

**2016 WEEKLY BULLETIN**  
**DEPARTMENT OF CHEMISTRY, NORTHWESTERN UNIVERSITY**  
**EVANSTON, ILLINOIS**

April 4, 2016

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

Tuesday April 5<sup>th</sup>:                      *Third Year Organic Student Seminar: WeiWei Wang*  
Ryan Hall 4003  
11:00am – 12:00pm

*Faculty Lunch Seminar: Dave Harris*  
Tech K140  
12:00-1:00pm

Friday April 8<sup>th</sup>:                      *L. Carroll King Lectures*  
*Thomas Holme, Iowa State University*  
Tech LR3  
4:00 – 5:00pm

**BIP**

BIP meets every Friday 10-11:00am in Tech K140

**Arrivals**

Ha Do joined the Silverman Group

**Announcements**

**9<sup>th</sup> Annual ANSER Solar Energy Symposium April 28-29, 2016:** The [Institute for Sustainability and Energy at Northwestern \(ISEN\)](#) and the [Argonne-Northwestern Solar Energy Research Center \(ANSER\)](#) are delighted to host the 9th annual ANSER Solar Energy Symposium – “Solar Fuels.” Bill Gates recently commented on the potential and inevitability of a liquid hydrocarbon from sunlight in the [Financial Times](#). Many of today’s prevalent renewable energy sources, such as solar and wind, are inherently intermittent. Energy storage is a critical piece to deeper penetration and adoption of alternative energy. At [ANSER](#), their researchers are working on developments that could create the next generation of solar energy technologies that produce a liquid fuel from sunlight, using only water and carbon dioxide (CO<sub>2</sub>) from the air. The ANSER Symposium will feature invited speakers from around the world to outline the current state-of-the-art in the development of solar fuels via nanotechnology, new catalyts, and novel materials. Please register at <http://isen.nu/anser16>.

**The 8<sup>th</sup> Yao Yuan Biotech-Pharma Symposium April 23, 2016 -** Emerging Therapeutics: A Fundamental Driver of Pharma’s Future Growth; University of Illinois at Chicago, College of Pharmacy Auditorium

Despite the high cost and low probability of success associated with drug discovery and development, we

are at a time that new drugs with improved profiles and new mechanisms of action are still emerging. As a result of better understanding fundamental biology, rigorous academic and industrial research, and fruitful collaborations, scientists are discovering break-through therapies for hard-to-treat diseases and greatly benefitting patients. In this forum, case studies on early discovery research and clinical development of compounds that are on or at the brink of being brought to the market will be presented. Progress in the exciting field of oncology (e.g., CAR-T cells, IDO and BCL-2 inhibitors), which is at the tipping point of producing revolutionary therapies, will also be discussed.

Time: April 23, 2016

Venue: University of Illinois at Chicago, College of Pharmacy Auditorium

Address: 833 S Wood St, Chicago, IL 60612

*Confirmed Speakers:*

Dr. Samuel Blackman, Senior Medical Director, Juno Therapeutics

Dr. Andrew P. Combs, Vice President, Incyte Corporation

Dr. Michael E. Jung, Distinguished Professor, UCLA

Dr. Dennis C. Liotta, Samuel Candler Dobbs Professor, and Executive Director Emory Institute for Drug Development, Emory University

Dr. Andrew Souers, Senior Research Fellow & Project Director, AbbVie, Inc.

Student Poster Award and Presentations

Panel Discussion: What Skills and Experience Are Pharma Looking For?

Sponsor's Exhibitions

*Chaired by:*

Dr. Xueqing Wang, Sr. Group Leader, Discovery Chemistry and Technology, AbbVie, Inc.

Dr. Hyunwoo Lee, Assistant Professor, Department of Biopharmaceutical Sciences, University of Illinois at Chicago

Dr. Alexander Mankin, Professor and Director, Center for Pharmaceutical Biotechnology, University of Illinois at Chicago

[To Register for the 8th Yao Yuan Biotech-Pharma Symposium](#)

### **Learn to Handle the Legal and Business Side of Scientific Innovation**

The one-year [Master of Science in Law \(MSL\)](#) degree offered by Northwestern Pritzker School of Law prepares students for careers and leadership positions at the intersection of business, law, and science/technology. Designed especially for STEM majors, the MSL provides practical, focused, business-centered legal training in three main areas: Business Law & Entrepreneurship; Intellectual Property & Patent Design; and Regulatory Strategy & Analysis. MSL students learn to communicate across disciplines; bring ideas to market; develop, protect, and manage intellectual property; and navigate the legal and regulatory structures that exist in STEM settings. MSL graduates are well positioned for careers as: entrepreneurs; business managers, developers, and analysts; patent agents; patent engineers; patent coordinators; IP/patent portfolio managers; scientific and/or technical consultants; regulatory strategists; compliance officers; government regulators; and more. Scholarships are available.

