

# Chemical Bond

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Number 7  
October, 2009

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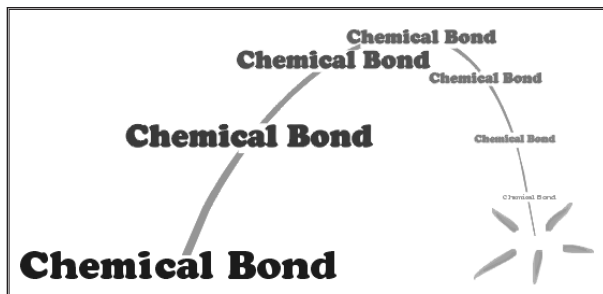
St. Louis Section, American Chemical Society

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*Dr. Richard C. Larock  
Iowa State University  
2009 Midwest Award Winner*

We're all sorry to see it go. But with great expectations for the coming changes, we announce the end of the print edition of the *Chemical Bond*. The December issue will be the last one to be printed and mailed to all members of the Section.



Precipitated by the inability to find a new full-time editor to solicit stories, edit copy, and lay it all out in a desktop publishing program, the new web-only version offers several very significant advantages to its readers and to the Section:

- **More timely content.** The print edition went to press about the 8th of each preceding month. The web edition will be able to accept new items and updates until the day before publication.
- **Searchable archive.** Our website search engine doesn't index pdf files, so archived print editions are not searchable. The web*Bond* is all html, so is fully searchable.
- **From black-and-white to Green.** Saves 12–20 reams of paper every issue, plus the ink and energy for printing, the fossil fuel for delivery, and the landfill volume for eventual disposal.
- **Big budget boost.** Even with advertising, the printed *Bond* was never self-sufficient, accepting a \$2,500 subsidy from the general fund every year. The web*Bond* will still generate some ad revenue, but will cost almost nothing to produce. That will mean more money every year for outreach, member programs, and awards.

No matter what your level of web-savvy, you will not be left out when the transition happens.

- If you would like to receive an email each month when the web edition is posted, you will be able to **subscribe to a list server**.
- If you don't have a computer at home, remember that most **public libraries** offer **free internet** access.
- If you have neither the will nor the way to access the web edition, you may **request** that the web*Bond* be **printed and mailed** to you each month at no charge. It won't be as pretty as the booklet format you're used to, but it will provide all the information you need to keep up with Section news and activities.

More details on your options next month....

# Chemical Bond

Volume 60

No. 7

October, 2009

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# Meeting & Seminars

## Board of Directors

St. Louis Section-ACS Board of Directors meets the second Thursday of each month, usually 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 vote on questions put to the Board; others in attendance have voice but no vote.

If you want to attend for dinner, please contact Bill Doub (william.doub@fda.hhs.gov or 314.651.7514) at least a week in advance. Usual cost of the dinner is \$20; unemployed officers and chairs of major committees \$10. Members wishing to become active in section activities are welcomed for their first dinner as guests of the section.

**Date:** Oct 8

**Social hour:** 5:30 pm

**Dinner:** 6:30 pm

**Business meeting:** 7:15 pm

**Future Meetings:** Nov 12,  
Dec 10 (Continuity Dinner)

## Saint Louis University

Seminars start at 12 noon in Room 12 Monsanto Hall, except as noted. For more information, contact the Chemistry Department, 314.977.2850.

October 2

**Dr. Oliver Steinbock**

Florida State University

*Systems Chemistry: How Reactions Shape the Macroscopic World*

October 9

**Dr. Ryszard Jankowiak**

Kansas State University

TBA

October 16

**Dr. Timothy L. Stemmler**

Wayne State University

*Frataxin-Mediated Iron Delivery during Mitochondrial Iron-Sulfur Cluster Biosynthesis*

October 30

**Dr. Eike Bauer**

University of Missouri-St Louis

TBA

## Univ of Missouri-St Louis

Mondays at 4 pm in 451 Benton Hall, unless otherwise specified. Refreshments 15 minutes prior to seminar time. For more information, contact the Chemistry Department, 314.516.5311.

