

# Wright State University Department of Chemistry 2005 Newsletter

## Greetings for the New Year



[www.chm.wright.edu](http://www.chm.wright.edu)

### Chair's Chat



Season's Greetings to you from all of us in the Chemistry Department. This is my second (and last) holiday newsletter and I would like to thank everyone for their support and service during my interim run. While I have enjoyed my time, I am happy to report that, under the leadership and hard work of Bill Feld, chair of the Self-Study

Committee, Eric Fossum and Steve Higgins, a departmental "self-study" was completed and the search for a permanent chair is now underway.

The past calendar year has been an exciting one with several honors and awards being bestowed on Chemistry Department faculty. In the spring, Steve Higgins, assistant professor of environmental/analytical chemistry, was recognized with a WSU Early Achievement Award (one of only three university wide). [see related box] Also in the spring, the department completed a near clean sweep of the College of Science and Mathematics (CoSM) faculty teaching awards, taking two out of three. The deserving winners were David Dolson, associate [professor of physical chemistry and Suzanne Lunsford, assistant professor of chemistry education. These awards recognize excellence in teaching and are especially gratifying because they are based on student nominations.

One of the newest challenges and opportunities facing the department is the 5 - 6 year renovation process being undertaken by CoSM. The plan starts with the building of a new, off-campus space for the Brehm Lab, freeing up the basement of Brehm for Chemistry teaching labs. Subsequently, the Geology Dept. will be dispersed throughout CoSM while space in Brehm and Oelman is remodeled. We are currently finalizing plans with architects for our teaching space and initiation of the planning process for the research labs is just around the corner.

In last year's newsletter I mentioned our plan to take advantage of a new initiative from CoSM and provide an insert in the spring issue of the college's newsletter (the Equation). To all those who watched their mailboxes, I apologize as, alas, there was no spring issue (I've been assured that we should not take it personally).

In January, with the help of the CoSM office, the department held its first Alumni Open House in recent memory. Despite the best efforts of Mother Nature, in the form of a late afternoon blizzard and dangerous road conditions, over a dozen alumni attended and a most enjoyable occasion ensued. We are planning to continue this new tradition, though perhaps without the external ingredients!

Our initiative of improving communication with, and between, our alumni, needs your help. We are seeking your current contact information (mail and e-mail addresses) as well as any updates that you would like to provide, both professional and personal. Just log onto our Web site, [www.chm.wright.edu](http://www.chm.wright.edu) and click on Alumni Update. We very much enjoy hearing from you! As an added bonus, everyone who sends us an update will be eligible for a quarterly gift card drawing. Also on our Web site, you can view the latest department goings-on, including our annual department picture,

class offerings, recent M.S. theses, seminar schedule, and information on the rescheduled Procter & Gamble Lecture [see related box].

Best wishes to you and your families in 2006 — Ken Turnbull

### Hawker will be Third P&G Lecturer

To honor the support of the Procter & Gamble Co. for the Wright State Chemistry program, two years ago the Chemistry Department established a *Procter & Gamble Lectureship Series* to bring eminent chemists to campus. The first P&G Lecturer was Prof. Jean M. J. Fréchet from the University of California, Berkeley, who set a very high standard, and last year we were delighted to welcome Professor Ronald Breslow, the S.L. Mitchell Professor of chemistry and University Professor at Columbia University, who presented his seminar on the topic "Polymers as Enzyme Mimics."

This year's lecture, featuring Professor Craig Hawker from the University of California - Santa Barbara, was to have taken place on Friday, October 21, however, a family emergency prevented Professor Hawker's visit. The lecture, "Commercial Exploitation of Nanostructures: Studies at the Interface of Organic and Materials Chemistry" has been rescheduled for Friday, May 19, 2006. Details will be posted on our Web site a few months before the event.

While a speaker has not been identified yet for the fourth iteration of the P&G Lecture, it is our intention to return to the Fall time-slot, leading to two P&G Lectures in 2006.



Steve Higgins, assistant professor of chemistry, was awarded the President's Award for Excellence: Early Career Achievement for 2005.

The award recognizes high achievement in research, service and teaching at an early stage of the recipient's career. On the teaching front, Steve has been involved predominantly with the freshman non-majors and, in order to connect with

what can be a challenging audience, he developed a series of in-class demonstrations to reach visual learners and implemented a number of computational science education tools into his lectures. Steve's research program centers on the development of a novel type of atomic force microscope that allows the study of chemical and physical processes on solid surfaces in submicroscopic detail. This unique capability is of importance for environmental science, surface physics and chemistry and for a host of important technologies that deal with surface phenomena. In less than three years at Wright State, Steve has garnered around \$1 million in research funding from the National Science Foundation, the Department of Energy, and the Department of Defense. In addition, he has been very energetic in cooperating with scientists in different disciplines to broaden the scope of his efforts.