Join us for our upcoming webinar. We will provide a comprehensive overview of the MSL program and answer questions from the audience.

- April 7 at 12pm CST
- May 16 at 5pm CST
- June 2 at 12pm CST
- Join online: <https://northwesternuniversity.adobeconnect.com/mslwebinar>

Anyone interested in the MSL program is also welcome to contact Susan Dennehy, Administrative Director, via email: [susan.dennehy@law.northwestern.edu](mailto:susan.dennehy@law.northwestern.edu).

## **Opportunities**

**Save the Date: May 5-6' 2016** 11<sup>th</sup> Annual Meeting of the Great Lakes Drug Metabolism Disposition Group to be held at the Hilton Rosemont/Chicago O'Hare Hotel in Rosemont, Illinois

Confirmed speakers include:

Paul Ortiz de Montellano, University of California at San Francisco; Kim Brouwer, University of North Carolina at Chapel Hill; Peter O'Donnell, University of Chicago; Mike Zientek, Pfizer; Steve Castellino, GlaxoSmithKline; John Beaver, AbbVie; Maria Posada, Lilly Research Laboratories; Cyrus Khojasteh, Genentech; Gary Jenkins, AbbVie.

Registration is now open, [Click Here to Register for this Event](#)

Schedule details and hotel information are available at [www.greatlakesdmdg.org](http://www.greatlakesdmdg.org)

**Illumina** is improving human health by unlocking the power of the genome. Our focus on innovation has established us as the global leader in DNA sequencing and array-based technologies, serving customers in the research, clinical and applied markets. Our products are used for applications in the life sciences, oncology, reproductive health, agriculture and other emerging segments.

### **Position Summary:**

We are looking for a scientist with experience in Chemistry, Nanotechnology or Materials Science to contribute to a team within Consumables Development. Experience could be industrial or academic and could include organic/polymer/bioorganic chemistry, particle/surface modification, functional materials, biomaterials, (bio)conjugation chemistry, or novel/experimental drug delivery techniques. As a successful candidate you will work in a dynamic, team-oriented environment to create genomic analysis consumable devices that enable leading-edge medical research. You will be a key contributor within integrated and multidisciplinary teams developing new, and improving existing nucleic acid sequencing and sample preparation technology platforms.

Responsibilities:

- Develop new and existing material systems and application methods for Illumina's sequencing and sample preparation platforms.
- Explore new reaction methodologies to expand the Illumina portfolio of sequencing and sample prep chemical transformations and isolation techniques.
- Modify surfaces and/or particles toward making functional materials at the biochemistry, chemistry, and/or physics interface.
- Perform in-depth analyses using techniques such as ellipsometry, DSC, TGA, FTIR, Raman, SEM, XPS, TOF-SIMS, AFM, high resolution spectroscopy and microscopy to characterize dimensions at the interface between Illumina's surface chemistry and substrate materials.
- Teach methods developed to other scientists, engineers, research associates, of a range of experience and education levels.
- Work collaboratively with chemists, biochemists and bioinformaticians, developing new components for DNA analysis platforms.

- Present clear and concise written and oral communications to colleagues and supervisors, lead and/or participate in technical meetings, and provide recommendations based on technical results.

Requirements:

- Competitive candidates will have 0-3 years of industrial experience. In addition, candidates will have performed many (but not necessarily all) of the following:
- Attained and applied a clear understanding of Chemistry at the molecular level.
- Demonstrated experience solving challenging, interdisciplinary problems at the interface of biology, chemistry and materials science
- Developed polymer chemistry or organic chemistry reactions in the context of materials and/or biomaterials. This could include methods for bioconjugation and cross functionalization of materials, surface modification and particle modification are also applicable.
- Used fluorescence-based methods for protein or material labeling techniques such as characterization of surface functionalization and molecular interactions.
- Characterized materials using techniques such as ellipsometry, DSC, TGA, FTIR, Raman, SEM, TEM, XPS, TOF-SIMS, AFM, or chromatographic techniques such as GC-MS and HPLC.
- Experience in programming or scripting languages (as a plus). This could include a working knowledge of Unix or writing in C#, C++, Java, Matlab, R or Python.

