

# Lycoming College Chemistry Newsletter

Issue No. 3

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Here's our summer 2010 summer researchers, a serious group if I've ever seen one.

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## Salutations

I hope this newsletter finds you well. I'm now in the habit of collecting information and photos for the newsletter. The goal is to hit the highlights and make sure the fun stuff is documented. As you know, learning and teaching chemistry is pretty hard work. Making sure this is done with a bit of light touch with some fun thrown in is important. This document will not focus on 2 am studying for chemistry exams or how you feel when your product won't recrystallize, rather it will feature accomplishments, whiffle ball games, and miscellaneous fun stuff.

Our speaker at the 2009 Homecoming colloquium (formally known as The William and Barbara Haller Endowed Lectureship in Biology and Chemistry) was Dr. Katherine J. Franz, Department of Chemistry, Duke University. Kathy is Dave Franz' daughter and she spoke on her research, "Minding Metals: Designing Iron Chelating Agents for Neurodegenerative Disease". After her talk, there was a brief ceremony where the instrument lab was renamed "The David A. Franz Chemistry Instrumentation Laboratory" which is just as it should be.



Dave Franz' family after Kathy's presentation



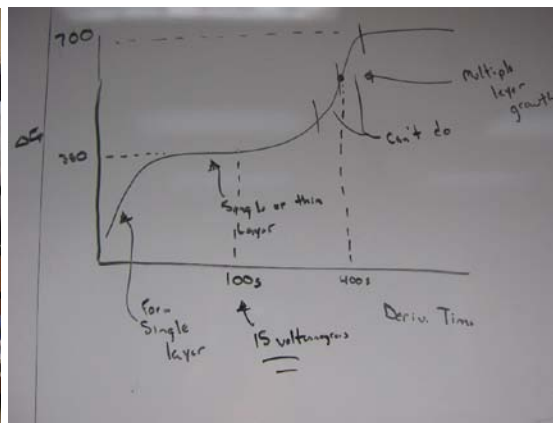
Touring the David A. Franz Instrumentation Laboratory

Over the past year we've had several students conduct research within the department. Brittany Bryan continued Dr. Mahler's project of characterizing ruthenium complexes by  $^{31}\text{P}$  NMR. Julie Bulter used the technique of cyclic voltammetry to determine the potential of samarium diiodide with various amounts of tripyrrolidine phosphine oxide present. Dave Sampsell worked in the McDonad lab over the year on a volunteer basis to do kinetic studies of  $\text{SmI}_2(\text{TriPy})_4$  with both 1-bromodecane and 2-octanone. Carrie Harsomchuck explored intermolecular versions of hydroacylation in the Bendorf laboratory. Zach Carroll worked with Dr. Ramsey on different low cost approaches to microfabrication. Trisha Lindenmuth investigated in-situ approaches to the derivatization of carbon electrodes for Dr. Ramsey. Mike Cecchini continued his investigations of the electrochemistry of catechol at carbon electrodes and helped out with the samarium diiodide electrochemistry. Several students presented their work at both the University of Maryland, Baltimore County in the Fall and the University of Delaware in the Spring.

Our summer research program had five students working with the four chemistry faculty. Our summer researchers did a great job. Along with the labwork, we had pizza-based lunchtime meetings where we started with YouTube videos of things being blown up followed by students and faculty holding forth on their work. We also had some sort of athletic endeavour each week (the Thursday throwdown) such as whiffleball, touch football, or volleyball. The summer research students also made a video of their summer work which makes doing chemistry research at Lycoming look like a pretty good summer gig. We'll try to get that video on our website for you to look at, it is pretty cool. Dave Sampsell and his dad hauled a big grill up to the summer researchers' apartments on Mulberry Street and they made ribs for everybody which were great. We also had a pork-based cookout at casa Bendorf/McDonald which went over very well. Chad Lemmons (Ahlstrom Filtration), Kyle Ruhl (Merck Pharmaceuticals) and Kate Williamson (University of Southern Mississippi) also did research and we're looking forward to finding out what they were able to accomplish.



Mike Cecchini and Julie Butler measure the potential of  $\text{SmI}_2/\text{TriPy}$



Derivatizing electrodes is complicated.....

In sports news, Biology was so traumatized by sequential whippings by the Chemfolk, that no game was played. In lieu of that, one rainy Friday a whiffleball game was held in the gym. The most noteworthy aspect of this was Eric Dingler's unassisted triple play, which was as exciting as it was improbable.



Dave Sampsell ran his 100<sup>th</sup> rxn so he gets a cake!



Aerial food at Ichiban for the summer research crew





Chillin' at the cookout the summer research students put on Summer whiffle ball (note Dr. Dave Fisher is on the hill)

As can be seen below we continue to have the Chemistree Party with all of the traditional activities and goodies.



