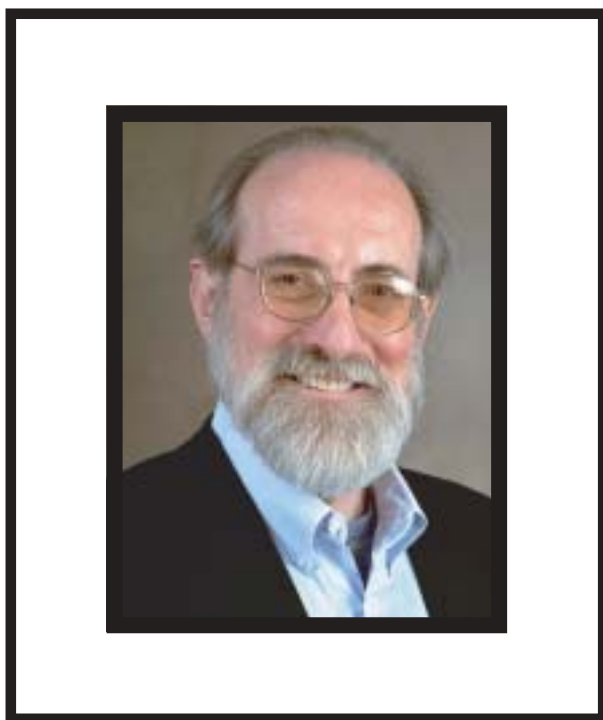




Chemical Bond

Volume 56
Number 7
October 2005

St. Louis Section, American Chemical Society



Jerry L. Atwood
61st American Chemical Society
Midwest Regional Award

St. Louis Chemical Science and Technology Award

2005 Call For Nominations

The St. Louis 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 to the winner at the Awards Night event, which will be held in April of 2006.

The Chemical Science and Technology Award will be presented to a person whose training includes successful completion of an Associate, Bachelor or Masters degree in chemistry or a chemistry-related curriculum.

Letters of nomination must be received by Joel Krauser, Pfizer Corp., mail code T2A, 700 Chesterfield Parkway West, Chesterfield, MO 63017 by December 20, 2005. 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: Joel Krauser at 314-274-8430,
FAX 314-274-4426, joel.a.krauser@pfizer.com

ACS Responds to Katrina

The attention of the ACS Office of Legislative and Government Affairs staff is on the aftermath of Hurricane Katrina and its devastating impact on so many of our friends, families, and colleagues. ACS is trying to help in any way that we can. To effectively respond, we are dependent on our members—their ideas, their needs, and their willingness to volunteer.

In order to help direct our efforts and resources effectively and to assure timely communications, the Society has established a [weblog](#) about our Katrina response. The goals of this [blog](#) include providing:

- A communication vehicle for those directly affected by Katrina
- A way for the ACS to determine the Katrina-related needs of its members,
- A way for ACS to provide information regarding the safety of our members,
- A mechanism for all ACS members to communicate their ideas and offers of assistance,
- A regular update on ACS activities and those of our local sections
- A mechanism to communicate other volunteer opportunities to ACS members.

Please go to the blog at <http://amchemsoc.blogspot.com/> and visit regularly to stay up-to-date.

Glenn S. Ruskin
Director, Office of Legislative and Government Affairs

Chemical Bond

Volume 56

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October, 2005

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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 Alumni Center, University of Missouri–St. Louis. 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 Bijan Khazai (bkhazai@sentortech.com or 314/497-8629) at least one week prior to the meeting date. The usual cost of dinner is \$15. Members wishing to become active in section activities are welcomed for their first dinner for free, compliments of the section.

Date: Oct. 13

Social hour: 5:30 pm

Dinner: 6:30 pm

Business meeting: 7:15 pm

Future meetings: Nov. 10
Dec. 8

Washington University

Seminars are in McMillen 311 at 4 pm unless otherwise noted. Coffee is available 20 minutes prior to the talk, and refreshments follow. For information, contact:

Amy Walker

walker@wuchem.wustl.edu

An up-to-date list of seminars is available at:

[www.chemistry.wustl.edu/
~seminars/seminars.html](http://www.chemistry.wustl.edu/~seminars/seminars.html)

NMR Discussion Group

The lectures are given in Room 241 Compton Hall (Physics Dept.) near the northeast corner of the Hilltop Campus at Washington University. You can download a campus map at:

<http://visitor.wustl.edu/>

The NMR group also has an email listserv. To join, send email to sarahj@wustl.edu with “subscribe NMR Discussion Group” in the subject line. The schedule is also posted on-line at:

[http://www.chemistry.wustl.edu/
seminars.stlnmr.html](http://www.chemistry.wustl.edu/seminars.stlnmr.html).

