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KSU Chemist

Department of Chemistry - Kansas State University / chemdept@ksu.edu



The prairie is still thriving, and so is your Chemistry Department

It has been far too long

Upcoming Events:

Feb. 6 - 10
TELEFUND

www.found.ksu.edu/telefund/

You can watch it live on the Web using the link above and no, we won't call during the Super Bowl!

April 3 9:00 am - 3:00 pm
K-STATE OPEN HOUSE

<http://consider.k-state.edu/openhouse/>

Featuring the AXΣ Chemistry Magic Shows

May 5 1:30 pm King 4
Phyllis Johnson Patrick Lecture
Robert Sievers - Univ. of Colorado

www.ksu.edu/chem/seminars/patrick.html

May 13 - 14
Commencement Ceremonies

www.ksu.edu/registrar/c_d/index.html

Dear Friends -

Greetings - it has been far too long since you've heard from us!

One of the goals I set for myself when I was appointed as Head last July was to re-establish contact and involvement with our alumni and friends. This newsletter, which I hope to offer twice a year, represents a step toward accomplishing that.

There are many things to share with you in upcoming newsletters - the activities and accomplishments of our faculty, students and staff members, information about your fellow alumni, sources of pride and items of concern, and opportunities for you to share your time, talents and treasures with us.

Two particularly important developments are on the horizon, and I'd like to give you an advance notice about them.

First, we will create a Chemistry Advisory Council, whose twofold charge will be to provide networking and guidance for our students, and to assist and advance our fundraising efforts.

Second, we plan to have an Alumni gathering in the Spring of 2006. We intend to integrate both departmental and social functions - above all, it promises to be enjoyable! I'll let you know more about both of these soon as our plans crystallize.

In forthcoming issues, I'll outline for you our vision and plans for enhancing our department, whose success and strength owes much to each of you.

There likely have been many changes since you last visited the department, but I assure you that our commitment to outstanding teaching, research and service is stronger than ever.

Exciting things have been occurring in the Department, at K-State, and in Manhattan and we'll do our best to keep you up-to-date. Let us hear from you also!

Sincerely,

Eric Maatta

Professor and Head

Faculty Profile: Chris Culbertson



Ph.D. student Greg Roman (center) and Prof. Culbertson conducting microfluidics research in the micro-gravity environment aboard NASA's KC-135A aircraft above Houston's Johnson Space Center

Saying that Assistant Professor Chris Culbertson's research program is really taking off is an understatement.

Since arriving at K-State in the Fall of 2002, Chris has been extremely active and successful in both the classroom and the research lab.

Chris is one of the world's experts in the analytical separation technique known as microfluidics, by which complex mixtures can be resolved into their individual components using tiny channels - about the size of a human hair - etched onto silica or plastics. Such separations are extremely fast,

highly efficient and require minimal amounts of analytes and solvents.

Chris and his students have been developing methods for the automated separation and detection of components of individual cells, including those proteins which could mark the early onset of various diseases.

The ability to perform many simultaneous analyses on a single "chip" coupled with the robust and lightweight nature of these devices, has attracted the attention of NASA scientists who are interested in using Prof. Culbertson's systems onboard the International Space Station.

Rhonda Reist: Making a Difference Through Chemistry

"I'll keep advising my chemistry students to attend KSU because I see them succeed and I know how well you take care of them."

- Rhonda Reist

Rhonda Reist's chemistry classroom has no boundaries.

Ms. Reist (BS Chem Educ 1988) teaches at Olathe North High School in Olathe KS, but the impact of her involvement reaches far beyond.

Among her many out-of-class activities at Olathe North, Rhonda works with The Faraday Society, a group of students who conduct science demonstrations at schools, museums, juvenile detention centers, malls, etc., throughout the KC metro area. All aspects of these presentations are researched and managed by the students in an excellent example of "learning by doing."

Her engaging and effective teaching techniques have earned Rhonda a host of honors, including a National Presidential Award for Excellence, a Christa McAuliffe fellowship, and our department's Phyllis Johnson Patrick Award.

At the Midwest Regional ACS meeting here last October, Rhonda received the ACS John Bauman, Jr. Award in Chemical Education. Seeing Rhonda feted at the awards banquet, surrounded by a large group of her former students who are now KSU Chemistry undergraduate and graduate students, filled us with pride. Congratulations, Rhonda!

Remember when?

In July 2004, Chemistry students, faculty and staff participated in the Great Willard Hall Clean-Out. We removed a staggering amount of junk from the attic, from W-215, and from the basement. Among the treasures we discovered were many classic

photographs from years gone by and we'll be sharing some of these in upcoming newsletters. I can't think of a better way to start this feature than with this photo of Herb Moser being presented one of his many awards recognizing his outstanding teaching.



ACS Midwest Regional Meeting Showcases KSU Chemistry

The Midwest Regional ACS Meeting was hosted by the KSU Local ACS Section on October 20 -22, 2004.

More than 350 technical presentations were given by attendees from across the country and around the world.

Bringing such a massive event to Manhattan required years of planning and a huge effort during the meeting. Special thanks are due to General Chair Dan Higgins, Program Chair Vince Ortiz, Treasurer Yasmin Patell, and Exposition Chair Earline Dikeman.

