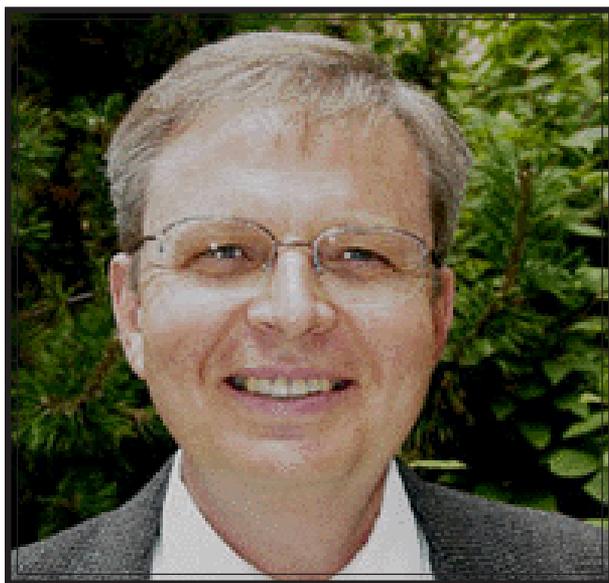




Chemical Bond

Volume 57
Number 6
September 2006

St. Louis Section, American Chemical Society



Professor Jay Switzer
Midwest Award Winner

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Volume 57

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Meeting & Seminars

Board of Directors

St. Louis Section—ACS Board of Directors meets on the second Thursday of each month, at the **Glen Echo Country Club** (map available on website). Meetings are open to all members, and all are encouraged to attend. Elected officers and chairs of major committees have the right to vote; others in attendance have voice but no vote. If you want to attend the dinner, please contact Alexa Serfis (barnoski@slu.edu) at least one week prior to the meeting date. The cost of dinner is \$18. Members wishing to become active in section activities are welcomed to their first dinner for free, compliments of the section.

Date: Sept. 14

Social hour: 5:30 pm

Dinner: 6:30 pm

Business Meeting will start during dinner.

Future meetings: October 12,
November 9, December 14

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General Meeting of the Section

Thursday, October 5

St. Louis University
McDonnell Douglas Hall, Room 1016

Presented by:

Earl R. Beaver, Ph.D., FAICChE

Chair Emeritus, Institute for
Sustainability AICChE Environmental
Division, Director 2006-2008

Reception 6:30 - 7:15 pm

Talk 7:15 pm

Societal Implications of Nanotechnology

The talk will provide a view of the
manufacture and use of nano-materi-
als, including environmental threats.

University of Missouri- St. Louis

Seminars are held on Mondays
at 4:00 pm in Room 451 Benton Hall.

September 18

Joe Kappock

Washington University

Life on Acid

September 25

Gary Meints

Missouri State University

Using Solid-State NMR to

Explore the Role of Dynamics

in DNA Repair

Workshop Focuses on Advances and Applications of HPLC, GC, and MS Systems

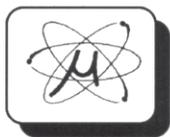
High Performance Chromatography/Mass Spectrometry will be the focus of a two-day workshop, 8:30 a.m.–4:30 p.m., September 21–22, 2006, in the J.C. Penney Conference Center, University of Missouri–St. Louis, One University Boulevard.

The first day of the workshop focuses on recent hardware, column chemistry, and interface advances in HPLC, GC, and MS systems. The second day focuses on GC/MS, LC/MS, and LC/MS/MS systems and their application to solving problems in organic synthesis, drug development, proteomics, clinical analysis, environmental analysis, forensics, fire residue analysis, and pharmaceutical manufacturing. Both sessions discuss practical techniques for applying and optimizing these systems in your research.

Marvin C. McMaster, PhD, will teach this in-depth workshop. Dr. McMaster is a UM–St. Louis adjunct professor of chemistry, consultant, and former technical field sales representative with Waters, Beckman, LDC, Pharmacia, and Teknivent in the St. Louis area.