We are delighted that Steve's outstanding efforts have been recognized by the university with this prestigious award.



# Faculty Frolics



**Dan Bombick** has been working closely with the Science Education program developing SM 144, a foundation course for the Early Childhood Education Program. In the same vein, he is now our representative on numerous education committees at the department, college and university level. Dan celebrated his twentieth anniversary at WSU this year and was, coincidentally, visited by his very first graduate student, Naomi Horchak-Morris.

**Dave Dolson** performed heroically as chair of the Graduate Studies' Committee and, in that role, he spearheaded the receipt of two grants from the Provost to aid recruitment. Brian Brumfield completed his M.S. thesis and he is now at the University of Illinois undertaking his Ph.D. in gas phase spectroscopy (Dave says that no pressure was applied)! As for Dave's other students, Alan Forlines (WPAFB) is continuing on a part-time basis, Brian Munson (now in Denver) is writing, and David Postell has just joined the group.

**Bill Feld's** 34th year closed with a lot of activity. Tina Dancevic completed her M.S. thesis in August and returned to Croatia. The remaining members of the group (Shingirai Chirisa, Kirby Underwood, Joe Shumaker, Kevin Wiacek, Matt Vanden Eynden, Nora Hunter and Travis Clark) are busy with thesis or undergraduate research, including projects with the Air Force on hydrogen storage materials and solid electrolytes for lithium ion batteries. The collaboration, with researchers at Wright Patterson, Argonne, Texas A&M, Cincinnati and Wright State, has proven to be a stimulating and challenging venture. As mentioned earlier, Bill led the Departmental Self-Study committee, a necessary precursor to our Chair search, and, through his sterling efforts, a remarkably thorough overview document (over 130 pages) was developed.

Nancy Feld is having a great time performing with her duo piano partner Wanda. They presented an all Dvorak program in October at Wright State. Laura and Adam continue to do well, live in the same apartment complex, and actually share a lot of time together.

**Eric Fossum** gave an invited talk to the Institute for Macromolecular Chemistry at the Czech Academy of Sciences. He continued to receive funding from Kodak Versamark, the Polymer Branch at WPAFB and DAGSI, and negotiated a donation of a "lightly used" GC/MS from Kodak Versamark. Two of his students, Patrick Himmelberg (Exciton) and Travis Wherry (law school) graduated with M.S. degrees and a third, Sridevi Kaiti, is finishing up as I write. Eric volunteered to head up the ad hoc M.S. review committee, was a member of the department self-study committee and founded the weekly "Pub Club." The latter is a weekly, informal meeting of faculty and students to discuss a relevant journal publication and has the aim of improving our students' abilities to assess, assimilate and discuss the chemical literature.

**Roger Gilpin**, in addition to his role as director of the Brehm Lab., has developed a number of novel, virtual laboratory experiments suitable for a freshman audience. With **Suzanne Lunsford**, he has submitted several proposals dealing with teacher training to the Ohio Board of Regents and the U.S. Department of Education.

**Dave Grossie** continued to perform heroically as assistant chair and as the department representative to the CoSM renovation committee — already over two years of biweekly meetings! Dave presented a paper at the International Union of Crystallography Meeting in Florence (nice work if you can get it). For his research endeavors, despite continuing to nurse a stone-age diffractometer, he has maintained a high level of productivity.

**Steve Higgins** once again taught in the Environmental Sciences' Ph.D. program as well as for the department. He was the organizer and a keynote speaker for the Goldschmidt Conference on Advances in Experimental and Theoretical Methods of Interface Analysis. He served on an EPA review panel in the spring and received funding from DOE, NSF and the ACS. Steve also was a recipient of an Early Achievement Award, one of only 3 university-wide [see related box].

**Vlado Katovic** continued his successful, well-funded collaboration with WPAFB and the Faraday Company in the area of Fuel Cell Development. Faraday has expressed its appreciation for the previous students he has sent their way (Heather Dyar and Holly Krall) by indicating that they would like to hire as many as he can graduate! Vlado received a gift of electrochemical equipment this year and one of his graduate students, Marie Williams, is defending soon.

