AMERICAN CHEMICAL SOCIETY
KENTUCKY LAKE SECTION

KLS-ACS
2013 Officers

Chair
Phillip Shelton
UTM
pshelto2@utm.edu

Chair Elect
Bommanna Loganathan
Murray State
bloganathan@murraystate.edu

Past Chair
Kate Stumpo
UTM
kstumpo@utm.edu

Secretary/Treasurer
Rebecca Brown
WKCTC
rebecca.brown@kctcs.edu

Councilor
Charles Baldwin
Union University
Cbaldwinchem1@gmail.com

Alternate Councilor
Jeff Anderson
MSU
Jeff.anderson@murraystate.edu

KLS-ACS Web Page
http://kentuckylake.sites.acs.org/

What's Happening

Nominations for Howard Huyck Outstanding High School Chemistry Teacher, Outstanding Professional Chemist-2013, and Outstanding Student Member-2013 are due October 4. Application form is available on the KLACS website. Send nominations to cbaldwinchem1@gmail.com.

September 2013 Kentucky Lake Section Meeting
Union University
1050 Union University Drive
Jackson, TN 38305
Monday, September 23, 2013

Social @ 5:30, Dinner @ 6:00, Presentation @ 7:00

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.

The price is $10 (Students $5)

Menu Options:
Pecan Crusted Chicken or Herb Crusted Tilapia,
Roasted Garlic Mashed Potatoes and Steamed Vegetables
Spring Mix Salad, and Chocolate Cake or Peach Cobbler.

Presentation:
"How to Design Organometallic Photochromes: How a Research Idea Evolves"
Dr. Ted Burkey
Professor of Chemistry, University of Memphis
See Reverse Side for Abstract & Biographical Sketch

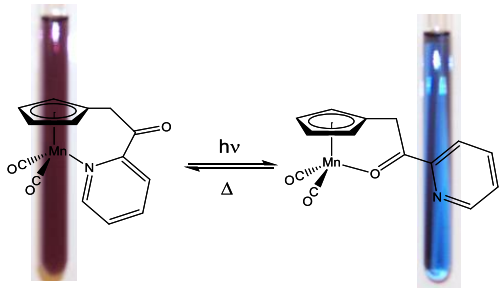
Comments from the Chair

Welcome everyone to the fall lineup of the KLS. I hope you enjoyed the August meeting in Murray, KY where we dined on **deliciously** grilled chicken. This month's meeting will put forth some very interesting chemistry featuring some colorful organometallic photochrome chemistry. As per the title of Dr. Burkey's abstract we will also get some insight on how a high quality research project evolves over time. We have great things happening in the section, so come and see what you can become involved in. On a personal note thank you for everyone who was able to join in my birthday party at the Jackson Generals game. It was a birthday I'll not forget. The cake and best wishes made me realize what a great section we have of colleagues and friends. ~Phil Shelton, Chair

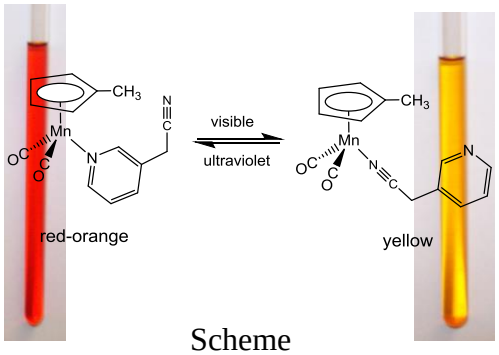
How to Design Organometallic Photochromes: How a Research Idea Evolves

Dr. Ted Burkey
Professor of Chemistry, University of Memphis

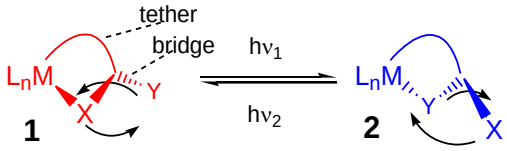
Photochromic materials reversibly change color when irradiated by light (see examples in Schemes 1 and 2). We prepare photochromic materials based on organometallic complexes that can undergo a light-driven linkage isomerization (Scheme 3) where the isomerization involves the interconversion of two chelates. Our studies include the effect of functional groups **X** and **Y**, the link between them, and the bridge between the metal and **X** and **Y**. I will describe how the idea for making these photochromic material evolved and the principles of designing organometallic photochromes.



Scheme



Scheme



Scheme

Ted Burkey obtained a bachelor's degree in chemistry at Harvey Mudd College. While earning a PhD at UC San Diego, he examined unfavorable equilibria for thiol addition to carbonyl compounds to determine the role thiol addition in receptor binding of steroid hormones. He joined the Hydrocarbon Institute at National Research Council in Ottawa Canada as a research associate. There he studied the dynamics of free radical reactions on millisecond to nanosecond timescales. In particular, he built a photoacoustic calorimeter which provided thermodynamic and kinetic data on transient species. As a postdoctoral fellow at Louisiana State University, Baton Rouge he studied free radicals in cigarette smoke and smokers lungs. He is currently a professor of chemistry at University of Memphis, and has been named a First Tennessee Professor. His research at U of M has focused on time-resolved studies of organometallic intermediates which led to the design and study of photochromic materials.