Education: The ideal candidate will have a PhD in Chemistry, Material Sciences, or a related field.

For more information about the company or to apply please visit:

<https://sjobs.brassring.com/TGWebHost/jobdetails.aspx?partnerid=25666&siteid=5503&Areq=3811BR>

**The Barnes Integrated Materials Research Group with Washington University in St. Louis** is seeking a talented and highly motivated candidate to fill an open post-doctoral position this Fall (2016) in the Department of Chemistry at Washington University (Wash U) in St. Louis. The preferred candidate should possess extensive experience in synthetic organic chemistry, and have interests in supramolecular chemistry, polymer/nanoparticle synthesis and characterization, as well as (spectro)electrochemistry. Additionally, this position will allow for potential opportunities to carry out *in vitro* (both mammalian and bacterial cells) and *in vivo* efficacy studies related to some of the multi-functional materials prepared in our synthesis laboratory.

The Barnes Research Group is a newly established research laboratory at Wash U, beginning in July of 2016, and will specialize in the design and development of ‘smart’ functional materials, which capitalize on non-covalent bonding interactions and various polymerization methodologies. Researchers who join our laboratory will gain valuable experience in a broad range of areas and techniques, such as synthetic chemistry, polymer synthesis, characterization of non-covalent bonding interactions and host-guest systems, absorption spectroscopy, electrochemistry, size-exclusion chromatography, dynamic light scattering, cell culturing, and *in vivo* efficacy studies. The new Barnes research space will consist of a large synthesis laboratory (multiple fume hoods, double glovebox, solvent purification system, etc.), in addition to a biological laboratory (complete with a cell culture room) and an instrument room for electrochemistry and optical absorption spectroscopy experiments.

Applicants should have successfully completed their PhD requirements by the time of appointment at Wash U and have excellent laboratory and analytical skills, as well as strong abilities in oral and written communication. Full applications include a curriculum vitae, a brief summary of past and current research

accomplishments, selected reprints of publications, three letters of recommendation, and designation of a preferred start date. These materials should be emailed as PDF's directly to Professor Jonathan Barnes ([jcbarnes@wustl.edu](mailto:jcbarnes@wustl.edu)). Select applicants will be contacted and interviewed in late March and early April, and expected to begin post-doctoral work in the Fall of 2016.

**The H.T. Soh Laboratory at the ChEM-H Institute at Stanford University** develops novel materials and biosensors for the early detection and personalized treatment of diseases (<http://sohlab.stanford.edu/>).

We invite applications for postdoctoral research fellows in the area of bioinformatics and nucleic acid chemistry & technology.

**Position Requirements:**

Applicants should possess a Ph.D. in chemistry, biochemistry, bioinformatics, or a related field. The ideal candidate will have a record of scientific rigor, productivity, and creativity; the ability to work both independently and as part of a team; and a strong publication record. Excellent oral and written communication skills are required.

Interested applicants should provide a cover letter, CV, and three letters of reference. This information must be sent via email ([sohlab@ee.stanford.edu](mailto:sohlab@ee.stanford.edu)). Salary and duration of the position will be commensurate with experience.

**Professor Oren Scherman (University of Cambridge)** is looking for an extremely motivated and talented individual for the position of group manager and scientific coordinator. The Scherman Group Manager will be an integral member of Professor Scherman's group based in the Melville Laboratory within the Department of Chemistry at the University of Cambridge, acting as coordinator and administrator for his large interdisciplinary research team. The role holder will manage the running of a large research team (which comprises of 25-30 post-doctoral researchers, graduate students, and visitors) and co-ordinate its extensive research activities across a number of centres within the University. The role holder will develop and provide support mechanisms which enable and promote collaboration with external organisations (to arrange facilities not available within the group and foster relationships with external research partners) and have oversight of medium to long term research operation strategy. In addition, the role holder will provide research, personnel and financial advice to the PI (including the development of appraisal and performance management). The role holder has responsibility for the effective management of the appropriate financial resources and be responsible for medium term financial planning.

