplewood, MN Travel: May include up to 15% domestic and international

<https://3m.wd1.myworkdayjobs.com/Search/job/US-Minnesota-Maplewood/Sr-Synthetic-Chemist--Maplewood--MN- R00927545-1>

Department of Chemistry and Biochemistry at Duquesne University, located in Pittsburgh,

Pennsylvania is accepting applications for a postdoctoral position in solid-state chemistry. The research project includes the structural and physicochemical characterization of new, multinary chalcogenides with promising infrared nonlinear optical properties, among others. A variety of synthetic methods will be pursued to prepare these materials as microcrystalline powders and single crystals, such as traditional high-temperature solid-state synthesis, polysulfide flux synthesis, iodine vapor transport and Bridgman growth. Characterization methods will include, but are not limited to, powder and single crystal X-ray diffraction, solid-state UV/Vis/NIR diffuse reflectance spectroscopy, thermal analysis, scanning electron microscopy and energy dispersive spectroscopy. Qualified applicants should possess a Ph.D. degree before they begin the position. A background in solid-state chemistry, condensed matter physics or materials science and experience using single crystal X-ray diffraction is essential. Experience performing Reitveld refinements (GSAS or other program) and/or DFT calculations (WIEN2K or other program) is desirable, but not necessary. Other skills that would be of use for this project include the ability to work with data obtained via neutron powder diffraction, as well as magnetic, nonlinear optical and electrical property measurements. Interested applicants should send a complete resume and a short cover letter to Professor Jennifer A. Aitken via email as soon as possible, aitkenj@duq.edu. Three letters of recommendation may be requested from applicants at a later date, but should not be sent with these initial application materials. The e-mail should have the subject heading "Solid-State Postdoc Position – Applicants last name".

Washington State University is seeking qualified candidates for a permanent full-time tenure track faculty position as an Associate Professor or Full Professor in the Department of Chemistry at the WSU Main Campus in Pullman, Washington.

In this renewable joint position with Pacific Northwest National Laboratory, you will also serve as the Director of the Institute of Nuclear Science and Technology. This recently formed Institute consolidates

the national and international leadership found at WSU and PNNL within the domain of nuclear science and technology, particularly as it pertains to nuclear forensics, environmental remediation and waste storage, and the fate of materials in radiation environments. With major institutional investments, the Institute is elevating the scientific and technical impact of nuclear research by leveraging the unique facilities and complementary capabilities between WSU and PNNL to build leadership and signature programs in nuclear science.

The Director will help shape the direction and lead the growth of the Institute, engaging with partners, recruiting a diverse group of new members, and establishing and nurture collaborative relationships with non-WSU members.

Applicants with a Ph.D. in Chemistry or a related discipline, an academic research program related to Chemistry in Nuclear Science and Technology, the ability to teach graduate and undergraduate courses in chemistry (including service courses), and excellent management and communication skills are strongly encouraged to apply.

The full posting is at: <https://www.wsujobs.com/postings/35783>

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