For more information contact:

Mark Conradi (Physics) at

935-6418 or msc@wuphys.wustl.edu

Joel Garbow (Radiology & Chem)

362-9949 or garbow@wustl.edu

Sophia Hayes (Chemistry) at

935-4624 or hayes@wustl.edu

November 10, 4:00 pm

Heiko Niessen

University of Magdeburg,

Center for Advanced Imaging
& Dept. of Neurology

Magnetic Resonance

*Progression Markers in the
Transgenic SOD1 Mouse Model
of Amyotrophic Lateral Sclerosis*

University of Missouri- St. Louis

Seminars are held on Mondays at 4:00 pm in Room 451 Benton Hall unless otherwise specified. Refreshments 15 minutes prior to seminar time. Please check the website at: <http://www.umsl.edu/chemistry>.

October 3

David Lewis

University of Wisconsin,
Eau-Claire

*Fiat Lux: One Role of a
Synthetic Organic Chemist
in Molecular Biology*

October 10

Bijan Khazai

Sentor Technologies, Inc.

*Materials in Perspective:
From Big Bang to Designed
Intelligence*

October 17

Carl Lovely

University of Texas-Austin
*New Methods in Heterocycle
Synthesis-Approaches to the
Oroidin Family of Marine
Alkaloids*

October 24

Carol Post

Purdue University
*Structural Plasticity in
Signaling from NMR and
Computational Studies*

October 31

Christopher Hamaker

Illinois State University
*Synthesis and Coordination
Chemistry of New Sulfur-
Containing Mixed-Donor
Ligands*

2006 ACS REGIONAL MEETINGS SCHEDULE

2006 promises to be an exciting year for regional meetings as all 10 regions have scheduled conferences! The Call for Papers will publish the end of November or beginning of December for the spring 2006 meetings, and online abstracts and advance registration will open the same time! Visit www.chemistry.org/meetings/regional to link to the spring meetings and examine their programs. It is a wonderful opportunity to present your oral or written research to your peers!

The **Western Region** has a cure for the January blues—their meeting takes place January 22 – 25, 2006 in Anaheim, California. Their theme is “Water, Water, Everywhere!?!?” and they are co-programming some topics of mutual concern with the American WaterWorks Association, CA – NV chapter. They are also working with many ACS Divisions on timely symposia.

There will be a plenary session on Water on Mars, an examination of the effects of Hurricane Katrina, a symposium on small chemical business in the Pacific Rim, and a wonderful opportunity to meet and chat with leading chemists at a special reception. Visit their website at www.wrm2006.org to view their extensive, and amazing, agenda. This is a meeting that should not be missed.

Visit the regional meetings website at www.chemistry.org/meetings/regional to link to any and all of the 2006 meetings and see what creative programming they have for you!

Out of This World Tic-tac-toe!

by Jack Bornmann

About forty years ago, when my daughters were about five years, old we had a three-dimensional tic-tac-toe game. Something happened to it; I have no idea where it went. Perhaps it was broken in the move to St. Charles from Illinois. But one day, when I was lamenting its disappearance, I realized that I could make a simple three-dimensional tic-tac-toe board on paper. Here's how I did it.

Letters & Words & More

Let me call the simple four-line tic-tac-toe grid (the two dimensional game) a "board". To make my three-dimensional tic-tac-toe game, I simply drew three "boards" horizontally across the top of a sheet of paper. I assigned the x and y-axes to the two-dimensional tic-tac-toe boards and then assigned the z-axis across the top of the paper. The board on the left was z equal 1, the board in the center was z equal 2, and the board on the right was z equal 3.

But, I could just as easily have put the three boards down the side of the page instead of across the top. It would work just as well vertically as it did horizontally. But, look what happens when you fill the paper with nine tic-tac-toe boards. You have a *four* dimensional tic-tac-toe game!

If we continue on this venue, the horizontal row being the z-axis, what shall we call the vertical column? Nothing comes after z, so let us choose the letter that comes before x. We will call the vertical column the w-axis.

Now, if you have three sheets of paper each containing nine tic-tac-toe boards and place them in a row across the far edge of your desk, you now have a five-dimensional tic-tac-toe game! Now fill your desk with a total of nine of these pages. Well, you get the point, I hope.

But there is a serious question here. Are you simply creating a complex game or are you delving into multi-dimensional space?