This one goes right here!



This decoration was made before Rob was born

We had two home school groups visit with us during the year. Their enthusiasm for science is palpable and it is great fun to do demonstrations and involve them in chemistry-based activities.



Dr. Mahler shares his endothermic reaction



Polyvinyl alcohol \$1, sodium borate 50 ¢, making slime, priceless.

## 2010 Graduates and Their Placement

Brittany Bryan	???
Julie Butler	???
Zach Carroll	Research and Development position, Bausch and Lomb
Michael Cecchini	M.S. program in chemistry, Bucknell University
Tess Duffin	M.S. program in chemistry, Villanova University
Carrie Harsomchuck	Physician Assistant program, Salus University
Trisha Lindenmuth	Ph.D. program in chemistry, North Carolina State University
Casey Wells	Research and Development position, Baker Hughes



## 2009-2010 Department of Chemistry Award Winners

Bethany Garnand	ACS Award in First Year Chemistry
David Sampsel	Analytical Chemistry Award
Carrie Harsomchuck	Brunstetter Award (joint award with Biology)
Trisha Lindenmuth	Trask Award
Tess Duffin	American Chemical Society Award



## 2009 Gamma Sigma Epsilon Inductees

The Department of Chemistry at Lycoming College is home to the Rho Delta Chapter of Gamma Sigma Epsilon National Chemistry Honor Society. New student members are inducted each fall, and the chemistry faculty and secretary are all honorary members. Here are the new members inducted last fall.



(L→R) Dr. Todd Morris, Justin Yakup, David Sampsell, Kyle Ruhl, Emily Rogers, Katherine Smith, Rebecca Spencer, Kate Williamson  
(not pictured – Samantha Smith)

## Outside Presentations by Lycoming Chemistry Majors

1. Kyle Ruhl, Holly Bendorf “Synthesis of Medium-Ring Nitrogen Heterocycles via Intramolecular Hydroacylation: Effects of Solvent and Chain Length” 12<sup>th</sup> Annual Undergraduate Research Symposium in the Chemical and Biological Sciences, UMBC, October 10, 2009.
2. Brittany Bryan, Charles Mahler “Synthesis and NMR Studies of Organometallic Ruthenium Phosphine Complexes” 74<sup>th</sup> Annual Intercollegiate Student Chemists Convention, University of Delaware, April 24, 2010.
3. Julie Butler, Chriss McDonald “Determining the Standard Potential of Samarium Diiodide with Tripyrrolidine Phosphine Oxide via Cyclic Voltammetry” 74<sup>th</sup> Annual Intercollegiate Student Chemists Convention, University of Delaware, April 24, 2010.
4. Kyle Ruhl, Holly Bendorf “Synthesis of Medium-Ring Nitrogen Heterocycles via Intramolecular Hydroacylation: Effects of Solvent and Chain Length” 74<sup>th</sup>

Annual Intercollegiate Student Chemists Convention, University of Delaware, April 24, 2010.

5. David Sampsell, Chriss McDonald "Samarium Diiodide/Tripyrrolidine Phosphine Oxide Complex: Kinetic and Synthetic Studies" 74<sup>th</sup> Annual Intercollegiate Student Chemists Convention, University of Delaware, April 24, 2010.
6. Casey Walls, Charles Mahler "Synthesis and NMR Studies of Pentamethylcyclopentadienyl Ruthenium Phosphine Complexes" 74<sup>th</sup> Annual Intercollegiate Student Chemists Convention, University of Delaware, April 24, 2010.

### **Student Talks in the Lycoming Chemistry Colloquium Series**

1. Brittany Bryan "Synthesis and NMR Studies of Organometallic Ruthenium Phosphine Complexes" (Mahler).
2. Carrie Harsomchuck, "Intermolecular Hydroacylation of Chelating Alkenes" (Bendorf).
3. Trisha Lindenmuth, "Using Dopamine Electrochemistry to Study Biphenyl Layers on Glassy Carbon", (Ramsey).
4. David Sampsell, "The Development of New Ligands for Samarium Diiodide" (McDonald).
5. Julie Butler, "Determining the Standard Potential of Samarium Diiodide with Tripyrrolidine Phosphine Oxide via Cyclic Voltammetry" (McDonald).
6. Zach Carroll, "Developing Microfabrication Tools fo Use with Glassy Carbon Electrodes" (Ramsey).
7. Michael Cecchini, "Electrochemistry of Catechols at Modified Glassy Carbon Electrodes" (Ramsey).

### **Our Departmental Secretary Debbie Smith**

Debbie Smith is the secretary for the Heim building for the Biology and Chemistry Professors. I've asked her to write a little blurb for our newsletter, and here it is.