October 5

**Ryan McCulla**

Saint Louis University

TBA

October 12

**R. Scott Martin**

TBA

October 19

**Craig A. Grapperhaus**

University of Louisville

*Substrate Binding & Oxygenation Studies of Iron Dithiolates as Models of Nitrile Hydratase*

October 26

**Joe Barchi**

National Cancer Institute

TBA

## Washington University

Seminars are in McMillen 311 at 4 pm unless otherwise noted. For information, contact Lev Gelb, gelb@wustl.edu. At press time, all topics were TBA.

October 1

**Arthur G. Suits**

Wayne State University

October 8

**James Kempf**

Rensselaer Polytechnic Institute

October 15

**Edward Wong**

University of New Hampshire

October 22

**Igor Kaltashov**

Univ. of Massachusetts-Amherst

October 29

**Malika Jeffries-El**

Univ. of Massachusetts-Amherst

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## National Chemistry Week Events October 18–24 . . . It's Elemental

"It's Elemental" is this year's theme for National Chemistry Week, October 18-24, 2009.

So far, we know about the following events in and around NCW. If you know of any other elemental festivities and you would like them immortalized on the Section website, please email [webmaster@stlacs.org](mailto:webmaster@stlacs.org) and [gwall37@msn.com](mailto:gwall37@msn.com).

**Mole Day:** at 6:02 on October 23. Controversy swirls around AM or PM; we prefer to let you decide. This event is actually Mole Minute, but you can celebrate—any way you feel is appropriate—all day long. One appropriate activity is to pause and recognize the 140th birthday of Dmitri Mendeleev's periodic table, every chemist's favorite poster art.

**Industry Expo:** October 24, 10am–4pm. Saint Louis Science Center at the Dinosaur Overlook, and possible overflow to the Human Adventure Spline on the 1st Floor. For holding an event, to reserve your spot as an academic or industrial participant, or just to volunteer, contact Greg Wall at 314.435.6487 or [gwall37@msn.com](mailto:gwall37@msn.com).

**Boy Scout Chemistry Merit Badge Clinic:** November 7 at SIU–Edwardsville for Illinois scouts. Preregistration by October 30 is required and spaces are limited. To preregister, or if you are an ACS member and want to help, contact Eric Voss at 618.650.2099 or [evoss@siue.edu](mailto:evoss@siue.edu). This event is sponsored by the St. Louis Section–ACS and Southern Illinois University–Edwardsville.



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## Decision 2009

The annual election of St Louis Section-ACS officers doesn't usually offer the high drama and history-changing potential of our national elections. Indeed, positions are often uncontested, and voters comprise only a few percent of the eligible membership. Nevertheless, it's worth making your voice heard, if only as support for the hard-working members that keep the section humming and active in its many programs.

This year's election offers historic potential. With our newly amended bylaws permitting electronic balloting, this could be the section's last old-fashioned all-paper election. Join the fun with your own hanging chad. Use the ballot and envelopes bound into this issue.

Candidates for elective office:

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### Chair-Elect

**Jeffrey Cornelius**, Professor of Chemistry and Chair, Principia College.

Saint Louis Section: Education Committee Chair (2001-2006); Undergraduate Research Symposium Chair (2000, 2004); Secretary (2007-present).

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### Secretary

**Pat Burrell-Standley**, physical chemistry, primarily polymer physics, at Amoco Research Center and Chemir. Retired.

St Louis Section: Science Fair subcommittee (1996-2002); Awards Committee Chair (2005-09).

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### Treasurer

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**Theodore C Gast**, professionally affiliated with the Carl F. Gast Company, Arch Paper LLC and Souldard Artist's Guild

Saint Louis Section activities include: Chair succession (2004-06; Best Local Section 2005, large category); hosted ACS president Bill Carroll on whirlwind tour and chemical round table; the development and promotion of Kids & Chemistry since its inception in 1996; Science Fair Judge for the past several years; liaison for TIE (Teachers Industry and Environment), SAS (Society for Applied

Spectroscopy) and AIChE (American Institute of Chemical Engineers). Ted has been more recently involved in fundraising activities for the Section through the American Chemistry Council (November 2002-present) and nominations committee. He is currently the treasurer of the St. Louis Section.