Duties will include contributing directly to the teaching and research activities of the group in the area of experimental chemistry. In addition the role holder will assist with the writing of publications and reports for funding bodies. Contribution to teaching will include assistance in the presentation of seminars and may include participation in the research group's teaching and outreach programme. The successful candidate will be educated to PhD level in Chemistry or a field related to the research activities in the group and have breadth of experience in research coordination / group administrative. Having well-developed communicational skills and the ability to relate well to a wide range of people is essential. Additionally, having a high degree of literacy with experience of independently writing clear and concise documents and the ability to make independent decisions and take effective action is highly desirable.

Fixed-term: The funds for this post are available for 3 years in the first instance.

Once an offer of employment has been accepted, the successful candidate will be required to undergo a health assessment.

To apply online for this vacancy, please go to the following website:

<http://www.jobs.cam.ac.uk/job/9362/>

and click on the 'Apply' button at the bottom of the page. This will route you to the University of Cambridge Web Recruitment System, where you will need to register an account (if you have not already) and log in before completing the online application form.

For informal queries please contact Emma Graham [ejg49@cam.ac.uk](mailto:ejg49@cam.ac.uk), 01223 763188.

Please quote reference MA08210 on your application and in any correspondence about this vacancy. Further information can also be found on the website.

**The University of Liverpool** is seeking to recruit to up to 10 academic positions in the Faculty of Science and Engineering in the broad area of materials research, distributed across the School of Physical Sciences (Chemistry, Physics & Mathematics), School of Engineering, the School of Electrical, Electronic Engineering and Computer Science, and the School of Environmental Sciences across the areas of Chemistry, Physics, Materials Science, Engineering, Computer Science. You should have an outstanding research track record, as demonstrated by publications and other relevant outputs.

Applications will be considered from any area of materials research, but would be particularly welcomed in the areas of computational materials chemistry, polymer physics, rheology, robotics and/or automated metrology, biomaterials, materials processing and related areas. The posts will be aligned with the Materials Innovation Factory (MIF), a major new £68m research institute that is being established at the University. For the Chair or Readership positions you will be expected to demonstrate a significant track record of funding and a capacity for leadership in your field.

The University is an Athena SWAN Bronze Award holder and is committed to encouraging, developing and supporting women in their research and academic careers. We are working to create an inclusive environment which values a diverse workforce and we recognise that many individuals value flexibility in their work/life balance, therefore these posts may be taken up on a part-time (a minimum of 0.5fte) or full-time basis (including a job share).

<https://www.liverpool.ac.uk/working/jobvacancies/currentvacancies/professorial/a-590406/>

**The Department of Chemistry at Kalamazoo College** invites applications for a full-time Visiting Assistant Professor position for one year—September 2016 through June 2017. The successful applicant will contribute to teaching in Organic Chemistry. A Ph.D. in chemistry or the equivalent is required (or evidence of imminent completion). Prior teaching experience is desirable. Candidates must demonstrate an interest in undergraduate teaching. The Departmental website can be viewed at:

<http://www.kzoo.edu/chem>.

Kalamazoo College is a highly selective, nationally known liberal arts college of approximately 1450 motivated students, offering an integrated undergraduate experience that weaves a traditional liberal arts curriculum into domestic and international educational experiences ([www.kzoo.edu](http://www.kzoo.edu)). Approximately 10% of students major in Chemistry. Graduates of the Chemistry Department pursue studies in the health care field, graduate-level work in the discipline, or move directly into industrial positions. The campus is located midway between Chicago and Detroit, and the Kalamazoo area encompasses a community of 225,000, which supports several college and university campuses along with numerous civic arts and cultural associations. Thirty-five miles from Lake Michigan, the area offers many opportunities for outdoor activities.

Review of applications will begin immediately and will continue until the position is filled. A cover letter, curriculum vitae, statement of teaching philosophy, undergraduate and graduate transcripts (unofficial is acceptable), and three letters of recommendation addressed to Laura Lowe Furge, Chair, Department of Chemistry, Kalamazoo College, 1200 Academy Street, Kalamazoo, MI 49006-3295, should be submitted electronically in pdf format to the administrative assistant, Lauryn Kindle at [Lauryn.Kindle@kzoo.edu](mailto:Lauryn.Kindle@kzoo.edu) .

Kalamazoo College encourages candidates who will contribute to the cultural diversity of the College to apply and to identify themselves if they wish. Equal Opportunity Employer

**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](mailto: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](http://www.nationalacademies.org/rap).