Among the highlights of the meeting were thematic symposia organized by KSU faculty including Drug Discovery (Duy Hua), Sol-Gel Chemistry (Maryanne Collinson), Crystal Engineering (Christer Aakeröy),

Electronic Structure Theory (Vince Ortiz), Undergraduate Research (Stefan Kraft) and Nanostructured Materials (Ken Klabunde).

A wide-ranging undergraduate program, which included departmental tours and a special dinner, was coordinated by our Senior Chemistry major Janie Salmon.

Our many distinguished guests for the meeting included ACS President William F. Carroll, Jr., shown at right visiting our Section's National Chemistry Week display.

Over 60 presentations were made by KSU undergraduates, graduate students, postdocs and faculty members - a testament to vibrancy and breadth of research being conducted within our department.



ACS President Bill Carroll visits the display of books donated to the Manhattan Public Library by the KSU Local ACS Section

We've heard from . . .

Stephen Davidson (MS 1992) writes that he's living in Hoyt, KS with wife Vickie and their three children. Stephen is an analytical chemist at the Hill's Pet Nutrition R&D center in Topeka; he also teaches chemistry at Washburn University.

Thomas Gran (PhD 1973) manages the Analytical Department at Energizer Battery. He writes from Avon Lake, OH that he recalls "trying" to hunt geese with Dale Hawley, and expresses his confidence that Dale's technique has improved since then.

Cheng (George) Shi (MS 1992) went on to earn both an MD and an MBA after leaving KSU. George is now an analyst/portfolio manager with Eaton Vance Management in both Boston and New York City.

Carl Pettyjohn (BS 1940) is enjoying a well-deserved retirement in Akron, OH after a 43-year career with B.F. Goodrich.

Jana Eaton Blanchette (BS 1996) joined Pfizer upon graduation, where she has worked in clinical research and in both Pharmaceutical and Exploratory R&D. Jana writes from Fairfield, CT that she is about to leave Pfizer for a new career - motherhood!

Gene Howe (BS 1936, MS 1937) has retired after serving as Director of Natural Products Development at Merck. He remains active with the Meadows Foundation in Somerset, NJ, having served as founding president of that organization which is dedicated to the preservation of early Dutch and American sites in the region.

Charles Smith (PhD 1966) continues his work with Boeing's Materials and Processes group in Huntington Beach, CA. Charley's team investigates effects of low-Earth orbit atmosphere on spacecraft materials, and has been involved in designing both Delta Rockets and the International Space Station.

Stom Ohno (BS 1977) and his wife both are faculty members in the Department of Plant, Soil and Environmental Sciences at the University of Maine - Orono.

Martin Ruegsegger (BS 1972) earned his law degree after leaving KSU and practices corporate law at Piedmont Natural Gas. Marty writes that law school was a breeze after learning the virtues of hard work in Chemistry - especially Joe Paukstelis's Organic course.

A Round of Applause for:

Vince Ortiz, named as a University Distinguished Professor in 2004.

Duy Hua, recipient of the 2004 KSU Distinguished Graduate Faculty Award.

Chris Levy, our most recent recipient of an NSF CAREER Award (2004 - 2009).

Jim Hodgson, whose hand-crafted Victorian-style glass ornaments offered at the Manhattan Arts Center generated more than \$1600 for the Mitsugi Ohno Scholarship Fund.

K-State Chemist

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Call, write, e-mail, or
better yet, stop by.
We'd enjoy hearing
from you!

New website coming!
visit us online at:
www.ksu.edu/chem/

Special thanks to . . .

Mr. Jerry Patrick, Leawood, KS.

Dr. John Berscheid, Libertyville, IL.

Dr. and Mrs. Jerry Reed, Topeka, KS.

Mr. Perry Dilworth, Fishkill, NY.

Mr. Mike Hinton, Deerfield, IL.

Mrs. Virginia Barney, Washington, DC.

Hospira, Inc., McPherson, KS.

3M Company, St. Paul, MN.

Mr. George W. Hawks, Southlake, TX.

Dr. Ed Mishmash, Oakdale, MN.

Dr. David Manzo, Germantown, KY.

Prof. Herb Moser, Manhattan, KS.

Dr. Timothy Nelson, Los Alamos, NM.

Mrs. Isobel Smith, Chesterfield, MO.

Pharmascience, Inc., Toronto, ON.

Proctor and Gamble Co., Cincinnati, OH.

Each of our friends above contributed \$500 or more to the Department since July 1, 2004.

Did you know?

In 1988, 42% of K-State's budget came from state funds. By 2004, that figure had fallen to 27% and is likely to continue to decline.

Your support of us is now more crucial than ever. Large, medium or small, whether given

now or planned for the future, your gifts enable us to maintain our standards of excellence in challenging times.

Thanks to all our donors and friends!

A Closing Anecdote...

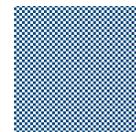
Dr. H. H. King, whose involvement with our department spanned 43 years, was a fine athlete and a quick wit in addition to being an outstanding scientist. His University of Chicago Ph.D. thesis on the surface tension of water is regarded as a classic in the field.

Dr. King once commented that the best decision he ever made was to hire as a faculty member Dr. J.S. Hughes, who at

KSU conducted pioneering studies of the nutritional effects of Vitamin A.

Once, Dr. Hughes introduced Dr. King as "the only person to receive a Ph.D. for counting drops of water coming out of a funnel." Taking the podium, Dr. King acknowledged Dr. Hughes as "the only person to receive a Ph.D. for killing two pigeons with vitamin overdoses"!

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