

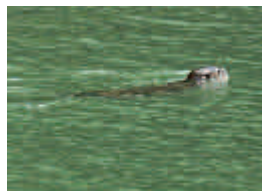
Special points of interest:

- Honors commencement
- Beginnings of Laboratory instruction
- Nash awarded fellowship

Annual Departmental Canoe Trip

We had a great time canoeing on the Buffalo River on Friday, May 16. We launched at Ponca low water bridge, and canoed to Kyles Landing, a distance of 10.5 miles. The river was 18 inches below the Ponca low water bridge, which is ideal, and the weather was good, but a bit chilly. We canoed past First Bluff, Bee Bluff, Roark Bluff, Big Bluff and Jim Bluff. Taking a break from canoeing, we took a hike up to Hemmed-in-Hollow, with the highest waterfall between the Appalachians and the Rockies. After several tip-overs below Hemmed-in Hollow, we hiked up into Bear Creek Hollow, featuring wonderful waterfalls. The canoeing highlight was the rapids called Hell's Half-Acre, right above Grey Rock. Everyone made it out in one piece.

Frank Millett's pictures of the trip are available on his Picasa web site:
<http://picasaweb.google.com/millett4>



Inside this issue:

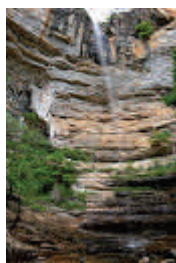
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Photographs are compliments of Frank Millett and Dan Davis

Faculty News

Publications

Nguyen TH, Maity S, Zheng N.

Organic synthesis using photoredox catalysis of Beilstein Journal of Organic chemistry: Visible light mediated intermolecular [3+2] annulation of cyclopropylanilines with alkynes. *Org. Chem.* 2014, 10, 975-980.

On the Go

Mary Kate Tucker, undergrad, will participate in the Medical Research Experience Program at the University of Okayama School of Medicine. She is support-

ed by the Honors College. Yudai Nakamura, a third-year medical student at the University of Okayama School of Medicine, will be hosted here by the **Sakon** lab.

Achievements

Christena Nash has been awarded the prestigious Colin Garfield Fink Summer Fellowship from the Electrochemical Society (ECS). This is one of five summer fellowships awarded annually by ECS. The funded project involves the use of AC-magnetic fields and synchronized AC-electric fields generated by redox-modified electrodes for microfluidic

pumping and mixing applications. The \$5000 was awarded to continue her research on AC-MHD over the summer. The work accomplished during this fellowship will result in an interference-free microfluidic technique capable of programmable, high velocity fluid flow with the benefits of a flat flow profile and mixing for indefinite time scales. Christena is a graduate student performing research in the laboratory of Professor **Ingrid Fritsch** toward completion of a doctorate degree.

How Laboratory Instruction Came to Be

Copied from Wilmer K. Fife "Instruction in the Organic Chemistry Laboratory: Past Present and Future" *J. Chem Ed* (1975) 52, 119-120.

Laboratory instruction at the university quickly developed early in the 19th century with Justus von Liebig as the foremost innovator. Although Liebig did not establish the first academic laboratory in chemistry, his laboratory at the University of Giessen, founded in 1824, was among the early ones and it is regarded as by far the most successful and productive of these early laboratories. Liebig called the laboratories of the other chemists "kitchens" and considered his laboratory to be the first true instructional laboratory in chemistry. The most notable feature of his laboratory program was a heavy emphasis on precise chemical analysis. Most chemists at this time were more concerned with metallurgical and pharmaceutical processes of a preparative or qualitative type. The remarkable success of Liebig's laboratory and those of some of his colleagues—especially Wohler's laboratory at Gottingen—enabled the Germans to supplant the French during the 19th century as the leaders in chemical science. In fact, many of the men most responsible for the development of chemistry in the United States, Chandler, O. W. Gibbs, Horsford, Nason, Remsen, E. F. Smith, and others, received training in Liebig's or Wohler's laboratory.

What were the special characteristics of Liebig's laboratory that may provide insight into its success and perhaps some guidance for us even today? *lnde*¹ gives the following description of Liebig and the Giessen laboratory.

There developed in the laboratory an *esprit de corps* which was a factor in spreading its fame. Liebig lived in the building and the students spent their entire day there; Aubel, the caretaker, complained about not being able to get them to leave. Liebig, a highly energetic man, had numerous projects under way at the same time. He gave the younger students little actual instruction in the laboratory, relying instead on his older students to act as his assistants in guiding the beginners in their work. The older students worked on original problems, turning in a report each morning on their progress the day before. Liebig discussed these reports with the various students in planning their future work. Thus, there was a great deal of activity of different kinds, and the students educated one another. The research work done in the Giessen laboratory covered a wide range of subjects.