Cosmologists are now talking about nine (or maybe ten) spatial dimensions. Including time, they propose a ten (or eleven) space-time dimensions. They also propose other universes, as in "The Other Realm" (see Letters, Words And More, September 2005 issue of the CHEMICAL BOND). Will these alternate universes be restricted to four space-time dimensions? Because, after all, if it is good enough for us, it will have to be good enough for them. But, how will we deal with all of the universes? Will someone propose a MU consisting of LCAU (MegaUniverse consisting of a Linear Combination of Alternate Universes)? Be sure to tell your great-grandchildren that I thought of it first, way back in 2005.

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2005 National Chemistry
Week presents:

The Joy of Toys

October 22, 2005

11 AM - 4 PM

in the May Exhibition Hall

The Science Center is hosting the Chemistry Expo sponsored by the St. Louis Section of the American Chemical Society during National Chemistry Week, **October 16-22, 2005.**

This annual event brings chemist from the community to communicate the importance of chemistry to our quality of life. Toys are for everyone and we love our toys. From home made toys to manufactured toys, they all based on chemistry. Come join in the celebration of chemistry and the joy it has brought to toys. See antique toys and explore the chemistry that made them. Watch chemical demonstrations explaining the concepts behind our toys. Participate in hands-on chemistry demonstrations and make your own chemical toy.

We will be joined at this festive event by the President of the American Chemical Society, Dr. Bill Carroll. You can be a part of this event by volunteering your time and talent. Mark your calendars for this one-day festive event.

For further information, contact:

Greg Wall, NCW Coordinator,
by telephone: 800-325-5832 ext. 3139
or e-mail: gwall@sial.com.





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Nominees for Office - 2006 St. Louis Section-ACS

The Nominating Committee presents the following candidates for office to the St. Louis Section-ACS for 2006. All members of the St. Louis Section are eligible to vote. Please mark the enclosed ballot, following the instructions printed on the reverse side, and return no later than October 31, 2005. Ballots postmarked after that date will not be counted.

Chair-Elect (vote for one)

Steve Kinsley: Undergraduate Organic Chemistry Laboratory Supervisor, Washington University - Publicity and Public Relations Chair 2002-2005.

Secretary (vote for one)

Keith J. Stine: Associate Professor of Chemistry and Biochemistry, University of Missouri – Midwest Award 1993; Surface Science Discussion Group 1993-1999; Materials Chemistry Discussion Group 2000; Saint Louis Award 1998-2000; Alternate Councilor 1997-1999; Director 2001; Career Day 2001-2004; Secretary 2002-2004; Program Chair – 35th ACS Midwest Regional Meeting.

Treasurer (vote for one)

Lisa Balbes: Balbes Consulting - Chair of the St. Louis Section ACS 2002; Treasurer 2005; Webmaven 1996-2004; Chair, Computational Chemistry Discussion Group 1996-1999; Career Resource Coordinator 2003-present; COMP Division Webmaven 2000-present; National ACS Career Consultant 1993-present.



Director (vote for three)

Samir El-Antably: Founder and President, Camela Medical Equipment Compan - Section Activities include Chair of several committees; Director; Alternate Councilor; Section Chair, 1982; St. Louis Section Distinguished Service Award recipient, 1996.

Bill Doub: Bio not available.

Eric Ressler: Technical Information Specialist, Sigma-Aldrich Corporation - Editor, *Chemical Bond* 1995-2003; Director 2003-2004; Webmaster 2004-present.

Councilor (vote for one)

Donna Friedman: Professor and Department Chair of Chemistry, St. Louis Community College at Florissant Valley – St. Louis Section: Business Manger, Chemical Bond (1983-85, 1999-2005), Treasurer (1986-87), Awards Committee Chair (1988), College Awards Subcommittee Chair (1989-90), Steering Committee (1990-93, 1997, 1999, 2000), Special Event “Proud to be a Chemist” Co-chair (1991), National Chemistry Week Acting Coordinator (1991), Chairman-Elect (1991), Section Chair (1992), Director (1993), Bylaws Committee Chair (1993-94), National Chemistry Week Coordinator (1994), Science Fair Subcommittee Chair (1995), Audit Committee Chair (1996-2005), Investment Trustee (1999-2004), Parliamentarian (2002-2005), Undergraduate Research Symposium Chair (2005).

Division of Chemical Technicians: Education Committee Chair (1994-96), Bylaw Committee Chair and Parliamentarian (2003-2005).

National ACS: Councilor (1994-2005), Council Committee on Technician Activities (1991-94), Council Committee on Constitution and Bylaws (1994-2000), Council Committee on Membership Affairs (2001-05), District V Councilors Caucus Secretary (1997-2002).

