



AMERICAN CHEMICAL SOCIETY KENTUCKY LAKE SECTION

KLS-ACS 2017 Officers

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KLS-ACS Web Page

<http://kentuckylake.sites.acs.org/>

September 2017 Kentucky Lake Section Meeting

@

Union University
1050 Union University Drive
Jackson, TN 38305

Thursday, September 21st, 2017

Dinner @ 6:00 pm, Presentation @ 7:00 pm

All events will be held in the Carl Grant Events Center on campus

Directions and maps: <http://www.uu.edu/about/map/index.htm#Directions>

From U.S. Highway 45 Bypass, take Union University Drive west to Walker Road. Turn left on Walker Road. The Grant Center is on your left after passing the Welcome House gate and student housing on the left.

Dinner: Choice of Chicken Marsala or Herb Crusted Tilapia, salad, garlic mashed potatoes, mixed vegetables, and pie dessert bar

The price is \$10 (Students \$5)

Program: Making Old Reactions New Again: A Tale in Two Parts

Dr. John Hershberger, Assistant Professor of Chemistry at
Arkansas State University

Comments from the Chair

Greetings all. I'm pleased to say this year has been a successful one for the KLS, culminating with being nominated for four Chemluminary awards. Out of those four nominations, we earned three this past month at the ACS national meeting in Washington D.C. One of the amazing things our section does is hold meetings each month during the academic year where current chemical research is presented. This month is no exception. Please join us -- we'll be treated to a presentation from John Hershberger of Arkansas State regarding the development of a cross-coupling and Biginelli reaction sequence leading to new bioactive derivatives. Students interested in graduate school are especially encouraged to attend! ~ Dr. Phillip Shelton, Chair

What's Happening

- Save the Date! We hope you can join us often this semester.
 - Nobel Prize Gala on October 13th at Discovery Park. Watch the mail for your exclusive invite!
 - National Chemistry Week Demonstration Show on October 19th at UT-Martin. Student groups, start planning and practicing.
 - November Meeting with Elections and Awards on November 16th at Bethel University.
- Congratulations to all involved for ChemLuminaries. Let's keep the momentum going and continue spreading the word about the importance of chemistry. Thank you to all who made the awards possible!

Making Old Reactions New Again: A Tale in Two Parts

This talk focuses on two tales of new reaction sequence development using undergraduate researchers. The first involves development of a fluoride-free cross-coupling of arylsilicon and arylboron derivatives. Cross-coupling has led to great advances in the synthesis of biaryl compounds, which can be found in everything from pharmaceuticals to advanced materials. The new reaction removes the need for the halide, using oxygen as the terminal oxidant. The second involves new modifications of Biginelli adducts. The Biginelli reaction is over 100 years old and gives rise to the dihydropyrimidinone, which is itself a privileged structure as well as a precursor to other bioactive molecules. We are taking the easily accessible Biginelli products and generating new derivatives using simple, robust reactions.



John is originally from the Kansas City area. He received his undergraduate degree from the Missouri University of Science and Technology (formerly the University of Missouri-Rolla). He then earned his Ph.D., at the University of Kansas, followed by postdoctoral work at both The University of Michigan and The University of Wisconsin. After a visiting year as an Assistant Professor at Hamilton College in upstate New York, he is currently an Assistant Professor of Chemistry at Arkansas State University where his research interests are in new reaction development and the discovery of new bioactive compounds.