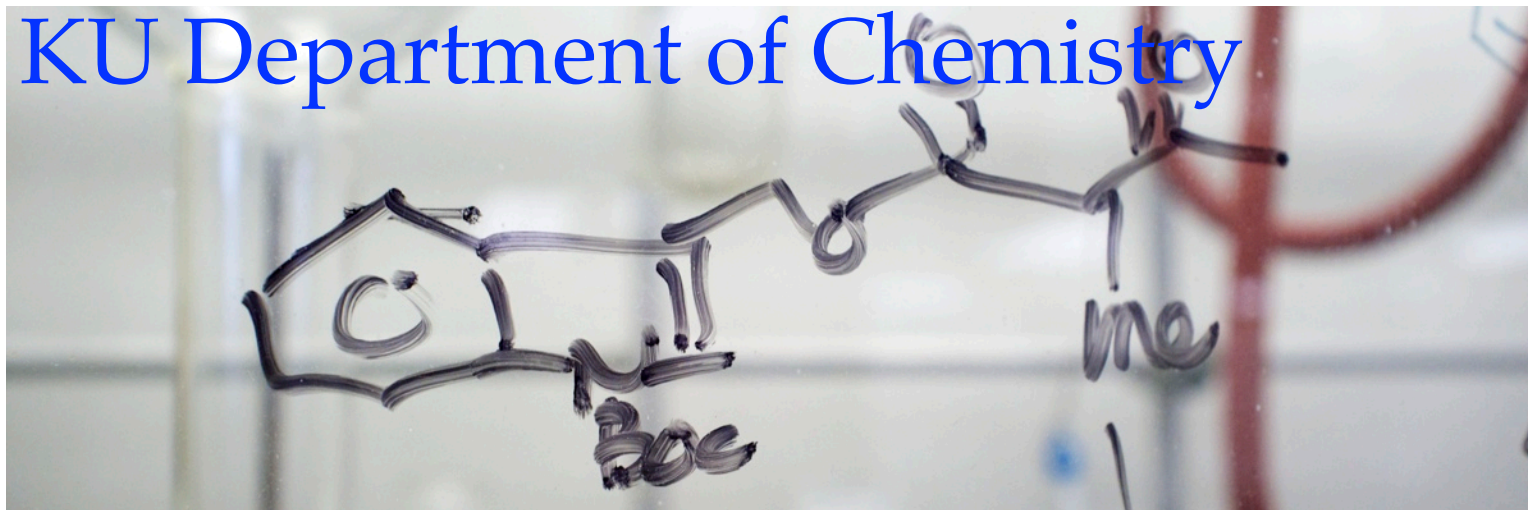


KU Department of Chemistry



Dear Chemistry Alumni & Friends — It is an exciting time in the KU Chemistry Department. The Department has continued to expand its research portfolio while maintaining our commitment to educating students. We have benefited from the hiring of two new faculty members who arrived at KU last year, [Shenqiang Ren](#) and [Yong Zeng](#), as well as new classes of undergraduate and graduate students. It is still the people that make the Chemistry Department a special place to work and learn. This electronically delivered newsletter is part of a concerted effort we are making to better inform our graduates and supporters of the accomplishments, changes, and challenges in the Department. We hope that you will enjoy hearing the latest Chemistry news and in the future we hope to include [news from you](#) as well. — *Craig E. Lunte, Professor & Chair*

New NIH-funded Center



A new \$11 million, five-year grant will enable chemists and other KU researchers on the Lawrence campus to better understand the molecular basis of diseases including

cancer and neurodegenerative disorders such as Parkinson's, Alzheimer's and Huntington's.

Funding from the National Institutes of Health will create a Center of Biomedical Research Excellence (COBRE): the [Center for the Molecular Analysis of Disease Pathways](#). The grant was awarded to [Professor Susan Lunte](#), the Ralph N. Adams Distinguished Professor in the Departments of Chemistry and Pharmaceutical Chemistry and director of the [Adams Institute for Bioanalytical Chemistry](#). The center will support work by faculty in a number of departments across the KU campus, including that of [Professor Michael Johnson](#) in the Department of Chemistry. Follow this link for the [complete KU News Release](#).

Breakthrough in All-Carbon Solar Cells

[Professor Shenqiang Ren's](#) research has led to "an exciting advance in solar cell technology," and was featured in the Oct. 9 issue of ACS Nano.

Dr. Ren's research "has produced the world's most efficient photovoltaic (PV) cells made from nanocarbons, materials that have the potential to dramatically drop the costs of PV technology in the future." These carbon nanomaterial PV panels "could advance solar technology because they are made from cheap, easy-to-get and environmentally sustainable carbon materials, have high optical absorption and much better photostability — meaning their performance doesn't degrade after exposure to sunlight. Follow this link for the [complete KU news article](#).