I have been with the College for 10 years in the Development Office for 6 years and now in the Heim building for 4 years. Currently I have an Associate Degree in Accounting and am working on completing credits for a Bachelor Degree in Accounting. I plan on using that Degree to assist the Accounting Department as a tutor to classes as needed in



addition to my position as secretary of the Heim building. This semester I will be helping with a computerized accounting program that will be implemented in one of the classes. I live in Montoursville, PA with my husband Kevin who works for PennDot and our son Ryan who is 6. Most of my time outside of work is spent either in the yard tending to our garden or playing street hockey on the driveway with Ryan who is learning to play ice hockey.

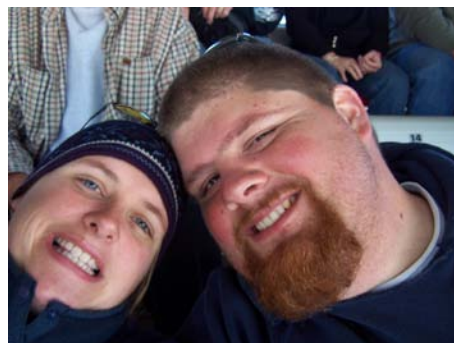


### **News from Alums**

We often hear from former students. Lately we've asked them for current pictures and descriptions of what they are doing, and permission to include the information in the newsletter. I would love to include more of this sort of thing. Please send me stuff!

*Jennifer Smith (class of 2001)*

I am an equine veterinarian (that means I work on horses, only horses, and maybe will give a rabies vaccine to someone's dog but not much else). I bought a house and live in the Albany, NY region and am part of a nine veterinarian practice. At times I really miss Lyco, and all of the friends I made while there. As requested here's a picture of my boyfriend Adam and I at Martinsville Speedway.



Jen and Adam



*Lou Ann Tom (class of 1987)*

I was just re-reading the last Lycoming College Chemistry Newsletter, and reminiscing about Dave (I still get choked up looking at his picture in your newsletter). I am just dropping an informal note to say Hi and to let you know I am still at Susquehanna University and doing well. I miss Lycoming very much, but it is nice knowing you are all very near. I am working on my third year review (which occurs after two years) and am submitting a paper for publication in the next day or so. I am teaching general chemistry and instrumental chemistry, and a few other courses here and there. I went to the national ACS meeting in Salt Lake City, UT this past spring, with two of my students (and four others) who were all presenting posters there. I hope to send two more next spring to California for the next national meeting.



### **Endowment Funds Benefitting the Department of Chemistry and Its Students**

The Department of Chemistry is pleased to offer a wide variety of philanthropic opportunities to donors. If you are interested in “giving back” or “paying forward”, please consider one of these endowment funds. Each is very useful to the department and its students and all are in need of additional funding. Your gift will be very much appreciated.

The David A. Franz Chemistry Instrumentation Endowed Fund was started by an anonymous donor, and renamed in 2005 for Dr. Franz upon his retirement. This fund has grown over the years and now provides annual revenues that can be used to help acquire small instruments or matching funds for grants procured from outside agencies. The Chemistry Research Endowed Fund was also started by an anonymous donor. The goal of this fund is to assist with the stipends given to students who participate in the summer research program that the department began in 1987.

The John A. Radspinner Endowed Scholarship Fund was started by a group of local area alumni. It was named in honor of Dr. Radspinner who taught general chemistry and physical chemistry at Lycoming from 1957 to 1987, and who made such an impact on the lives of so many Lycoming students. This scholarship benefits talented chemistry majors. The James K. Hummer Endowed Scholarship Fund was started in 2007 by one

of Dr. Hummer's colleagues in the department. It recognizes his contributions to students and the department from 1962 to 1988. This endowment fund provides a scholarship for a chemistry major who is also a participant in one of the college's musical groups (choir, band, orchestra). The Brian Belz '96 Endowed Scholarship Fund was started by Brian Belz himself and benefits chemistry majors who demonstrate financial need.

### Invitation to Contact Us!

We would love to hear from you. Send us an update and let us know if you want us to include it in the next issue of the newsletter. Any comments or ideas for the newsletter will be much appreciated. **We'd love to have a current picture of you too.** You can send your updates to: [mcdonald@lycoming.edu](mailto:mcdonald@lycoming.edu). We hope you enjoyed reading this newsletter. We promise to write more in the future.

Homecoming weekend is October 15-17, perhaps we'll see you then. If you want to come to the Biology-Chemistry Homecoming dinner on 10/15, right after the Homecoming Biology-Chemistry Colloquium, please contact our secretary Debbie Smith at 570.321.4180 to make a reservation. Our Speaker this year is Kristen Skvorak, '02. Kristen will be speaking on "Cell Transplantation to Treat Inborn Errors of Metabolism".

Ta Ta for now!

