

Wright State University
Department of Chemistry Newsletter
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Chemistry

Chair's Chat



Happy 2008 from all of us in the Chemistry Department!

It's a leap year this year, which happily coincides with our big leap into renovations. Progress has been made, as our seven new teaching labs in the basement of Brehm Lab. are now on-line and plans for the basement, second and fourth floors of Oelman are under review. Never has the phrase "back to the drawing board" been more over-used than during these renovations but it appears that, finally, we may be close to mothballing the drawing board and heading to the construction phase. Despite the good news that this represents for our research and teaching, it also means that our *next* Chair search has been deferred for two years. Like myself, after my second fond farewell last year, you may have perused Webster's Dictionary for the word "interim" and found it defined as a "temporary arrangement". The mistake we all made was in not consulting the WSU definition, wherein "interim" is identified as "three years, plus two more." Alas, once again, our external Chair Search was tantalizingly close but ultimately came up empty. The uncertain nature of the on-going renovations was almost certainly the deciding factor, so it was determined that it would make sense to wait two more years before testing the waters again. *Ergo*, here I am, with a working definition in hand, for two more years.

The above notwithstanding, exciting things have been afoot in both the Chemistry Department and WSU. The year started with the appointment of David Hopkins as the 6th president and the arrival of both Steven Angle as provost and Jack Bantle as vice president for research and graduate studies. We have been excited about the potential interactions with the new Provost since he is an accomplished organic chemist (as is his wife, Dominique Belanger, who has been a visiting scholar in our department since their arrival). Also, as you may know, Wright State celebrated its 40th Anniversary in the past year. A selection committee (including our own Eric Fossum) organized a variety of events including a slate of outstanding speakers from all over the country (and beyond). One of the latter was Joe Schwarcz, director of McGill University's Office for Chemistry and Society who presented an entertaining and thought-provoking lecture entitled "Modern Science in the Age of Anxiety." Even closer to home, Bill Feld, in his role as seminar coordinator in the spring, integrated a departmental 40th anniversary celebration by starting each seminar with a 10-15 minute, "down memory lane" picture gallery. While thoroughly entertaining, I must confess to a certain trepidation each week as to what 'horrors' might be revealed – quite justified as it turns out since none were spared - and, for example, the assemblage was treated to pictures of me with a fright wig (one time false and one time real)!

In the summer, we were delighted to find out that John Fortman, Emeritus Professor of Chemistry, had won the Helen M. Free award for Public Outreach (presented during the ChemLuminary program at the National ACS Meeting in Boston). This prestigious, annual award was established in 1995 and is given to the individual perceived to have improved most, the public recognition and appreciation of the contributions of chemistry. No one fits the bill better than John – congratulations from all of us.

Also, once again, our students amassed an impressive collection of awards during the year. While these are listed on our web-site, I will pick out some highlights. Thus, at the annual Dayton Section of the ACS / SAS research poster competition, students from our department gathered 5 of the 6 awards (last year our students won 4 of the 6 awards) – we're looking for the clean sweep next year! Travis Clark (an undergraduate research student with Bill Feld) received both a

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Chair's Chat Continued

WSU Libraries' and a WSU Honors' Poster Award, Nicholas Hendricks (an undergraduate research student with Eric Fossum) received one of the inaugural WSU Presidential Commendations for Excellence in Extra-Curricular Activities and a third place research poster award from the Division of Polymer Science at the Chicago ACS meeting, while Tricia Meyer (also an undergraduate research student with Eric Fossum) was selected as the Dayton Section of the ACS Patterson College Awardee. David Postell (a graduate student with Dave Dolson) was recognized as our Outstanding Graduate Student and Sweta Bose (a graduate student with Steve Higgins) was selected as the Outstanding Graduate Student in the Environmental Sciences' Ph.D. program. Congratulations to these students (and those not mentioned here) and to their faculty advisors. In other student activities, the ChemClub, led by its president, Steven Ballmer, was one of a small number of Student Affiliate Chapters selected to participate in the Chem Demo Exchange at the ACS National Chapter Meeting in Chicago. Though the event was not a competition, our students perceived themselves to be among the top performers (who am I to disagree!). The Club is also involved in university events throughout the year that help to promote the department.

Recently, more good news was forthcoming when we learned that the College of Science and Mathematic (CoSM) Outstanding Alumni Award Winner for 2008 was once again a Chemistry Graduate, Dr. Jeanne McHale, (B.S., 1975), Professor of Chemistry at Washington State University! Our second winner in three years (in 2006, Prof. Marc Porter was the awardee) will present a seminar in our department on Friday, February 1 at 3.30pm (see: <http://www.chm.wright.edu/seminars.html>) and will be honored at a university-wide reception on February 2. More information and details about this award and event can be found at <http://www.wright.edu/cosm/>. The Outstanding Alumni Award is an annual event which presents an outstanding opportunity to showcase the successes of our alumni. We appreciate the nomination suggestions that we received in the past year and while, unfortunately, there can be only one winner, undoubtedly, the depth of the pool that we presented helped to secure the win. For the 2009 award, we would be grateful for your nominations and/or suggestions, so please drop us an e-mail at chemistry@wright.edu.