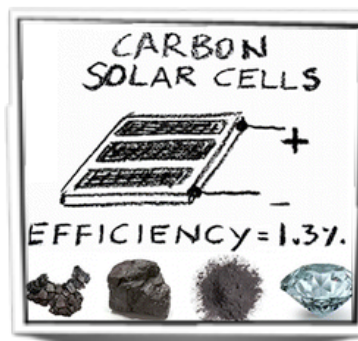


NIH Grant Will Assist HIV Vaccine Development

[Professor Heather Desaire](#) was recently awarded a \$1.38 million R01 grant from National Institutes of Health for a project titled "Characterization of PTMs on Env to

support HIV vaccine development." This research will investigate a group of HIV vaccine candidates and the proteins that make up those candidates. The project could help vaccine developers answer

several critical questions, including identifying cell lines in which specific proteins should be expressed and why particular vaccine candidates have especially advantageous properties, such as the ability to bind tightly to desirable antibodies. Follow this link for the [KU News Release](#).



KU Chemistry Students Honored

A number of undergraduate and graduate students in the Department of Chemistry have recently been recognized for their accomplishments by KU or national organizations:

- **Rodi Torres-Gavosto**, BS Chemistry major and member of the [Cindy Berrie Research Group](#), was awarded a prestigious Barry M. Goldwater Scholarship. [KU Press Release](#).
- **Rachel Saylor**, Chemistry graduate student and member of the [Sue Lunte Research Group](#) received an honorable mention for the National Science Foundation Graduate Research Fellowships. [KU Press Release](#).
- **Megan Watson**, a senior majoring in Chemistry and English was featured on the KU Women of Distinction calendar for the breaking barriers in STEM fields category.
- **Anthony Prosser**, a 2011 graduate of the Chemistry Department, was awarded an NSF Graduate Research Fellowship. Currently a graduate student at Emory University, Tony carried out research with [Professor Mikhail Rubin](#) while an undergraduate at KU.



Chemistry Faculty Earn Prestigious NSF-CAREER Awards

Three Chemistry faculty members have been awarded five-year CAREER grants from the National Science Foundation.

[Professor Chris Elles'](#) grant entitled "*Controlling non-adiabatic reaction dynamics in solution: A window on the fundamental details of*



photochemical reactions" will support research involving the reactions of technologically important molecular switches that are activated by light. In addition to the research, Professor Elles will be supported to work with future high school science teachers from the UKanTeach program.

The CAREER grant awarded to [Professor David Weis](#) will support his development of new mass spectrometry-based methods to probe protein structure under the crowded conditions inside cells and answer the question "Does crowding stabilize intrinsically disordered proteins?" The grant will also support the development of an introductory course in biomolecular structure.

[Professor Timothy Jackson](#) earned an award for his research on "the potential for manganese catalysts as less expensive and less toxic alternatives to precious metals in industrial and medical applications." Dr. Jackson also plans to develop a science camp aimed at middle school students with the grant.

These grants make 14 NSF-CAREER Awards for KU Chemistry faculty (out of 19 eligible) since the program's inception in 1995. Chemistry faculty thus account for 41% of the total received by all KU faculty.

Heppert Named ACS Fellow

[Professor Joseph Heppert](#), who also serves as Associate Vice Chancellor for Research and Graduate Studies, was named one of ninety-six 2012 American Chemical Society (ACS) Fellows. This prestigious program honors ACS members for "their contributions to science, the profession, and ACS." Joe and the other new ACS Fellows were honored at a special ceremony at the national ACS meeting in August. He joins the company of other KU



Chemistry faculty Kristin Bowman-James and Daryle Busch, who were previously named ACS Fellows. Follow this link for the complete [KU Press Release](#).

KU Chemistry Faculty Honored for Teaching and Mentorship

Two Department of Chemistry faculty members were recently recognized for their efforts in undergraduate education. [Professor Timothy Jackson](#), received the Silver Anniversary Award for excellence in teaching. This award honors outstanding teaching by a tenure-track faculty member and is given by the 25-year anniversary class. Professor Jackson received \$2,500 and was honored at the May commencement. [KU Press Release](#). [Professor Mikhail Rubin](#) was awarded the 2012 Barbara Schowen Undergraduate Research Mentor Award. Named for Emeritus Professor of Chemistry and former honors program director Barbara Schowen, this award recognizes an outstanding faculty member for his/her outstanding support of undergraduate research. Dr. Rubin received \$1,000 to use for research.

Join Us at the Carnival of Chemistry

Every November, Malott Hall is filled with hundreds of children and their parents for the [Carnival of Chemistry](#). This Department-sponsored event will be held from 1-4 pm on *Sunday, November 18* this year and we invite those of you in and around Lawrence to attend (with or without kids!).

Support the Chemistry Department

The Department of Chemistry continues to benefit from the strong support of our alumni and friends. Financial gifts to the department allow us to recognize exceptional students, bring in dynamic speakers, and explore new avenues of research. In the current challenging funding environment, your support is need more then ever. If you are interested in giving to the department, please visit our [website](#) or contact [Professor and Chair Craig Lunte](#).