The \$245 fee includes lunch and refreshments. Textbooks are additional. For more information or to register, call UM–St. Louis Continuing Education at (314) 516-5948 or visit www.umsl.edu/~conted/arts-sciences/hpcmsworkshop.

This workshop is sponsored by the College of Arts & Sciences and Division of Continuing Education at UM–St. Louis. For information on other continuing education programs, visit www.umsl.edu/~conted/.



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2006 Midwest Award Winner

Professor Jay Switzer

Jay A. Switzer is the Donald L. Castleman Distinguished Professor of Chemistry at the University of Missouri-Rolla (UMR). He is also a Senior Investigator in the Materials Research Center at UMR. His training in Chemistry began in his early teens, when he produced pyrotechnics in his basement laboratory in Cincinnati, Ohio. He received his B.S. in Chemistry from the University of Cincinnati in 1973, and his Ph.D. in Inorganic Chemistry from Wayne State University in 1979. His Ph.D. work with Professor John F. Endicott was on the kinetics and mechanisms of electron transfer reactions.

Professor Switzer fell in love with electrochemistry in graduate school, and has spent most of his career finding excuses to use electrochemistry in his research. After receiving his Ph.D. he joined Union Oil Company of California (UNOCAL) as a Senior Research Chemist. His research at UNOCAL was on photoelectrochemistry and the electrochemical processing of photovoltaic cells. In 1986, Dr. Switzer joined the Materials Science and Engineering Department of the University of Pittsburgh as an Associate Professor. In 1990, he moved to UMR as a Professor of Chemistry. Switzer became a Curators' Professor of Chemistry in 1994 and was appointed the Donald L. Castleman Professor at UMR in 1999.

Switzer has pioneered the electrodeposition of nanostructured metal oxide semiconductors, magnetic materials, and catalysts. The goal behind this work is not to imitate vapor deposition, but to exploit the wet aspects of electrodeposition to produce epitaxial architectures which may not be accessible to UHV methods. He is best known for his research on the electrodeposition of ceramic superlattices (Science 247, 444 (1990)), epitaxial films (Science 284, 293 (1999)), and chiral catalysts (Nature 425, 490 (2003)). Current research thrusts in the Switzer group include



chiral electrochemical sensors, epitaxial electrodeposition of metal oxides, spintronics, and electrochemical biomineralization.

He has served on the editorial board of Chemistry of Materials and is presently a Principal Editor of the Journal of Materials Research. Professor Switzer received the Electrodeposition Award from The Electrochemical Society in 2003, and served as the chair of the Gordon Research Conference on Electrode Position in 2006.

Compound Your Success!



**The Mark Twain Section
of the American Chemical Society
will host the 41st Midwest Regional Meeting,
October 25-27
Oakley-Lindsay Center in Quincy, IL**

<http://www.quincy-cvb.org>

Quincy can be reached by commercial air service into the Quincy Municipal Airport, the St. Louis Lambert International Airport [STL] (which is two hours away), or Amtrak rail service from Chicago. We have designed a diverse program at a reasonable cost to attract an optimal number of participants from industrial, academic, and government settings. We anticipate attendance to be between 500 and 600. Please visit our web site to view the program as it is continually updated: membership.acs.org/m/mwrm2006

The advanced registration is open until October 6th and the abstract submission deadline is September 8th [<http://acs.confex.com/acs/mwrm06/cfp.cgi>].

A block of rooms has been reserved at the Holiday Inn (\$79 +tax; 217-222-2666; 1-800-HOLIDAY) and the Hampton Inn (\$74+tax; 217-224-8378; 1-800-HAMPTON) both of which are within easy walking distance of the convention center. The booking code is ACS.

Do consider attending the 41st Midwest Regional Meeting and *compounding your success*.

[Dawood Afzal](#)

Co-Chair

660-785-4683

660-785-4642

afzal@truman.edu



[David Wohlers](#)

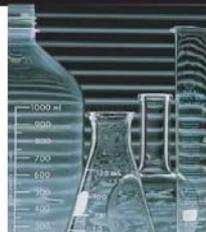
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Temporay Position in St. Louis

Allied Healthcare Products is looking for a chemist to aid in the design and implementation of two new CO₂ absorption devices. The position is a twenty-four month contract, which may be renewable depending on the qualifications of the person and our long-term needs. Start date is August 1, 2006. Salary is about \$4000/month dependent on skill level.