**Dan Ketcha** maintained his successful initiatives in combinatorial chemistry as a co-organizer of the fourth annual NSF workshop on combinatorial chemistry, this year at Miami University, and by presenting a poster on combinatorial chemistry and microwave initiatives at the Gordon Conference. Dan is currently co-organizing the 3rd Ohio Valley Organic Chemistry Symposium (OVOCS) for spring, 2006. One of his students, Stephanie Cooke (Schering-Plough) graduated this year with an M.S. degree.

**Suzanne Lunsford** was again extremely active on the chemical education front. She taught in our Middle Childhood Education program (as mentioned earlier, she was a recipient of a CoSM teaching award for her efforts), organized workshops for classroom teachers and volunteered for several WSU and external outreach events. She continued her strong record of external funding and published several papers in the *Journal of Chemical Education*.

**Audrey McGowin** continued as secretary for the AAUP (the faculty union) and once again taught in the Environmental Sciences' Ph.D. program as well as for the department. Her invited chapter on Polycyclic Aromatic Hydrocarbons appeared recently in the mammoth tome, "Chromatographic Analysis of the Environment," published by Marcel Dekker.

**Dave Portlock** continued to do an excellent job as visiting research professor. As well as overseeing the organic chemistry labs, Dave taught our medicinal chemistry courses. His research in diversity-oriented synthesis attracted several undergraduates, and his long-standing connection to Procter & Gamble helped secure a \$5,000 donation to continue our prestigious Procter & Gamble Lecture. Alas, despite our best efforts, Dave has elected to "hang up his lab. coat" and retire from teaching. He will be missed, but we are grateful for his many contributions during the past three years.

**Paul Seybold** was on sabbatical leave for the Fall '04 and Winter '05 academic quarters after serving five years as department chair. The Fall '04 quarter was spent at Virginia Commonwealth University's *Center for the Study of Biological Complexity*, teaching a course on "Complexity" and working with colleagues there on a book. The book, *Modeling Chemical Systems Using Cellular Automata* (Springer), should be out this month. During the Winter '05 quarter, Paul was a Visiting Scholar at the University of California, San Diego, working with Professor Andy McCammon in the area of molecular dynamics.

## ***Adjunct Antics, Emeritus Escapades and Staff Sprees***

**John Kuo** (Isotec) continued to render great service to the department as an adjunct professor, teaching both CHM 101 and 102 in the past year.

**Jon Grieb**, our organic chemistry lab coordinator, taught several sections of CHM 215 on top of his other duties, and stepped in to teach CHM 102 for the first time.

**Andrea Burns** also was immensely helpful, teaching *five sections* of CHM 245 and *one* of CHM 246 on top of her outstanding work as freshman chemistry lab coordinator. Andrea once again provided sterling support services for the ever-popular Chemistry Demonstration Shows.

**Rubin Battino** received the honor of being named an IUPAC Fellow in October. He submitted a paper to the Journal of Chemical Education on an inexpensive device for measuring vapor pressure and determining enthalpy changes on vaporization and worked on a paper on cryophorus. He co-supervised two graduate students with **Paul Seybold**. Rubin has also continued his endeavors into hypnotherapy including his eighth book, *Expectation. The Very Brief Therapy Book*.

**Sue Cummings** and her husband, Glynn, spent the entire year pursuing their passions of gardening and antiquing. Just to prove that they were not yet "over the hill", they laid nine tons of stone (in one month!) and sold Christmas trees from the forests they planted 10 years ago. Sue has been writing her book on album quilts of the Miami Valley and preparing to give a talk about her years of fossil collecting to members of the Aullwood Audubon Center. Retirement is great!

**John Fortman** and his wife, Margie, continued to rack up the travel miles. The ACS Speaker Service sent him to the Carolinas, Northern California, Hawaii, North Dakota, Croatia, Eastern Europe and Costa Rica. With **Rubin Battino** he continued the Chemistry Demonstration Show at WSU, which, he believes, is the largest such program in the world, doing 18 shows yearly for 8 - 9 thousand students!

**Paul Servé** for the second year taught a well-received Environmental Chemistry course at Notre Dame University, his alma mater, during their winter semester.

**Marty Tucker** may well be in her 30<sup>th</sup> year at WSU. While she may be reticent to share this information, she is not so when it comes to sharing her accumulated knowledge. She is now a master gardener, watch for her at work on Riverscape in downtown Dayton, and she volunteers to brighten the lives of the sick and needy *via* providing flowers; sort of a "plants on wheels" arrangement!

