



Chemical Bond

**Volume 55
Number 4
April 2004**

St. Louis Section, American Chemical Society



Douglas F. Covey
2004 St. Louis Award
Winner

The SIUE Department of Chemistry and the
Chemistry Club announce the
28th Annual William J. Probst Memorial Lecture

Dr. Bassam Z. Shakhashiri

William T. Evjue Distinguished Chair for the Wisconsin Idea
& Professor of Chemistry University of Wisconsin – Madison

Both talks now on the same day



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**Thursday, April 15,
2004**

**7:00 pm Meridian Ballroom
Morris University Center**

Spectacular demonstrations will be used to show how science can be communicated to all segments of our society. Students, faculty, and all members of the community are invited. Come learn about combustion, exploding balloons, floating soap bubbles, polymers, and other spectacular scientific phenomena. You will sit at the edge of your seat and will see science in action.

Additional Probst Lecture Events Include:

“The Joy of Learning and Exortations for Good Teaching”

Bassam Z. Shakhashiri
Wednesday, April 14, 2004
4 p.m., Science Building 3114

Student Research Symposium

Thursday, April 15, 2004
2 p.m. Meridian Ballroom,
Morris University Center

Funded in Part By: The College of Arts and Sciences, The Graduate School, The Department of Chemistry, and Student Activities Fees

For further information contact the SIUE Department of Chemistry
at (618) 650-2042

Chemical Bond

Volume 55

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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: April 8

Social hour: 5:30 pm

Dinner: 6:30 pm

Business meeting: 7:15 pm

Future meetings: May 13

St. Louis NMR Discussion Group

The St. Louis NMR Discussion Group will feature the following speaker at 4:00 pm in Room 241 Compton Hall (Physics Dept.) at Washington University.

April 27

G. Allan Johnson
Duke Medical Center
Center for *in vivo* MR
Microscopy

For more information contact: Mark Conradi 935-6292 or 935-6418.

St. Louis University

Seminars start at 3:30 pm in Room 204 Macelwane Hall, unless noted otherwise. Refreshments follow. For more information, contact Steven Buckner, buckners@slu.edu.

April 16

Prof. Richard Loomis
Washington University
*Characterizing the Inter-
molecular Potential Energy
Surfaces that Dominate
Dynamics at Very Low
Temperatures*

April 23

Prof. Shelley Minteer
St. Louis University
*Development of a High Power
Density Ethanol/Oxygen
Biofuel Cell*

April 30

Prof. Gregory S. Yablonsky
Washington University
*Temoral Analysis of Products:
Theory and Application*

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)

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Hobble the Hubble?

by Jack Bornmann

In another publication I suggested that the Hubble Space Telescope should be renamed the Hubble Space Telescope (HST) because NASA administration decided not to send a space shuttle to repair the telescope. Soon the telescope will need new batteries and gyroscopes. NASA was going to simply let the Hubble Space Telescope descend out of orbit and crash someplace on the surface of the earth. Since the surface of the earth is about 2/3 oceans, there would be only a 1 in 3 chance that the telescope would fall on land and an even smaller probability that something of value (like a person) would get hit. The HST has done a marvelous job of bringing us pictures of deep space with great clarity and detail. It would be a shame to lose this telescope as a result of failure to make simple repairs.

Letters & More

NASA said its concern for the safety of a shuttle crew was what brought about the decision. But earlier news reports said it was really money behind the decision. George W. Bush announced that NASA would be given the responsibility to set up a base on the moon and to send humans to Mars (and back). Since the federal budget is strained, NASA would have to cut back on current projects in order to fund these two new projects. The decision to cut back on shuttle flights (and the possibility of another tragedy) was made. To reduce the number of shuttle flights

NASA leaders decided to scrap shuttle trips to Hubble and perhaps cut back on trips to the International Space Station (ISS).

In Sharon Begley's column, "Science Journal" on page B1 of the Wall Street Journal, Friday, February 20, 2004 she quoted Robert Zubrin, an aeronautical engineer and President of the Mars Society. Dr. Zubrin has used NASA's own data to calculate the risks of sending a space shuttle either to the International Space Station or to the Hubble Space Telescope. The chance of a collision with a micrometeor or with space debris while in a flight to the ISS is 1 in 250, while the risk of the same collision in a flight to the Hubble Telescope is 1 in 414. In this regard, it is less risky to go to Hubble than to the ISS.