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Capital Connection

Science Budget Numbers Continue to Shine

As the Senate Appropriations Committee completed work on its version of FY 2007 appropriations, a banner year for basic physical science continued to roll forward. The National Science Foundation, Department of Energy Office of Science, and core accounts at the National Institutes of Standards of Technology all would receive large increases, in line with or greater than the president's budget request as part of the American Competitiveness Agenda. Even long-neglected programs such as the Environmental Protection Agency's Science and Technology program and the Department of Defense's basic research (Account 6.1) saw small increases.

The National Institutes of Health are slotted to receive a 0.4% (\$43 million) increase in Senate legislation. This amount is far below prior year increases; although congressional advocates are promising to push for larger increases in final negotiations.

Programs suffering from cuts in funding include the Science and

Technology Directorate at the Department of Homeland Security, which is facing increasing congressional scrutiny due to unresponsiveness to congressional oversight, lack of accountability, and poor budget preparation. Also, the Department of Defense Applied (6.2), and Advanced (6.3) accounts are subject to significant decreases. The administration's attempts to decrease education spending at NSF appears to be gaining traction with appropriators, as Senate legislators agreed with their House colleagues and enacted significant cuts in spending for the NSF Math and Science Partnership program.

At press time, only DOD is expected to be signed into law prior to Congress' adjournment in October before November's elections. Virtually all other appropriations will likely occur during a November "lame duck" session.

Senate Kills ATP

The Advanced Technology Program (ATP), an innovative program at the National Institute of Standards and technology (NIST) designed to help companies bring innovative technology to marketplace, was zeroed out in the Senate legislation, mirroring long-standing House of Representative and White House attempts to eliminate the program. ATP was sustained for many years by former Senator Fritz Hollings (D-SC); however, his retirement in 2004 left the program without a congressional champion and despite the best efforts of the scientific community, ATP appears to have funded its last grant. It will use prior-year funding to enact shutdown over the course of 2007.

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St. Louis Chemical Science and Technology Award Call for Nominations

The St. Louis Chemical Science and Technology Award will be presented to a chemist in the St. Louis area who has demonstrated a high degree of professionalism and scientific contribution. Criteria used to judge the award include technical proficiency, presentations, coaching/teamwork and additional professional activities. The award will consist of a plaque, a check for \$500.00 and dinner for the awardee and a guest at the annual Chemical Progress Week Awards Night. The award will be presented at the Awards Night event, which will be held in April of 2007.

This award will be presented to a person whose training includes successful completion of an Associate, Bachelor or Masters Degree in a chemistry or chemistry-related curriculum.

Letters of nomination must be received by Sue Dudek, Pfizer Corp., mail code T2A, 700 Chesterfield Parkway West, Chesterfield, MO 63017 by December 22, 2006. Nominations, including seconding letters, must not exceed six pages. The nominating letters should address the criteria above. A current work address, phone number and fax number must be provided for each nominee. Please include an e-mail address.

Nominees need not be a St. Louis Section member to be eligible for this award. This award is administered by the St. Louis Section of the American Chemical Society (ACS). For more information contact Sue Dudek 314-274-2464

FAX 314-274-4426 susan.dudek@pfizer.com



100th Anniversary of the St. Louis Section

A sub-committee was established by the Board of Directors in 2005 to plan the celebration of the centenary of the Section during 2007. The committee is chaired by Chair-Elect Steve Kinsley. Part of the work of the committee is to gather information, artifacts, memorabilia, old publications, etc. from the early days of the Section. If anyone has any such materials that they would be prepared to give, loan or otherwise share with the committee, they should contact Lol Barton via one of the following: lbarton@umsl.edu, Phone 516-5334 (O); 382-7355 (H).

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