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### Councilors (vote for up to two)

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**Lisa Balbes**, Balbes Consultants, freelance scientific communication consultant.

ACS National: Committee on Economic and Professional Affairs (CEPA) (2007-present); CEPA Professional Program Development Subcommittee Chair (2008-pres-

ent); CEPA Subcommittee on Standards and Ethics (2008-present); Career Management and Development national presenter (2002-present)

Saint Louis Section: Treasurer (2005-06); WebMaven (1996-2004); Director (2000); News Media Coordinator (2000-01); Midwest Regional Meeting Exhibit Chair (2011); Councilor (2007-present); Career Resources coordinator (2003-present); Chair succession (2001-03).

Regional: Professional Relations Division newsletter editor (2007-present); Professional Relations Division Executive Committee member-at-large (2008-present); Career Committee, CINF Division Chair (2006-08); WebMaven, COMP Division (2000-08).

**Alexa Serfis**, Professor of Chemistry and Associate Dean for Student Affairs, Graduate School, Saint Louis University.

Saint Louis Section: Councilor (2009); Director (2007-08); Fundraising Committee (2007-08); Chair, succession (2005-07).

Candidate's summary state-

ment: I have also been involved with the Scouting programs for boys and girls, including securing ACS grant funding. I have participated for many years in outreach activities related to National Chemistry Week, and organized the events at the Science Center twice. I have involved college students from area schools in the Section, and St. Louis Section won a National Award for Student Affiliate Interaction with the Section during my tenure as Chair. I have attended workshops sponsored by ACS on leadership and peer mentoring in Washington, DC.

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### Alternate Councilor

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**Ben Outlaw**, organic synthesis chemist, Petrolite Corporation, retired.

Saint Louis Section: Associate Photography Editor, *Chemical Bond* (1974); Photography Editor, *Chemical Bond* (1975-1976); Associate Editor, *Chemical Bond* (1977); Editor, *Chemical Bond* (1978); Business

See **Candidates** on page 12



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## 2009 Midwest Award Richard C. Larock Iowa State University

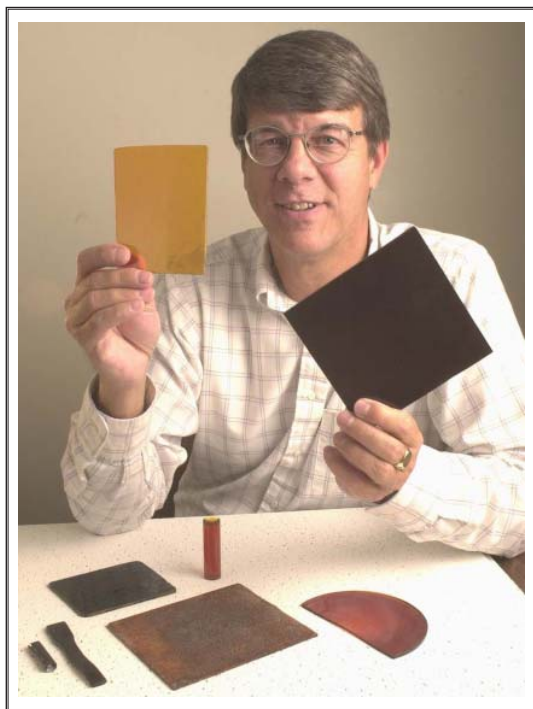
Richard C. Larock is Distinguished Professor of Chemistry at Iowa State University. He received his BS degree *summa cum laude* in 1967 from the University of California–Davis and his PhD from Purdue University in 1972, under the direction of Professor Herbert C Brown, the 1979 Nobel Laureate in Chemistry. In 1971, he was an NSF Postdoctoral Fellow at Harvard University under Professor E J Corey, the 1990 Nobel Laureate in Chemistry. In 1972, he joined the Chemistry Department of Iowa State University, where he rose through the ranks, to University Professor in 1999 and Distinguished Professor in 2007.

Professor Larock is a pioneer in the use of palladium catalysts in organic synthesis, particularly in the synthesis of carbocycles and heterocycles. Dr. Larock has also discovered a remarkable range of novel rubber, adhesive, coating, elastomeric and plastic materials and biocomposites made from natural oils.