Also, since Hubble bound missions carry less payload, they need less fuel and that means less weight at takeoff. With greater acceleration their flight time to the target is less than to the ISS. That makes it safer according to Dr. Zubrin. He has also calculated burn times needed if a flight must be aborted during launch. An ISS mission requires 282 seconds of burn of all three main engines to reach a parking orbit, called the abort-to-orbit. The burn time for abort-to-orbit takes only 188 seconds for a mission to Hubble. In an emergency every second counts and every additional second means increased opportunity for disaster.

Begley reports other calculations that show missions to Hubble are safer than missions to the International Space Station. With data like these I hope NASA administration will rethink its decision to hobble the Hubble Space Telescope.

**Synthetic Organic
Chemistry (SOC)
Discussion Group**

The Synthetic Organic Chemistry (SOC) discussion group will hold its fourth meeting of the year on:

Wednesday, April 21

St. Louis University
Lee Lecture Hall 1 (LH1)
(lower level lecture halls,
just next to Chem. Dept.)

and will also be very pleased to host the following speaker on that evening:

Dr. Bruce C. Hamper

Pfizer Corporation
St. Louis, MO

*Parallel Synthesis of
Targeted Heterocycles
for Drug Discovery*

Please convene for refreshments at 5:30 pm, general remarks and comments/suggestions from the participants will start at 6 pm, and the presentation will follow. Parking will be available at the Olive Parking Garage, corner of Olive Blvd. and N. Compton Ave. The lower level lecture halls and Chem. Dept. are located just behind the soccer stadium. If you need directions, contact Olivier Nicaise at 977-2853 or nicaiseo@slu.edu.

If you are interested in participating, and some additional activities of the SOC discussion group, or at best would like to make a presentation at a future meeting, then please contact one of the organizers listed below: Prof. Olivier Nicaise
St. Louis University
(314) 977-2853

Prof. Kevin Moeller
Washington University
(314) 935-4270
moeller@wuchem.wustl.edu

**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. (www.umsl.edu/chemistry)

April 5

Stephen Hanessian

Univ. of Montreal
*Incentives toward New
Methodology through Natural
Product Synthesis*

April 12

Ravindra K. Pandey

Roswell Park Cancer Institute
TBA

April 19

Mark McMills

Ohio University
*Metallo-carbenoids: One
Intermediate, Several
Synthetic Outcomes*

April 26

James Rigby

Wayne State University
*Novel Cycloaddition Strategies
for Natural Product Synthesis*

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CAREER CORNER...

Did you know... the local ACS section has career development video tapes, produced by ACS, available for loan to any section member? The following titles are currently available:

Essence of a Winning Interview
Career Transitions: Catalyst for Change

Formula for Success
- Turn Job Leads into Gold
Developing the Right Picture
- Resume Preparation

To borrow one (or more!) contact Lisa at lisa@balbes.com or 314/966-5298.

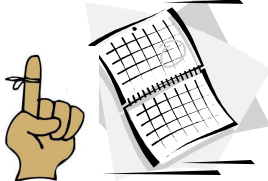
Save the date!

Career Development Workshop Series will continue on **May 4** with **“Careers in Teaching”**

presented by Professor Hal Harris. Join us on Tuesday evening as we talk about ways to further your career by furthering the education of young minds. Networking begins at 6:00pm, talk will start at 6:30pm in 451 Benton Hall, UMSL campus.

Check the web site at <http://www.umsl.edu/~acs>

DATES



TO REMEMBER

May 4 - Career Development Workshop Seminar
“Careers in Teaching”

May 4, 5 - St. Louis Public Schools Career Awareness Fair

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Marcus Award to be Held at SLU

The 2004 Leopold Marcus Award competition will be held Wednesday, April 14 at 4:00 p.m. in Lee Hall (Lecture Hall 1) on the campus of St. Louis University. It is administered by the Department of Chemistry at SLU and the St. Louis Section of the American Chemical Society. The competition consists of presentations based on the undergraduate research projects of senior chemistry majors at St. Louis University. The winner of the award is determined by vote of the professional chemists in the audience. All ACS members are invited to attend. Refreshments will be available after the competition. For further information, contact Bruce Kowert at (314) 977-2837 or kowertba@slu.edu.