Alternate Councilor

Thomas Layloff: St. Louis Section: Member of Education Committee Long Range Planning Group, 1967; General Meetings Program, Chairman, 1968; Program Committee, Chairman, 1969; Community Relations Committee, Chairman, 1970; Crime Lab Advisory Committee, Chairman, 196971;

Professional Activities Committee, Chairman, 1971; ChairmanElect, 1972; Steering Committee, Chairman, 1972; Chairman, 1973; Board of Directors, 197476, 197879, 198184; Centennial Committee, Chairman, 197576; Centennial Sunday Supplement Committee, Chairman, 197576; Nominating Committee, 1978, 1980, 1981; Midwest Award Jury Member, 198083, 19871991; Chairman, 75th Anniversary Program, 1982; Organizing Committee for the 1984 National Meeting in St. Louis, member, 198284; Alternate Councilor to the National Society, 197886, 2005; Councilor to the National Society, 19872004.

National Level: Member, Task Force on Establishing Mentoring Programs for Minorities and Women, 1996-1998; Member, Task Force on Environmental Analyst Accreditation, 1996-1999; Local Section Activities Committee, member, 198788, Associate, 1996-2004; Local Section Development Subcommittee, member, 198788; Council Policy Committee, member, 198889; Meeting and Expositions Committee, member, 199095; Chairman, Regional Meetings Subcommittee, 199091; Chairman, Expositions Subcommittee, 199295; SCICOM Task Force on Non Publication Scientific Communication, 197980.

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Nominate a Colleague for the St. Louis Award

The St. Louis Award, sponsored by the Monsanto Company, is presented to an individual who had made outstanding contributions to the profession of chemistry and demonstrated potential to further the advancement of the chemical profession. The award, consisting of a \$1,500 honorarium and a plaque, is presented at the St. Louis Award Banquet, the final event of Chemical Progress Week in April.


Please help the Awards Committee identify outstanding chemists in the St. Louis Section by submitting your nominations to the St. Louis Award Chair. The nominations should include a nominating letter, two or more seconding letters from individuals who have had a close professional affiliation with the nominee, a brief biography, a description of the nominee's accomplishments, and a list of publication and patents.


At the time of the nomination, the nominee must not have previously received the Midwest Award or any national ACS-sponsored award. The nominee must be a member or affiliate of the St. Louis Section of the ACS. The deadline for nomination packets to be received is December 10, 2005. Please send nominations and inquires to:

Dr. Joseph Ackerman
St. Louis Award Chariman
Department of Chemistry
Campus Box 1134
Washington University
1 Brookings Drive
St. Louis, MO 63130-4899
Phone: 1-314-935-6593
FAX: 1-314-935-4481
ackerman@wuchem.wustl.edu

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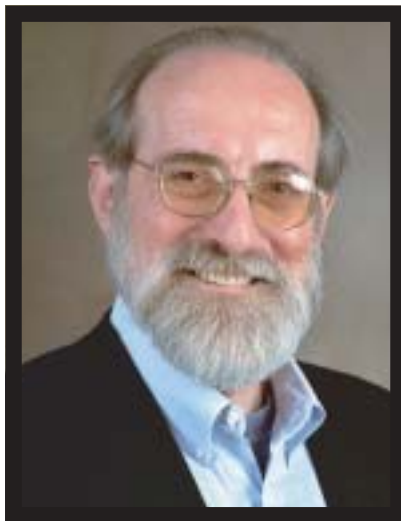
2872 Meigs Blvd., Maryland Heights, MO 63043

Midwest Award 2005

Prof. Jerry L. Atwood

Jerry Atwood, the recipient of the 2005 Midwest Regional American Chemical Society Award, was born in rural Missouri and raised on a farm. He pursued undergraduate studies in chemistry and mathematics at Southwest Missouri State University. He undertook graduate studies in chemistry at the University of Illinois, where he worked with Galen Stucky. Upon completing his doctorate degree, he took a position as assistant professor at the University of Alabama in Tuscaloosa. During the next 26 years, he rose to the rank of University Research Professor. In 1994, he returned to his home state to head the Chemistry Department at the University of Missouri in Columbia and currently holds the rank of Curators' Professor and Chair.