We appreciate also the e-mail updates that we have received (often in response to last year's newsletter) from many of you. The information that you have approved is available on our website at <http://www.chm.wright.edu/alumni.html> and we envisage this as an informational 'clearing house' for both ourselves and all of our alumni. To provide updates, professional and personal, please log onto our website, www.chm.wright.edu and click on the Alumni link, followed by the Alumni Update Request Form link. Alternatively, you may e-mail us at chemistry@wright.edu (or regular mail to: Chemistry Department, Wright State University, Dayton, Ohio 45435; phone (937)775-2855). We very much enjoy hearing from you. Also on our website, you can view the latest department goings-on, including our annual department picture, class offerings, recent M.S. theses, seminar schedule and pictures from the Procter and Gamble Lecture. We are very grateful to all of you who have been so generous in providing funds for scholarships and other Department initiatives. In this regard, in part thanks to your donations, we have been able to purchase a DSC (Differential Scanning Calorimeter) to help enable the reestablishment of the physical polymer chemistry course and lab. and an ICP (Inductively Coupled Plasma) Spectrometer. These new instruments replace our previous 'stone-age' versions and, coupled with our recent purchases of new HPLC and Atomic Absorption instruments (both with autosamplers), we are excited about the prospects for a more timely educational experience for our students, especially in the instrument-intensive courses and research endeavors. Thank you again for your help.

Despite my apparent groanings and apprehension, I have come to enjoy my "interim" years and look forward to (a clearly defined) two more! Thank you for your support throughout the past few years, and I hope to count on it in the future.

Best wishes to you all for a happy 2008 - Ken Turnbull

Faculty Frolics

Daniel Bombick continued his efforts in teaching science education courses for early childhood education majors. Along these lines he was active in a number of committees, including the search for two new chemistry faculty members. He is working to develop a new course for the education core program this summer (basically, a condensed quantitative analysis) and he has been instrumental (pun intended) in helping to secure an Inductively Coupled Plasma Spectrometer that was installed in December '07. In the Fall he moved from the 4th floor of Oelman Hall to his new location in the newly renovated science education wing in Brehm Laboratory. After twenty years, he finally has an office window with a nice view of the campus (albeit, largely subterranean). His daughter, Celeste, continues her rapid growth and is now in sixth grade at Dixie in New Lebanon. Dan continues to hone his creative talents at home by taking a number of arts and craft classes.

David Dolson was pleased to have two students finish MS degrees this year. Alan Forlines completed his thesis research on a kinetic study of an oxygen-terminated chlorine/cyclohexane chain reaction, and David Postell finished his thesis research on the near infrared fluorescence spectrum of laser excited bromine. Both have found that mention of these topics effectively quashes cocktail party conversation! David is now pursuing a Chemistry Ph.D. degree at Emory University, and Alan continues his employment with

Faculty Frolics Continued

ISSI in contract research primarily at WPAFB. David (the other one!) also has been pleased to work with undergraduate researchers, Benjamin Kohn and Jennifer Monahan, on an E-V energy transfer study involving spin-orbit excited bromine atoms and methane. Benjamin has gone on to Colorado State University in pursuit of a Chemistry Ph.D. degree, and Jennifer will continue the project in the coming year. David and Bonnie were blessed with their first grandchild, Olivia Mae Dolson, on September 1st, and thoroughly enjoyed her first Christmas.

Bill Feld continued to have an active group in Organic and Polymer synthesis. Kevin Wiacek graduated with an MS in Chemistry in June after a whirlwind finish brought on by a sudden Air Force transfer to the missile command. Travis Clark (his dad is in the Physics department at Wright State) completed an Honors project, graduated and entered the Ph.D. program at Michigan in July and is adjusting well – his blog is great. Nora Hunter entered the Ph.D. program at Boston University and recently applied for an NSF graduate research fellowship. Bill enjoyed both of them thoroughly. The current group consists of MS students Lynette Prophyl, John Kelley and Morgan Hart and undergraduates Rachel Sayers and Devin Anderson. Bill and Nancy spent the last year celebrating their 40th anniversary with trips to Canada, England and Italy.