**Mary Sparks**, our other senior administrative assistant, will finish the requirements for her degree in Management Information Systems with a minor in economics in Spring 2006. We're trying to persuade her to stay on for her M.S. degree, so that we can retain her skills for another year or so!



## **2005 Faculty and Staff Honors & Awards**



**Mary Sparks** - President's Award for Outstanding Service (2004)

**Steven Higgins** - WSU Early Achievement Award

**David Dolson** - CoSM Teaching Award

**Suzanne Lunsford** - CoSM Teaching Award



## **2005 Student Honors & Awards**



**Ben Southerland** - 2004 Patterson Award winner (outstanding Chemistry junior) & Analytical Chemistry Award

**Zara Rhone** - CRC Outstanding Freshman Chemistry Student Award

**Sridevi Kaiti** - Best Graduate Poster award at the Dayton ACS Patterson Awards meeting

**Brian Brumfield** - HyperCube Scholar Award & Outstanding Graduate Student

**Laura Bedrossian** - American Institute of Chemistry Award

**Candace Beach and Angie Sellers** - Third Place Undergraduate Poster at the Kentuckiana Student Research Meeting

**Shingirai Chirisa** - Outstanding Graduate Teaching Assistant

**Stephanie Cooke** - Outstanding Graduate Teaching Assistant

**Pragathi Kadiri** - Outstanding Graduate Teaching Assistant

**Laura Sennet** - Outstanding Graduate Teaching Assistant



## **2005 Student Scholarships**



*Chemistry department scholarships:*

**Stephanie Z. Hertz**, Junior

**Truc T. Huynh**, Freshman

*Dubois Scholarships:*

**Tricia L. Meyer**, Sophomore

**Steven G. Ballmer**, Junior

*Dave Karl Scholarship:*

**Sara L. Hout**, Junior

*Cargill Scholarship:*

**Steven G. Ballmer**

**Stephanie Z. Hertz**



## News from 2004

**Editor's note:** The following information was originally to appear in the spring issue of the CoSM *Equation* newsletter, (the one that didn't materialize) so we are sharing it now.

In 2004, alum **Kirsten Wohlwend** sent us word of an amazing happening from her last chemistry farewell dinner at USAFA in Colorado where she and others realized there were five WSU chemistry grads in their department!

The news as sent by Kirsten from 2004 is as follows:

**Kirsten Wohlwend, M.S. '98** is on the faculty at USAFA in Colorado. She is in her 4th (and final) year of teaching. She has taught the core (freshman) chemistry course as well as teaching and directing the analytical chemistry course. Next semester she will be the assistant course director for the core course.

**Major John Peak, B.S. '88, M.S. '89** is working on a Ph.D. in organic chemistry at University of Florida. He was selected for promotion to Lt. Col. and, while at USAFA, he course directed the one semester organic chemistry course for biology majors — to help him get back into the organic frame of mind.

**Major John Garver, M.S. '95** is the assistant course director for the core chemistry class and will be the course director next semester. He and his wife are expecting their 4th child any day now.

**Eric Eldridge** is stationed at Patrick AFB and, while at USAFA, he was course director for the spring semester repeat core chemistry. He also worked with the Cadet Ski Club.

**Aaron Weiner** is course director of space chemistry. Primarily chemistry majors and astronautical engineering majors take this course. He will also teach a section of core classical physics next semester, a two semester sequence that every cadet must take. He will teach a section of the first physics course, something he thought would be fun!

### *Other alumni news from 2004:*

**Jean Faullimmel, M.S. '74** writes from France that he has retired and in 2003 took his wife and two girls on a five-week vacation in Namibia and South Africa, driving almost 10,000 km, half on dirt roads. He presented talks on "Environmental issues in the chemical industry" in both India and China. E-mail - jean.faullimmel@evc.net

**M. Salim Akhter, Ph.D., M.S. '79** received his Ph.D. at Denver University and in 1984 took a position in Bahrain, where he is an Associate Professor of Chemistry. E-mail - akhter@sci.uob.bh

**Tom Farquer, B.S. '83** received an M.S. from Purdue and a J.D. from the University of Toledo. Tom is presently Associate General Counsel for Information Systems and Intellectual Property for W.W. Grainger Inc. in Lake Forest, IL.