Professor Larock has given over 420 research presentations and published about 350 articles, 32 patents, and 4 books. The books include two on applications of organomercury compounds in organic synthesis and two editions

of the best selling classic, *Comprehensive Organic Transformations*.

Dr Larock's contributions have earned several major awards, including an Alfred P. Sloan Foundation Fellowship, a DuPont Young Faculty Scholar Award, two Merck Academic Development Awards, the Iowa Regent's Award for Faculty Excellence, the Edward Leete Award of the American Chemical Society, the Paul Rylander Award of the Organic Reactions Catalysis Society, and an American Chemical Society Arthur C. Cope Senior Scholar Award.



Dr Larock with samples of bioplastics prepared from soybean oil

## Is there a HSCToY out there?

As a chemist, you know a fantastic high school teacher when you see one, and you can nominate for High School Chemistry Teacher of the Year awards.

Has your high school student had an exceptional chemistry teacher? Have you met a great high school chemistry teacher through outreach or science fair activities? Consider nominating a teacher for the 2009-2010 High School Teaching Award.

While exemplifying excellence in teaching chemistry at the high school level, the nominee also should have contributed to other aspects of teaching, such as professional growth, curriculum development, course materials preparation, workshop participation,

chemical or educational research, publications and other activities. Candidates must work within the geographic region of the St Louis Section–ACS and may not not be a past winner of the award.

Please contact Virginia Kirwin to obtain nomination forms and to verify eligibility: vkirwin@att.net or 636.225.5513. Nominations are due by November 25.

## Brain Buster

Last month's Brain Buster asked you to find the chemical compound, essential to all life, that is concealed in

HIJKLMNO

The answer would, of course, be water, H<sub>2</sub>O, H to O. Got it?



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## Candidates from page 9

Manager, *Chemical Bond* (1979–82); St. Louis Award Committee Chair (1982); Treasurer (1983–1985); Professional Activities Committee Chair (1986); Chair succession (1987–89); Director (1989–1991, 1994–1997); Investment Committee (1990–1992); Publicity and Public Relations Chair (1992–1994); Alternate Councilor (1993–1995); Nominating Committee Chair (1995); Fundraising subcommittee (2008–2009).

Greater Houston Section: Director (1999); Chair succession (2000–02); Alternate Councilor (2003); Councilor (2004, 2006–08).

ACS National: Local Section Activities Committee (2007–2008).

## Directors (vote for up to three)

**Samir El-Antably**, Founder and President, Camela Medical Equipment Company.

Saint Louis Section: Chair of several committees; Director; Alternate Councilor; Chair succession (1981–83); Distinguished Service Award (1996).

**Eric Ressler**, Technical Information Specialist, Sigma-Aldrich Corporation.

Saint Louis Section: Editor, *Chemical Bond* (1995–2003, 2009); Director (2003–04, 2006–09); Webmaster (2004–present); Salute to Excellence (2003); Distinguished Service Award (2009).

**Keith Stine**, Professor of Chemistry and Biochemistry, University of Missouri–St. Louis.

Saint Louis Section: Chair succession (2007–09); Secretary

(2002–06); Director (2001); Alternate Councilor (1997–99); Career Day co-organizer (2001–09); Program Chair, 35th ACS Midwest Regional Meeting (2000); Program Chair, 46th ACS Midwest Regional Meeting (2011); Younger Chemists Committee Advisor (2008–09); Fundraising subcommittee chair (2008–09); Surface Science Discussion Group Chair (1993–99); Materials Chemistry Discussion Group Chair (2000); Saint Louis Award Chair (1998–2000); Midwest Award Chair (1993).

## Award erratum

Last month, we headlined,

St Louis Award 2009  
Dr Christopher D Spilling  
Saint Louis University

While Saint Louis University and the University of Missouri–Saint Louis are both fine institutions of higher learning, they are not the same. Dr Spilling is affiliated with UMSL, as mentioned in the body of the story, not SLU, as in the headline.