Eric Fossum's group continued along its ever more merry way during 2007. Amanda Ike, Brian Werry, and Mike Simons finished their M.S. degrees in July, and August, respectively. Amanda is currently teaching chemistry and physics at Covington High School in Ohio, Brian moved on to the Ph.D. program in Chemistry at Case Western Reserve, and Mike is in his first year of the Biomedical Sciences PhD. Program at Wright State. Tiffany Hall, a current M.S. student, was awarded a Dagsi Fellowship for the 2007-2008 academic year. Undergraduate departures included Nick Hendricks (Polymer Science & Engineering Ph.D. Program at U. Mass) and Andy Banks (University of North Carolina). The group published papers in *Polyimides and Other High Temperature Polymers* and *Synthetic Communications*, presented five posters at the Spring ACS Meeting in Chicago and Nick Hendricks was awarded third place at the Undergraduate Polymer Research Symposium. Postdoc, Zhenning Yu, has been a most welcome and productive addition to the group. On a personal note, Eric is really looking forward to the first quarter of 2008 and the arrival of twin boys. The home tally will be evened out at 3 females and 3 males and the deciding vote goes to the male dog.

David Grossie continued as Assistant Chair this year, performing the vast majority of the scheduling, certification, and inventory duties in the department, largely because Ken Turnbull doesn't have the attention span to do so! In addition, on behalf of the department, David oversaw the completion of the Brehm Lab renovation and the process of moving in. Since Brehm Lab was only the first phase of renovations for the Chemistry Department, he continues to represent the department in the planning of Oelman Hall renovations (Phase 2). Research continues with virtual trips to Youngstown to collect diffraction data. December of 2007 was highlighted by the move of the Physical Chemistry lab into Brehm Lab and working to complete a couple more manuscripts.

Steve Higgins has taken on the role of Associate Director of the Environmental Sciences PhD Program. He has continued with his NSF and DOE supported research in scanning probe microscopy instrumentation and the surface chemistry of minerals and has begun pursuing additional NSF support for projects in chemical composition mapping of mineral surfaces using microcontact printing technology and in fundamental controls of alkaline earth signatures in marine minerals. Both Steve and his PhD student, Sweta Bose, were speakers at the Geological Society of America meeting in Denver.

Dan Ketcha continued to have an active group in Organic synthesis. Graduate students Brandon G. VanNess and Benjamin K. Southerland, along with undergraduate students Patrick Seymour and Steven G. Ballmer, presented papers at the 233rd ACS National Meeting in Chicago in March. Brandon VanNess graduated in June and joined the Ph.D. program at Ohio State while Ben Southerland was employed this summer by Apoptrol. Steve Ballmer graduated with his B.S. and is working towards his Ph.D. at the University of Illinois. Dan presented an invited lecture, "Microwave-assisted heterocyclic chemistry," in the symposium on Organic Synthesis Using Microwaves, at CERMACS2007 in Covington, KY in May. He will be resuming his NSF Workshop on Combinatorial Chemistry this summer at Miami University.

Suzanne Lunsford continued her work with educational chemistry. The Duke Field Trip served 24 teachers this summer while "Exploring Science" and "Take Your Son and Daughter to Work Day" served over 400 middle and high school students. She is continuing her efforts with the STEM initiatives through the REEL Project at Ohio State. She submitted a grant to OSURF on nanoparticle electrochemical sensors for catecholamines and nerve agent detection at low concentrations.

Audrey McGowin: This year has proven to be very educational for Audrey. She began a new project, the analysis of pine needles for air pollutants and served on the Ohio EPA Voluntary Action Program Board, which made recommendations regarding laws for cleanup of contaminated landsites. Discussing environmental issues with engineers, bankers, developers, representatives of industry, and regulators was fascinating and provided many new insights and perspectives. Audrey developed a new course "Chemical Processes in the Environment" for the Environmental Sciences PhD curriculum. Students constructed posters during the course showing all of the forms of carbon that were discussed and how they move and change into various other forms. The students agreed that this project gave them a more integrated perspective on the fate of chemicals and contaminants in the environment.

Paul Seybold continued his research efforts in the areas of applied quantum chemistry, agent-based models for complex systems, and molecular structure-property relationships. Paul is spending most of January 2008 working with colleagues at the University of California, San Diego where, coincidentally, the weather is a tad warmer than in Dayton, Ohio!

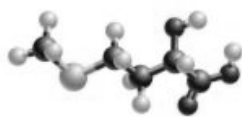
Adjunct Antics, Emeritus Escapades and Staff Sprees

We are very grateful to the following adjunct professors, who continued to render great service to the Department: **Lawrence Cerny** (CHM 102, Spring '07 and CHM 101, Fall '07), **John Kuo** (Isotec, CHM 101 and 102, Summer '07) and **Adam Smith** (Wright Patterson Air Force Base, CHM 101, Winter '07). Unfortunately for us, Adam took a job at DuPont and moved out of the area but we were fortunate indeed that Lawrence Cerny was able to take Adam's CHM 101 class in the Fall. **Jon Grieb**, our Organic Chemistry Lab. Coordinator, taught several sections of CHM 215 on top of his other duties (which included almost single-handedly moving the contents of the organic chemistry teaching lab. to their new location in the basement of Brehm!), and continued to teach CHM 102. **Andrea Burns** also was immensely helpful, teaching 4 sections of CHM 246 and 1 of SM 144 during the year. Andrea may be reassessing the meaning of retirement!