Chemical Progress Week: April 19-24, 2004 Schedule of Events

Monday, April 19, **Awards Night**

Kemoll's Restaurant - \$20/person, 5:30 pm social hour,
6:30 pm dinner, 7:30 pm Program
contact: Bijan Khazai (314) 497-8629 bkhazai@sentortech.com

Tuesday, April 20, **ADACIOM Luncheon**

contact: Bijan Khazai (314) 497-8629 bkhazai@sentortech.com

Friday, April 23, **Chemistry Career Day**

9:00 am to 12:00 pm - Benton Hall, UM-SL
contact: Jim O'Brien or Keith Stine at (314) 516-5311

Friday, April 23, **St. Louis Award Symposium**

1:00 - 5:00 pm, Cori Auditorium, McDonnell Science Bldg., WashU
contact: George Gokel (314) 362-9297 or ggokel@molecool.wustl.edu

Saturday, April 24, **St. Louis Award Banquet**

Kemoll's Restaurant - \$30/person, 6:00 pm cocktails, 7:00 pm Banquet,
8:00 pm Program; Reservations to Samir El Antably, P.O. Box 50168,
Clayton, MO 63105. Questions call (314) 664-5522

Science Fair Call for Judges

The 2004 Science Fair season is now wrapping up the the largest Science Fair of all: the Monsanto/St. Louis Post-Dispatch Greater St. Louis Science Fair. More volunteers from the ACS St. Louis Section are needed as judges to evaluate chemistry projects for special awards. Judging of secondary (middle and high school) projects will be on Friday, April 16th, 5:15 pm at Greensfelder Pavilion at Queeny Park. Dinner will be provided, starting at 4:30.

Interested in being involved, but not available on the 16th? We will be distributing participation ribbons to chemistry-related Elementary-level projects on Monday, April 12. This event is also at the Greensfelder Pavilion at Queeny Park. Again, dinner is provided at 4:30 pm with distribution afterwards.

Interested in judging? Please contact David Haselbauer:

phone: (314) 918-1062

email: djhase@swbell.net

2004 High School Chemistry Contest Award Winners

REGULAR DIVISION

- 1st) Robert P. Pasque: St. Louis Priory School, James T. Dodds
2nd) Andrew S. Hoekzema: Westminster Christian Acad., Cathy Jones
3rd) Max H. Altman: Clayton High School, Michael Howe
4th) Laura C. Wang: John Burroughs School, Mary Harris
5th) Nathan C. Strauss: John Burroughs School, Mary Harris
HM) Theodore Gast: St. Louis Priory School, James T. Dodds
HM) James J. Lee: Parkway Central High School, Mark Schuermann
HM) Hao Ding: John Burroughs School, Mary Harris
HM) Joshua D. Holzhausen: Westminster Christian Acad., Cathy Jones
HM) Amanda F. Springer: John Burroughs School, Sandra Mueller
HM) Ariel Franks: John Burroughs School, Sandra Mueller
HM) Elad Gross: Clayton High School, Michael Howe
HM) Elizabeth C. McKinney: John Burroughs School, Mary Harris
HM) Bennett D. Meier: John Burroughs School, Mary Harris
HM) Joseph Mello: Clayton High School, Michael Howe

ADVANCED DIVISION

- 1st) KYLE A. BEAUCHAMP: St. Louis Priory School, Joseph Gleich
2nd) INTELLY S. LEE: Parkway Central High School, Mark Schuermann
3rd) BENJAMIN M. STORMO: Clayton High School, Nathan Peck
4th) JERRY K. NGUYEN: St. Louis Priory School, Joseph Gleich
5th) ANTU XIE: Clayton High School, Nathan Peck
HM) JASON LOGAN: Kirkwood High School, Robert Becker
HM) Ningning Ma: Clayton High School, Nathan Peck
HM) Greg U. Lipstein: Clayton High School, Nathan Peck
HM) ADAM M. STOOKE: O'Fallon Township HS Illinois, Ken Gattung
HM) Edward X. Dong: Clayton High School, Nathan Peck
HM) ALEX SPEKTOR: Parkway Central High Sch., Mark Schuermann
HM) Karen A. Blaha: Parkway Central High School, Mark Schuermann
HM) Daniel D. Kordonowy: Clayton High School, Nathan Peck
HM) Claire Saffitz: Clayton High School, Nathan Peck
HM) PARKER A. SEIDEL: John Burroughs School, Sandra Mueller

*HM: honorable mention

**Names of qualifiers for the National Chemistry Olympiad exam are in capital letters. No more than two students may qualify from one school. (Student: School, Teacher)

Copyrights & Copywrongs: What a “Fair Use” Exclusion Is and What It Is Not.

