



## American Chemical Society Wichita Section

April, 2013 Newsletter  
Stephen Donnelly, Editor

**Section Meeting**  
Thursday, 18 April, 6:00 PM  
Exploration Place  
Wichita, Kansas

**Meal (optional):** 5:30 PM

We will meet at the Emporia Pizza Ranch Restaurant, 3000 West 18<sup>th</sup> Avenue in Emporia. Directions to the restaurant and a menu can be found at [pizzranch.com](http://pizzranch.com). The restaurant offers a buffet (including drink) for \$8.99 - menu items will be available as well. The section will cover half the cost for students who also attend the presentation.

Contact Eric Trump at [etrump@emporia.edu](mailto:etrump@emporia.edu) for additional information.

**Meeting:** 7:00 p.m.,

The meeting will take place in room 123 of the Cram Science Hall on the Emporia State University campus. A map of the ESU campus can be found at <http://emporia.edu/campus-map/>

**Speaker:** Dr. MaryKay Orgill, Associate Professor of Chemistry at the University of Nevada, Las Vegas.

**Title:** *Sliding toward inquiry: Using the Essential Features of Inquiry to improve learning in the laboratory environment*

In recent years, there has been a repeated call for science instructors to improve learning in the laboratory environment by modifying laboratory activities to make them less "cookbook" and more inquiry-oriented. But what does that mean? What is "inquiry"? What does it look like in a laboratory learning environment, and what can an instructor do to make a laboratory activity more inquiry-oriented? In this interactive session, we will discuss four historical laboratory instructional styles, their

relationships to "inquiry," variations of "inquiry," and how instructors can use the "Five Essential Features of Inquiry" to make their laboratory activities more inquiry-oriented.

### Speaker Bio:

The following is taken from the UNLV Department of Chemistry web site.

"I am interested in using qualitative research techniques to examine and improve undergraduate biochemistry and chemistry teaching and learning. Currently, this involves looking at how students understand concepts explained in chemistry classes, how they solve chemistry-related problems, how they visualize different chemical concepts, and how they use language to make sense of chemical concepts. I also am involved in a number of projects that provide professional development opportunities to faculty and K-12 teachers."

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### Chair's Message

Dear Section Members:

I would first like to thank Jung for her service as section chair last year. This was her second stint as chair in the past few years and once again she did an outstanding job.

As indicated above we have a meeting next Thursday in Emporia where Dr. MaryKay Orgill will discuss incorporating inquiry into the laboratory learning environment. As a chemistry educator that came up through the ranks via the standard graduate school process (i.e. with little emphasis on teaching) I teach by emulating the way I was taught. For my introductory lab course that includes having the students follow a series of steps listed in an a handout, record data in a pre-printed table, perform calculations as directed, and check their results against some known value by calculating percent error. While this method certainly has merit and can efficiently teach laboratory technique, it does not always give the students the sense of discovery that is such an import aspect of science. I look forward to hearing Dr. Orgill's presentation as our department has been discussing the need of updating our introductory lab sequence while at the same time improving retention of students within our degree program, and I certainly think incorporating inquiry in the labs will be a positive step towards that goal.

In addition to her presentation Dr. Orgill will lead a workshop on Friday and Saturday intended to

help chemical educators implement inquiry based exercises in their teaching labs. I sent out the workshop flyer a few weeks ago and can be found on the Wichita section web site (listed below).

We will have a second meeting in April as well. On the 30<sup>th</sup> we will meet at Newman University in Wichita to present awards to the outstanding freshman and graduating senior chemistry majors from the academic institutions within the section. We had a speaker arranged for the evening as well, but unfortunately I found out recently that the speaker will is not able to attend. That may not necessarily be a bad thing as not having a speaker will give us some time to sit, relax and catch-up with those folks we don't see often enough (I guess that is called networking now).

We have two presentations set for the fall. Dr. James and Jenny Marshall will give a presentation entitled "Rediscovery of the Elements" during the week of 16 September (exact date and location to be determined). Dr. James O'Brien will give a presentation on the chemistry in the Sherlock Holmes stories. This meeting will be on 30 October in Wichita (location to be determined).

We have yet to arrange for an industrial tour this year, so if anyone has ideas or would like to host a tour of their facilities please let me know. A few ideas that the executive committee kicked around at our last meeting include the NCRA refinery near McPherson, Hospira, one of the aviation related facilities in Wichita, or one of the helium processing facilities in western Kansas - I would greatly appreciate hearing from anyone with a connection or contacts at one of these facilities.