This has been a year of firsts for **Kirby Underwood**, our Freshman Lab. manager. He celebrated his first wedding anniversary, completed his first year of Wright State employment and bought his first house. In addition, both of his children (aka: cats) turned one year old. Kirby's sterling support work for the popular Chemistry demonstration shows helped to ensure their continued success. According to Kirby, John Fortman's judgment must be waning since he let Kirby actively participate in four, yes four, of the 12 shows while Rubin Battino enjoyed some time off. It would have been five had it not been for a snow cancellation! All in all Kirby has enjoyed a great year and, as of this writing, he has just started teaching his first University class, CHM 101, and working with the chemistry club as their new advisor.

After many years of teaching CHM 752 (Thermodynamics), Rubin has decided to hang up his, figurative, teaching boots. We are grateful for his years of dedication and his tremendous experience in this area will be missed. Fortunately, **John Kuo** has volunteered to teach the class, starting in Spring 2008, and so a new chapter begins. Rubin gave four presentations at a hypnosis conference in Phoenix in December, had five chemistry publications and a new book ("That's Right, Is it Not? A Play About the Life of Milton H. Erickson, M.D."). He continued to perform the chem. demo shows with John (even with a new artificial knee!) and his master's student, Sule Sidigu, completed her degree work at the end of the year.

Retired professor and department chair, **Sue Cummings**, spent the winter of 2007 actually writing her long-anticipated quilt book, *Album Quilts of Ohio's Miami Valley*. The book is scheduled to come out in September 2008 and will be published by Ohio University Press. Once the words started flowing, Sue went on to write a research paper on another Ohio quiltmaker who lived and quilted in Chicago during the 1940s-1950s. She will present this paper in October 2008 at the National Meeting of the American Quilt Study Group in Columbus, Ohio, where she also is scheduled to give a two-hour study center on the Ohio album quilts, which are the subject of her book. Hopefully this will put her book on the best-seller list! She is doing finger exercises now to get in shape for book signing events. Most of the time, Glynn left Sue to her writing and kept himself busy with chores around their farm and cooking meals when Sue forgot what time it was. Glynn also built a quilt display rack in the summer so Sue could take photos of the quilts pictured in the book and paper. It is reported that Sue and her photography assistant had only one fight during the book project - it started with the first quilt photo and ended with the last! **John Fortman** (with **Rubin Battino**) once again presented 16 chemical demonstration shows on campus, reaching over 7,000 students last year in the largest outreach program of its kind in the world. However, undoubtedly, the biggest item for John was his receipt of the prestigious the 2007 Helen M. Free award for Public Outreach from the ACS at the Boston Meeting. John was a featured demo presenter at the ACS Central Regional Meeting in Cincinnati, the National ACS Meeting in Chicago and at the close of the CHEM ED 2007 meeting in Denton Texas this past summer. Other than these events, he and Margie were kept busy with travel, demo shows, ACS speaking tours, and especially their two grandsons who are now both one year old. In January, John and Margie will be taking a cruise visiting Italy, Greece, Turkey, and Egypt. In February, John will be the featured demonstrator at TECH FEST and this Fall's ACS speaking tours will take him to Alabama, Mississippi, Texas, Louisiana, and Arkansas. **Marty Tucker** has a computer countdown of her remaining days in the department office. Audrey McGowin recently presented her with a "quit my job" bank to assist her in her effort to retire by the end of 2008 (it is rumored that, after 3 months of contributions, the bank now contains a Canadian quarter, 2 paper clips and a shirt button; yes, we don't want her to leave!). Marty, her children, new son-in-law and puppy are all doing well. Aside from her plentiful, regular duties, **Mary Sparks**, our Administrative Support Coordinator, has volunteered to assist faculty with undergraduate and graduate open houses and to participate in both our undergraduate and graduate studies' committees. Mary also helps with student advising, when the university software permits, and, as of Winter Quarter, has begun her pursuit of an MBA. Mary's husband and family are all looking forward to a busy 2008.



Keep in touch by dropping us a line at chemistry@wright.edu or filling out the alumni update form at <http://www.chm.wright.edu/alumniupdate.html>. You can also catch up with those you have lost touch with by visiting our website at <http://www.chm.wright.edu/alumni.html>. We look forward to hearing from you!