Sadiq Shah

Office of Technology Transfer
Western Illinois University

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Stay tuned for more on these topics and associated ownership rights in future Chemical Bond issues.



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Douglas F. Covey

2004 St. Louis Award Winner

Douglas Covey was born, raised and educated in Baltimore, Maryland. He received a B.S. in chemistry from Loyola College in Maryland in 1967 and a Ph.D. in chemistry, under the mentorship of Alex Nickon, from Johns Hopkins University in 1973. In 1974, he started three years of postdoctoral study with Cecil H. Robinson in what was then the Department of Pharmacology and Experimental Therapeutics at Johns Hopkins School of Medicine. This postdoctoral experience provided his first exposure to research at the chemistry biology interface and demonstrated to him the unique contributions that a chemist can make in a medical school environment. He accepted an appointment as an assistant professor of pharmacology at Washington University School of Medicine in 1977, was promoted to associate professor in 1983 and has been a professor in the Department of Molecular Biology and Pharmacology since 1990.

Dr. Covey's early work was in the area of mechanism-based inhibitors of steroid hormone

biosynthesis. He was able to develop strategies for inhibition of steroid oxidoreductases and was a pioneer in the development of aromatase inhibitors for the treatment of breast cancer. His current research involves structure-activity studies of anesthetic steroids and the development of ent-steroids, unnatural enantiomers of



naturally occurring steroids, as new pharmacological probes for distinguishing between steroid effects on membrane properties and steroid effects mediated by

binding to receptors. His research work has produced more than 160 peer reviewed original papers, 10 U.S. Patents and additional patent filings in foreign countries. In recognition of his scientific and academic achievements, he was elected in 2004 to the Johns Hopkins Society of Scholars.

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Recognition Night 2004

The 2004 St. Louis Section Recognition Night was held on Saturday, March 13 at the Glen Echo Country Club. The event was well attended by the section members, the honorees, the award recipients, as well as their spouses. During the ceremony the section recognized the society's 50 year members:



Past Presidents of the St. Louis Section of the ACS

C. William Ade
Curtis Elmer
Dr. John Fredrick Herber
David Fredric Oltman
Robert C. Riegel
Dr. Robert George Schultz
J. Warren Stump
Dr. James Teng
Norman Lewis Wilson, Jr.
Dr. Clarence Wolf

The Distinguished Service Award was presented to Dr. Greg Wall from Sigma Chemical Company, and Professor Leah



Bijan Khazai, Chair, with 2 of the 50 year members



Dr. Greg Wall receives the Distinguished Service Award.

O'Brien received the Immediate Past Chair's Award for her highly successful leadership of the section in 2003. In addition, special notes of appreciation were expressed to the society's past 50 year members, present and past section officers, past Distinguished Service Award winners, and 2004 Chair-elect, Ted Gast.

The section would like to thank Dr. Samir El-Antably and Professor Lol Barton for making the arrangements and hosting the event.

**Chemical Progress Week 2004
Join Us!
for 2 Special Evenings at**



Awards Night 2004

Date: April 19

5:30 pm Cocktails, 6:30 pm Banquet, 7:30 pm Program

Location: Kemoll's Restaurant

#1 Metropolitan Square

St. Louis, MO 63102

314/421-0555

www.kemolls.com

Cost of dinner: \$20.00 per person

St. Louis Award Banquet

Date: April 24

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

Location: Kemoll's Restaurant

#1 Metropolitan Square

St. Louis, MO 63102

314/421-0555

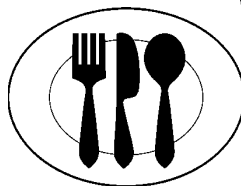
www.kemolls.com

Cost of dinner: \$30.00 per person

Please send Reservations to:

Samir El-Antably
P.O. Box 50168
Clayton, MO 63105
(314) 664-5522

Make checks payable to:
St. Louis Section - ACS
Please make your reservations
by April 16.



Awards Night Dinner Reservation

Member name _____

Number attending _____ x \$20.00 = Amount remitted \$ _____

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St. Louis Award Banquet Reservation

Member name _____

Number attending _____ x \$30.00 = Amount remitted \$ _____

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