**Shaun Robinson, B.S. '86** is working at Pfizer in Groton, CN, and has been a great help to the Wright State chemistry program, including donating equipment and finding internship opportunities for WSU students. E-mail - shaughn\_robinson@groton.pfizer.com

**Rob Meyer, B.S. '99** is a training coordinator for the Minster Machine Company. Rob enjoys taking courses and is working on cracking the 500 credit hour barrier. E-mail - MeyerR@Minster.com

**Matt O'Malley, B.S. '03** is in the Chemistry Ph.D. program at The Ohio State University, working on solid state pH sensors. Matt has bought a house in Columbus to see him through his graduate work. In addition in 2005, Matt married Chrissy Specker, B.S. '03. Chrissy is also at OSU working towards a M.S. and Ph.D. in geology. E-mail - momalley@chemistry.ohio-state.edu or specker.5@OSU.edu

## News from 2005

**Connie Jo McCarroll, B.S. '68, M.S. '70** has retired medically from the practice of neonatology. She currently practices pediatrics part-time at Cassano Clinic in Dayton and continues to provide pediatrics medical mission care to children in the village of LaLabor San Pedro Ayampuc Guatemala.

**George Knull, B.S. '72**, E-mail - gknull@earthlink.net

**Thomas Farquer, B.S. '73**, work E-mail - tom.farquer@grainger.com

**Robert Gilliam, B.A. '75**, E-mail - robandshar@msn.com

**Wayne Edison Houpt, Jr., B.A. '76**, E-mail - ehaupt@healthcarepartners.com

**Robert J. Zellmer, B.S. '76**, E-mail - rzellmer@columbus.rr.com

**Michael F. Cox, M.S. '77**, work E-mail - michael.cox@us.sasol.com

**Jerry Clark, MD, B.S. '81**, E-mail - drjac@commkey.net

**Philip Trainer, B.S. '82, M.S. '84**, E-mail - Philip\_trainer@gillette.com

**Kimberly Wiefeling, B.S. '84**, E-mail - Kimberly@wiefeling.com

**Lynn Zettler, B.S. '84**, has been working as a patent agent for 12 years. E-mail - lzettler@indy.rr.com

**Robin Fox, B.S. '86**, E-mail - Dr.RobinER@aol.com

**Shaowo Liang, M.S. '86**, E-mail - sliang@eastman.com

**Dr. Jacqueline Roberts, B.S. '86, M.S. '89**, has a son named Chris, graduated high school and he is attending UAB as a pre-med student. E-mail - roadrnr@hiwaay.net

**Diane Needham, B.S. '87**, work E-mail - dneedham@acs.org

**K. Paulvannan, M.S. '89**, E-mail - paulvannan@aol.com

**David Jackson, B.S. '89**, E-mail - djackson@ora.fda.gov

**Douglas Bland, B.S. '89**, E-mail - jzdcbland@chartermi.net

**Jeffery Schreier, B.S. '89, M.S. '92**, married Katherine Stubbs. E-mail - k.m.schreier@worldnet.att.net

**Katherine M. Schreier (Stubbs), B.S. '92**, married Jeffery Schreier. E-mail - k.m.schreier@worldnet.att.net

**Erik Michael Ramnath, B.S. '92**, E-mail - emramnath@hotmail.com

**Neil C. Thiesing, B.S. '92, M.S. '95**, married with three children, including twins. E-mail - nctmail@yahoo.com

**Susan Luna, B.A. '94**, work E-mail - susan.luna@dinslaw.com

**Colin McHugh, M.S. '96**, work E-mail - mchugh.cm@pg.com

**Kirk Rupnik, M.S. '98**, E-mail - grignard73@yahoo.com

**Jim Eutsler, B.S. '99**, received his MBA from Xavier University in Cincinnati Ohio in August 2003. Currently works as an Assistant Brand Manager at Procter & Gamble. E-mail - eutsler2002@hotmail.com

**Christa Janeen Payne, B.S. '99**, has worked as a quality control chemist for over four years. E-mail - s001cjp@juno.com

**Jodi Brazelton, M.S. '99**, E-mail - jbrazelton@eurand.com

**Robert C. Pence, B.S. '01**, E-mail - pence\_4@yahoo.com

**Andrew Weisner, M.S. '03**, E-mail - weisnera2@yahoo.com

**Hrvoje Lusic, M.S. '04**, E-mail - hlusic@ncsu.edu

**Larry "Doug" Williams, B.S. '04**, married Sharlene Hopkins, B.S. '04 in 2004.

**Stephanie Cooke, M.S. '05**, E-mail - stephaniecooke1@gmail.com

**Jennifer Fisher, M.S. '05** is working at Isotec and married Adam Mahoney in September.