## St Louis Award Symposium and Banquet

honoring the 2009 recipient

**Dr Christopher D Spilling**

Professor of Chemistry and Biochemistry  
University of Missouri–St. Louis

Friday October 16, Room B451, Benton Hall  
University of Missouri–St. Louis

2:00 **Dr William Doub**, Chair, St. Louis Section: Welcome and general introductions

2:05 **Dr Keith J Stine**, UM–St. Louis: Introduction of Dr Spilling

2:10 **Dr Christopher D Spilling**: General remarks

2:15 **Dr Paul R Hanson**, Department of Chemistry, University of Kansas: *Multivalent activation in cyclic phosphates: application in natural product synthesis*

3:00 **Dr David F Wiemer**, Department of Chemistry, University of Iowa: *Synthesis of schweinfurthins and related natural products via cascade cyclizations*

3:45 Refreshment Break

4:15 **Dr William Donaldson**, Department of Chemistry, Marquette University: *Synthetic applications of organo-iron complexes: strategy and serendipity*

5:15–6:30. Reception in the Center for NanoScience, adjacent to the symposium room

Parking for the Symposium is available in the West Drive Garage.

West Drive is off Natural Bridge Road.

You are cordially invited to attend the

## 2009 Saint Louis Award Banquet

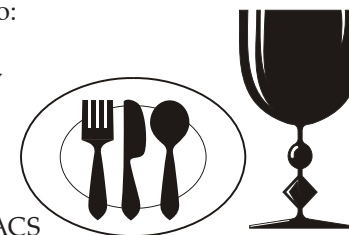
Saturday, October 17, 2009

at Kemoll's, One University Square, St Louis, Missouri 63102

6:00 pm Cocktails, 7:00 pm Banquet, 8:00 pm Program

Please send reservations by October 12th to:

Keith J. Stine  
Department of Chemistry and Biochemistry  
One University Boulevard  
University of Missouri–St Louis  
Saint Louis, MO 63121  
(314) 516-5346 or e-mail [kstine@umsl.edu](mailto:kstine@umsl.edu)



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Name(s) \_\_\_\_\_

Number attending \_\_\_\_\_ × \$55 each = amount remitted \$ \_\_\_\_\_

## Saint Louis Younger Chemists Committee wins ChemLuminary Award

Congratulate the Younger Chemists Committee (YCC) of the Saint Louis Section for a job well done. They received a coveted ChemLuminary Award as the Outstanding New Local Section Younger Chemists Committee, August 18 at the ACS national meeting in Washington, DC.

The gala event (resembling Academy Awards with chemists, so nobody was particularly photogenic) took place in a giant ballroom at the Capital Hilton Hotel. The reception, with great food and an open bar, drew a crowd of at least a few hundred people. Posters were up from all the local sections nominated for awards so guests could learn of ACS local section activities across the country.

The award presentations by ACS President Thomas Lane and major ACS committee chairs was filmed by the ACS. The Saint Louis section had its own table with Councilors Lisa Balbes, Lol Barton, Alexa Serfis, and Donna Friedman

all present, along with 2009 Chair Bill Doub, immediate past chair Keith Stine, and YCC chairs Arindam Roy and Eric Bruton.

There were over 25 award categories. At the start of the event, all that was known were the identities of the finalists for each award. Upon hearing "and the award goes to ...", Keith Stine took to the stage and had his picture taken holding it, but he had to hand it back on his way off the stage. No worry though: the award was shipped by UPS and joins the collection of awards won by the Saint Louis Section over the years.

If you have an interest in issues and events of concern to younger chemists (loosely defined as under 40), please contact Arindam Roy (royarind@yahoo.com) or Eric Bruton (eric.bruton@gmail.com) for information. To see our YCC and read about its recent activities, check the Local Section YCC web page at <http://www.stlacs.org/ycc/index.html>.



YCC Advisor Keith Stine and YCC Chair Arindam Roy in front of our Section activities poster.



A sampling of our Section's representation at the Washington meeting: (l to r) Immediate Past Chair Keith Stine, YCC Chair Arindam Roy, Chair Bill Doub, Councilor Lisa Balbes, YCC Co-chair Eric Bruton.



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