Honors Commencement

College Scholars

Bailey Barnes, Summa Cum Laude, Chemistry. Mentor—Neil Allison
Claire Bewley, Cum Laude, Chemistry/Biochemistry. Mentor—Wei Shi
Anna Coleman, Cum Laude, Biochemistry. Mentor—Ravi Barabote
Kanasha Day, Chemistry/Biochemistry. Mentor—Matt McIntosh
Nathan Falls, Summa Cum Laude, Chemistry/Biochemistry. Mentor—Suresh Kumar
Taylor Ghahremani, Summa Cum Laude, Biochemistry. Mentor—Suresh Kumar
Taylor Gohman, Magna Cum Laude, Biochemistry. Mentor—Jingyi Chen
Rebekah Langston, Summa Cum Laude. Mentor—Susanne Striegler
Samuel McLelland, Magna Cum Laude. Mentor—Nan Zheng
Shelby Nolte, Summa Cum Laude, Biochemistry. Mentor—Daniel Lessner
Edouard Oudin, Magna Cum Laude, Chemistry/Biochemistry. Mentor—Susanne Striegler
Rachael Pellegrino, Summa Cum Laude, Chemistry/Biochemistry. Mentor—Suresh Kumar
Keaton Piper, Summa Cum Laude, Chemistry/Biochemistry. Mentor—Ryan Tian
Katherine Ramey, Cum Laude, Biochemistry. Mentor—Suresh Kumar
Karina Sanders, Summa Cum Laude, Chemistry/ Biochemistry. Mentor—Suresh Kumar
Christopher Sonntag, Summa Cum Laude, Chemistry/Biochemistry. Mentor—Roger Koepp
Gayatri Suresh Kumar, Summa Cum Laude, Chemistry/Biochemistry. Mentor—David McNabb
Samantha Wages, Cum Laude, Chemistry/Biochemistry. Mentor—Paul Adams
Chris Wallace, Magna Cum Laude, Chemistry. Mentor—David Zaharoff
Hans Wang, Magna Cum Laude, Chemistry. Mentor—Paul Adams
Kelsey Wells, Summa Cum Laude, Chemistry/Biochemistry. Mentor—Nan Zheng
Megan Wood, Magna Cum Laude, Chemistry/Biochemistry. Mentor—Denise Greathouse

Departmental Scholars

Jacob Baxter, Magna Cum Laude, Chemistry/Biochemistry. Mentor—Nan Zheng
Dana Bodenner, Magna Cum Laude, Chemistry/Biochemistry. Mentor—Nan Zheng
Ross Burnett, Cum Laude, Biochemistry. Mentor—Suresh Kumar
Bethany Doss, Summa Cum Laude, Chemistry/Biochemistry. Mentor—Roger Koepp
Hayden Dunn, Summa Cum Laude, Chemistry/Biochemistry. Mentor—Suresh Kumar
Robert Engler, Magna Cum Laude, Chemistry. Mentor—Bill Durham
Erin Jeffrey, Cum Laude, Chemistry. Mentor—Matt McIntosh
Mary Catherine Leath, Cum Laude, Chemistry/Biochemistry. Mentor—Suresh Kumar
Reece Ritter, Cum Laude, Chemistry. Mentor—Wes Stites
Chase Wingfield, Cum Laude, Biochemistry. Mentor—Suresh Kumar
Shicong Xu, Summa Cum Laude, Biochemistry. Mentor—Paul Adams

A listing of the rest of our graduates will be published as soon as it is available.



Excellence in the Central Science

Kinetic Motion Asteroid

Dr. Chen's cure for those pesky overhead lights turning off.



A Gentle Reminder —

Please include your name on any invoice, receipt, packing slip and P-card transaction when submitting them to Judy Sluppick. It will save her much time and frustration in trying to match transactions to receipts. She would appreciate having all of the above items submitted in a timely manner.



The department of chemistry and biochemistry at the University of Arkansas strives for excellence in research, teaching and service in chemistry - the central science. We aspire to positions of leadership regarding the discovery of new scientific knowledge, the training of students, and the economic development of the State of Arkansas. We seek to recruit and retain a diverse group of the best faculty, students and staff to address the challenges of the future through interdisciplinary and multidisciplinary research and education.

Calendar of Events

June

- 02 Last day to drop an 8-wk class without a "W"
- 04 Last day to drop a 10-wk class without a "W"
- 6-9 NCAA Baseball Super Regional
- 11-13 NCAA Track & Field Championships
- 14- 25 Baseball College World Series
- 21 Summer Begins
- 30 Last day to drop an individual 8-wk class with a "W"



Save the Date!

The 2014 INBRE conference will be held November 7-8 in Fayetteville, AR.

Library Hours

CHBC Library (CHEM 225)
<http://libinfo.uark.edu/chemistry>

Summer and Intersessions

Intersession Hours: May 12 – 24

Saturday – Sunday CLOSED
Monday – Friday 8:00 am – 5:00 pm

Regular Summer Hours: May 25 – August 2

Saturday – Sunday CLOSED
Monday – Thursday 8:00 am – 6:00 pm
Friday 8:00 am – 5:00 pm

Exceptions to Regular Summer Hours

Monday May 26 (Memorial Day) CLOSED
Friday July 4 (Independence Day) CLOSED

Intersession and Interim Hours: August 3 – 24

Saturday – Sunday CLOSED
Monday – Friday 8:00 am – 5:00 pm

The chemistry and biochemistry library resources can be accessed in the following LibGuides: <http://uark.libguides.com/content.php?pid=110953>. Please bookmark for future use. Theses and dissertation resources can be found on the following LibGuide: <http://uark.libguides.com/content.php?pid=123035&sid=1057466>.



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We're on the web!
chemistry.uark.edu/4842.php
&
Department of Chemistry and
Biochemistry University of Arkansas

Safety Tip: by Bill Durham

Both aqua regia and "piranha" (a mixture of sulfuric acid and hydrogen peroxide) are unstable and cannot be stored in a sealed container. The container will explode if sealed. Hydrogen peroxide is normally stored in containers with vented caps for the same reason.



Department of Chemistry
and Biochemistry