Greetings

Welcome to the inaugural edition of ChemBits. The purpose of ChemBits is to publicize and celebrate the accomplishments of graduate students in the Department of Chemistry and Biochemistry. ChemBits will also contain news and announcements relevant to the graduate student community in the Department. To help us communicate your accomplishments in ChemBits, please send information regarding awards, fellowship applications or fellowships received, papers published, external presentations, or any other relevant information to chembits@nd.edu.

- Steven Corcelli, Director or Graduate Studies

News and Announcements

Professional Development Grants Application Deadline: January 31

The Graduate School offers grants to students for funds to aid in their academic training, conference attendance or research endeavors. The next deadline for grant applications is Jan. 31; this will be the only time grant applications will be accepted during the spring semester. If you have a conference or research activity planned before July 1 for which you would like to apply for funding, you must have your application in before Jan. 31. Click here to apply for the Graduate School’s Professional Development Awards.

Awards

Congratulations to the following students for earning nominations for a Graduate Student Award to attend the 63rd Lindau Meeting of Nobel Laureates:

Kerry Bauer
Joseph Gianino
Brandon Haines
Matthew McDonald
Zack Terranova
Katherine Ward
Natalie Wasio
Erin Wilson
Matthew Wilson
Fellowships

Awarded

Congratulations to the following students for being awarded a 2012–2013 Chemistry Biochemistry Biology Interface (CBBI) fellowships:

Marcus Arieno
Kerry Bauer
Jill Bouchard
Renee Bouley
Esther Braselmann
Douglas Rice
Danialle Ronnow
Jordan Scott
Katherine Ward
Abigail Weaver

Congratulations, also, to Rebecca Quardokus for receiving a Dorothy M. and Earl S. Hoffman Travel Grant.

Applied

The following students have applied for fellowships:

Jennifer Areco – NSF GRF
Hannah Babbini – NSF GRF
Jill Bouchard – DOD ASEE SMART
Olivia Cox – AHA Midwest Affiliate Predoctoral Fellowship
Ryan Flaherty – NSF GRF, National Defense Science and Engineering Graduate Fellowship
Danyal Foisland – NSF GRF
Ryan Forrest – NSF GRF
Jacob Hoffman – NSF GRF
Matthew Jobbins – DOD ASEE SMART
Julie Kessler – National Defense Science and Engineering Graduate Fellowship
Luan Nguyen – NSF GRF, DOD ASEE SMART, Ford Predoctoral Fellowship, Link Foundation Energy Fellowship
Danialle Ronnow – NSF GRF
Jared Stritzinger – NSF GRF
Zack Terranova – ACS Graduate Student Awards in Computational Chemistry
Katherine Ward – ASBMB Graduate Student Travel
Abigail Weaver – EPA STAR
Matthew Wilson – ACS Division of Organic Chemistry Graduate Fellowships
Laurence Zaino – NSF GRF

Good luck to everyone, and thank you for your efforts in applying for fellowships!
Publications

“Titanocene-Catalyzed Multicomponent Coupling Approach To Diarylethynyl Methanes”

“Vibrational Probes and Determinants of the S = 0 ⇌ S = 2 Spin Crossover in Five-Coordinate [Fe(TPP)(CN)]−”

“Phosphine–Based Redox Catalysis in the Direct Traceless Staudinger Ligation of Carboxylic Acids and Azides”

“Sphingosine analogue drug FTY720 targets I2PP2A/SET and mediates lung tumour suppression via activation of PP2A–RIPK1-dependent necroptosis”

“Laboratory studies in search of the critical hydrogen concentration”

“Selective Gelatinase Inhibitor Neuroprotective Agents Cross the Blood–Brain Barrier”

“Single–Particle Tracking Demonstrates that Actin Coordinates the Movement of the Ebola Virus Matrix Protein”

“Structural and dynamic control of T–cell receptor specificity, cross–reactivity, and binding mechanism”

“Method for Assigning Structure of 1,2,3-Triazoles”

“Dichlorobis(cyclopentadienyl) titanium – isobutylmagnesium halide”
Catherine A. Campos and Brandon L. Ashfeld, Encyclopedia of Reagents for Organic Synthesis 2012, on line. Link.
“Direct Acyl Substitution of Carboxylic Acids: A Chemoselective O- to N-Acyl Migration in the Traceless Staudinger Ligation”

“Positional chemoselectivity in the Zn(II)-mediated removal of phenol protecting groups”

Please send citations of your papers to chembits@nd.edu for inclusion in future editions of ChemBits.

**External Presentations and Outreach**

Nicholas Myers (Lieberman Lab) gave a poster entitled “Paper analytic devices for quantification of iodine in iodized salt” at the Microfluidics 2.0 conference in Boston, Massachusetts on December 1. Nick and Professor Lieberman also did a workshop for about 50 participants at the Microfluidics conference with hands-on fabrication and analysis activities.

Please send information about your external presentations and outreach activities to chembits@nd.edu for inclusion in future editions of ChemBits.

**Dissertation Defenses**

Congratulations to the following students who successfully defended their dissertations during the Fall 2012 semester:

Cheng Ji
"Exploiting Bacterial Iron Acquisition from New Antibiotics to Pathogen Detection Devices"
Advisor: Dr. Marvin Miller

Major Gooyit
"Gelatinase Inhibition as a Therapeutic Approach for Treatment of Diseases of Matrix"
Advisors: Dr. Shahriar Mobasery and Dr. Mayland Chang

Shenyu Kuang
"Atomistic Simulations of Nanoscale Transport Phenomena"
Advisor: Dr. Dan Gezelter

Jeffery Mayfield
"The Flavin-Dependent N-Hydroxylating Ornithine Monooxygenase from Aspergillus Fumigatus and the Heme-Dependent O2Generating Chlorite Dismutase from Dechloromonas Aromatica: Studies of Oxygen Consumption and Production by Two Microbial Enzymes"
Advisor: Dr. Jennifer DuBois

Ian Sander
"Protein Folding in the Cell is Modulated by the Translating Ribosome"
Advisor: Dr. Patricia Clark
Richard Besingi
"The N-Terminus of the Yersinia Pestis Yapv Autotransporter Protein Destabilizes the Entire Passenger Domain In Vitro: Implications for In Vivo Secretion"
Advisor: Dr. Patricia Clark

Ryan Haws
"Computation of Nitrile Vibrations as a Probe of the Structure and Dynamics of Condensed Matter Systems"
Advisor: Dr. Steven Corcelli

Jeanette Young
"Toward Characterization of the Polyketide Synthase Gene Cluster Responsible for the Production of Gephyronic Acid"
Advisor: Dr. Richard Taylor

Pauline Bourbon
“Development of Potential Niemann–Pick Type C Therapeutics and the Synthesis of Caged Nicotinamide and Cholesterol to Gain a Better Understanding of Cholesterol Biosynthesis and Trafficking”
Advisor: Dr. Paul Helquist

(There Is) Life After Graduate School

Congratulations to Jeff Bertke who on February 1 is starting a new position as a staff crystallographer at the University of Illinois at Urbana–Champaign.

Congratulations also to Ryan Haws who recently began a postdoc at the University of Texas at Austin in the laboratory of Peter Rossky.

Please send your "Life After Graduate School" announcements to chembits@nd.edu for inclusion in future editions of ChemBits.