The discovery of liquid clathrates in 1969 led to fundamental contributions in aluminoxane chemistry and to the discovery of a method of stabilization of H_3O^+ in aromatic solutions. This work also provided the underpinnings of the current ionic liquid research. The major themes of the recent work of Prof. Atwood have involved the study of weak interactions and their use in synthesizing large molecular assemblies. In this arena, he first discovered organic clays, O-H...p hydrogen bonding involving water, the ordered water clusters, including $(\text{H}_2\text{O})_{10}$, in a supramolecular environment, the selective binding of anions within the cavities of metallated calixarenes and related hosts, and a facile method of separating fullerenes by supramolecular complexation (with



Prof. C. L. Raston). In 1997, Prof. Atwood published the discovery of a chiral spherical molecular capsule held together by 60 hydrogen bonds (with Prof. L. R. MacGillivray). They quickly generalized this work to a strategy for the design of very large, spherical molecular capsules based on the geometrical principles of Plato and Archimedes. It is now possible to prepare such large supramolecular assemblies by design from simple molecular building blocks. Another significant contribution was the description of control over supramolecular architecture, sphere or tubule, based on reagent stoichiometry. Thus, the same components may be formed into a sphere or a tubule by design. In 2002, Prof. Atwood (together with Prof. L. J. Barbour) published two studies in which a new view of porosity and the organic solid state are delineated. This work has been expanded by an *Angewandte Chemie* article published in 2004 (with Prof. Barbour).

During his career, Atwood has authored or coauthored over 600

papers, patents, reviews, chapters, and books. Almost 100 of these papers appeared in the *Journal of the American Chemical Society* and his work has appeared on the covers of both *Science* and *Angewandte Chemie*. Atwood also founded the *Journal of Inclusion Phenomena* and *Supramolecular Chemistry*. He is currently Associate Editor for *Chemical Communications*.

**CALL FOR NOMINATIONS -
ADVANCING DIVERSITY IN THE
CHEMICAL SCIENCES**

**The American Chemical Society
Committee on Minority Affairs is
pleased to announce a Call for
Nominations for the Stanley C. Israel
Regional Award For Advancing
Diversity in the Chemical Sciences**

The American Chemical Society
Committee on Minority Affairs is
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Nominations for the Stanley C. Israel
Regional Award For Advancing

Diversity in the Chemical Sciences

Nature: The award consists of a medal and a \$1,000 grant to support and further the activities for which the award was made. The award also will include funding to cover the recipient's travel expenses to the ACS regional meeting at which the award will be presented.

To Nominate: For nomination of individuals, a letter of nomination of no more than three pages and a CV or resume is required. For institutions or corporations, a brief description of the institution or organization must be included. *Send nominations to:* Committee on Minority Affairs
American Chemical Society
1155 16th Street NW
Washington, DC 20036

For information regarding the award, contact Stephanie Allen, 800/227-5558 ext. 6262, or e-mail: s_allen@acs.org.

Deadline for receipt of nominations is
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St. Louis Section Wins Again!

Finalists for 4, Winner of 1 ChemLuminary Award



Once again, the outstanding accomplishments of the St. Louis section have been recognized by national ACS. The St. Louis Section was the winner of the 2004 “Local Section Career Program (Large to Very Large) Award”. This award was bestowed for our resume databank, electronic mailing list for those seeking scientific jobs, and employer database. Additionally, the section obtained a grant to develop a career resource video.

The St. Louis Section was also a finalist for three other awards. First for the “Outstanding High School Student Program Award”, because we make science interesting and fun for students by sponsoring events like the “Battle of the Burets”. Secondly, for the “Local Section/Division Interaction Award”, for sponsoring the Midwest Award Symposium with financial support and input from the Division of Computers in Chemistry (COMP) at the Midwest Regional Meeting, October 20-22, 2004. We were also a finalist for the “Outstanding Performance by Local Section Large Size Category Award”, because of our topical Groups; career development workshops; programs that increased participation of students, women, and underrepresented minorities; awards to improve the public’s recognition and appreciation of chemistry; and educational activities for students and all chemists.

Congratulations to all section members, who helped contribute to these achievements!

The St. Louis Section of the American
Chemical Society and the St. Louis
Community College at Florissant Valley
are pleased to announce the 2005:



Battle of the Burets

This contest, for high school chemistry students, will match teams from local high schools against one another in a test of titration speed and accuracy. Teams will be run in preliminary rounds with the winner of each round will advance to the championship. Trophies will be awarded to the preliminary round winners and the winning school.

The contest will be held **Wednesday, October 26th** on the Florissant Valley Campus of the St. Louis Community College. Come join us for a few hours of not too serious competition as we celebrate National Chemistry Week using one of the most basic techniques of analytical chemistry.

For more information on how to enter a team from your high school contact:

Bruce Ritts
314-290-4744
bruce_rittts@steris.com

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