We have also discussed a round table type meeting between academia and industry within the section. The focus of the meeting would to explore the connections between the two groups including the graduates that the academic side produces to fill the personnel needs of industry, the support that industry can provide to the schools, and collaboration on potential projects between the two. Any ideas you may have to help flesh out the framework for such a meeting would be greatly appreciated.

As you know we have been distributing the newsletter via email for several years now, and I use the ACS data base for email addresses. This database is updated once a month. A number of section members did not provide an email address to the ACS, or the email address provided is not valid. If you are receiving a printed copy of this newsletter via the USPS you are in one of those categories. I have no problem sending it out in the

mail (I have our secretary do the hard work), but as I am sure you are aware I can be somewhat tardy in getting the newsletter out and the mailing process slows it down even more. If you would like to receive it via email please update your address on the ACS web site or send a note to me directly. On the other hand, if you prefer that I not send it to you via email send me a note and I will take you off the email list.

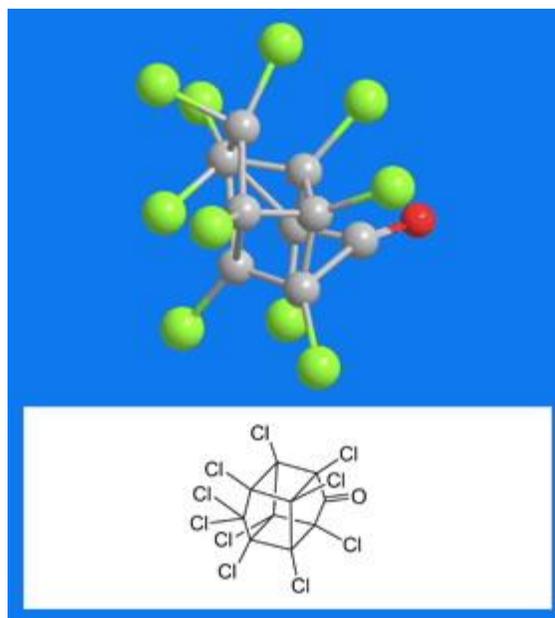
Well, I have rambled on enough. I hope to see you next Thursday in Emporia.

Sincerely,

Stephen Donnelly, Chair, ACS Wichita Section

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### Molecule of the Week



**chlordecone**

decachloropentacyclo[5.3.0.0<sup>2,6</sup>.0<sup>3,9</sup>.0<sup>4,8</sup>]decan-5-one

Chlordecone is an insecticide that was patented in 1952 by the now-defunct Allied Chemical Company. Millions of pounds were sold under the trade name Kepone, but it soon became clear that it is highly toxic to humans and wildlife.

Dumping chlordecone into the James River in Virginia caused 100 miles of the river to be closed to fishing for 13 years. Serious soil contamination by chlordecone occurred in the Caribbean islands of Martinique and Guadeloupe. In 2009, the Stockholm Convention banned its production and use worldwide.

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**Wichita Section Web Site:**

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

**2013 Section Officers****Stephen Donnelly, *Chair***

Fort Hays State University  
sdonnell@fhsu.edu

**Eric Trump, *Chair-elect***

Emporia State University  
[etrump@emporia.edu](mailto:etrump@emporia.edu)

**Norman Schmidt, *Secretary***

Tabor College  
[normans@tabor.edu](mailto:normans@tabor.edu)

**Malonne Davies, *Treasurer***

Emporia State University  
[mdavies@emporia.edu](mailto:mdavies@emporia.edu)

**Paul Rillema, *Councilor* (2011 - 2013)**

Wichita State University  
[paul.rillema@wichita.edu](mailto:paul.rillema@wichita.edu)

**Tom Wiese, *Alternate Councilor* (2011 - 2013)**

Fort Hays State University  
twiese@fhsu.edu

**Executive Committee Members****Jung Oh, *Immediate Past Chair***

Kansas State University at Salina  
jroh@sal.ksu.edu

**Jim Bann,**

Wichita State University  
jim.bann@wichita.edu

**Robin Jackson**

Central Christian College  
[robin.jackson@centralchristian.edu](mailto:robin.jackson@centralchristian.edu)

**Stephen Donnelly, *Newsletter Editor***

Fort Hays State University  
sdonnell@fhsu.edu

**Alan Oberley**

Newman University  
oberleya@newmanu.edu

**Eric Trump, *Webmaster***

Emporia State University  
[etrump@emporia.edu](mailto:etrump@emporia.edu)

**Tom Wiese**

Fort Hays State University  
twiese@fhsu.edu