



# Chemical Bond

Volume 53  
Number 2  
February, 2002

**St. Louis Section, American Chemical Society**



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***Dr. William R. Heineman***

Distinguished Research Professor, Department of Chemistry,  
University of Cincinnati

Monday, February 18th, 2002

**“Chemical Sensors: Why They Are Important to You”**

7:00 pm Meridian Ballroom, Morris University Center

Additional Probst Lecture Events  
Include:

Student Research Symposium  
Monday, February 18th, 2002  
2 p.m. Meridian Ballroom,  
Morris University Center

“New Concepts for Chemical Sensors”  
Dr. William R. Heineman  
Tuesday, February 19th, 2002  
9:30 a.m. Science Building  
Auditorium Room 1105

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# Meeting & Seminars

## *Dept. of Chemistry & Biochemistry at UMSL Winter 2002 Seminar Schedule*

Seminars will be held at Benton Hall in room B451 at 4:00PM. Refreshments are served at 3:45. For further information, please contact Prof. Don Becker, 314-516-7345, [chedbeck@jinx.umsll.edu](mailto:chedbeck@jinx.umsll.edu).

### **February**

- 4 Ray Bergeron
- 18 Barry Gold
- 25 Jacques Baenziger

### **March**

- 11 Andy LiWang
- 18 J. Fraser Stoddart

### **April**

- 1 Peter H. Seeberger
- 8 W. Dean Harman
- 15 Cal Y. Meyers
- 22 Peter Tipton
- 29 Susan Martinis

## *Dept. of Chemistry at Washington University Spring 2002 Seminar Schedule*

<http://wunmr.wustl.edu/Events/seminars.html>

Time: 4:00 PM

Location: 311 McMillen Hall

### **February**

- 21 Prof. Sean Casey  
University of Nevada-Reno
- 28 Prof. Scott J. Miller  
Boston College

### **March**

- 7 Prof. Neil Kelleher  
University of Illinois at  
Urbana-Champaign
- 14 Prof. Ralf Warmuth  
Kansas State University
- 18 CBI Seminar-Prof. Eric T. Kool  
Stanford University  
"Mimicking Structures and  
Functions in DNA Replication  
and Repair"
- 21 Prof. Jef de Brabander  
The University of Texas  
Southwestern Medical Center  
at Dallas
- 28 Prof. David Sherman  
University of Minnesota  
"The Chemical Biology of  
Combinatorial Biosynthesis"

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## ***Computational Chemistry Discussion Group***

Meetings will be held at:

Tripos, Inc.  
1699 South Hanley Road  
Saint Louis MO 63144

Refreshments will be served at 5.30pm,  
seminar starts at 6:00pm

Wednesday, February 20th, 2002  
"Melting points, what are they and can  
they be modeled?"

Prof. James S. Chickos  
Department of Chemistry &  
Biochemistry  
University of Missouri-Saint Louis.

For more information, contact  
Philippa Jayatilleke at  
314-647-1099 / pjayat@tripos.com.

## ***Recognition Night***

New 50-year members honored,  
presentation of the Distinguished  
Service Award, Past Chair recognition  
and address.

Come for an enjoyable evening.  
Date: March 8, 6:00 pm  
Location: Glen Echo Country Club  
3401 Lucas & Hunt Road  
Cost of dinner: \$18.50

**Please find the reservation  
form on page 11.**

For reservations, contact:

Samir El-Antably  
P.O. Box 50168  
St. Louis, MO 63105  
(314) 664-5522  
and mail check payable to  
St. Louis Section-ACS  
no later than March 10th.



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*by Jack Bornmann*

## **The Money Cycle in an Isolated System**

Last month, I wrote about my fascination with the Principle of Le Chatelier and the chemical equilibrium constant plus the application of thermodynamics to calculate the constant and its temperature dependence. I looked for other ways to apply the Principle of Le Chatelier, and I found it in economics.

I grew up in Charleston, West Virginia: the capital city, but a small city, located at the confluence of the Kanawha and the Elk Rivers and bordered on all sides by mountains. The city was relatively isolated geographically.

Occasionally barge traffic could be seen on the rivers, but no passenger boats. The railroads—the Chesapeake & Ohio (C&O) and the Baltimore & Ohio (B&O)—moved freight only. Some pontoon planes landed and took off from the Kanawha River. But not until after the Second World War was there a Charleston airport. The “major” highway was US 60, a two-lane road going east and west, twisting and turning as it climbed the mountains (usually

behind a truck). Charleston was certainly isolated economically.

During the Great Depression, the little money that arrived (earned or given) was quickly spent for food, bus fare and other necessities. Money paid for bread and milk was in turn given as wages to the workers at the bakery and dairy, the bus fare to drivers and mechanics. That money in turn went to others. Around and around the money went and soon money appeared in the next pay envelope. It was an isolated system in economic equilibrium.

During the Second World War, men enlisted or were drafted into military service. Other people took their jobs, some who had never been in the workforce before. In the summers of my fourteenth and fifteenth years, I held a man’s job. People who had been out of work during the Depression were able to find work at last. A lot more money was flowing around Charleston.

But the government froze wages and prices during the war. The extra money was used to buy War Bonds and War Stamps. While the adults were buying War Bonds, we children were buying War Stamps. Once a week, schoolteachers would sell these stamps, which we bought with our allowances and money from odd jobs. We would stick the stamps in pages of a

special booklet. When our stamps totaled \$18.75, we could turn in the book of stamps for our very own War Bond. Thus we little kids could feel that our odd jobs were, in a way, part of the war effort. Economically Charleston was still a system in equilibrium.

The equilibrium was disturbed when wage and price controls were removed. Union Carbide, headquartered in New York City, raised the wages of the workers at the Carbide plant in Charleston. But a worker who found an extra \$10 in his pay envelope was in for a surprise. The system was going to offset that upset. The worker

soon found that the prices of bread and milk went up, as did the cost of bus fare to get to work. It seemed like everybody took a little nibble out of his increase in pay. He still had a net increase, but it was not as large as that original \$10.

The Principle of Le Chatelier worked when applied to the isolated economic system of Charleston, West Virginia. I wonder, is there something akin to thermodynamics that can be applied to theoretical economics? Would it be possible to use "ecodynamics" to determine an economic equilibrium constant?

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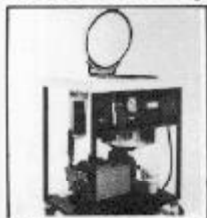
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# Bond Briefs

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## Science Fair Call for Judges

It's Science Fair season again, and time for you to encourage an understanding of good science by participating as a Science Fair judge. The ACS judges chemistry projects for special awards at regional science fairs in the area. Secondary level winners receive prizes from the section (science books and more), while all elementary participants with chemistry-related projects receive ribbons. Everyone (kids and judges) wins in other ways as well.

This year the judging times are as follows:

### **St. Charles-Lincoln County Regional Science Fair**

Monday, March 11th, 6:00 pm  
at St. Charles Community College

### **Illinois Junior Academy of Science Region 12 Science Fair**

Saturday, March 23rd, 9:30 a.m.  
at SIU-Edwardsville

### **Greater St. Louis Science Fair**

Friday, April 12th, 6:00 p. m.  
at Greensfelder Pavilion/Queeney Park

Interested in judging?

Contact Pat Burrell-Standley:  
phone: (636) 537-8745  
e-mail: standley@mvp.net

## “Plant” a Future Scientist

Project SEED is the American Chemical Society's social action program for economically disadvantaged high school students. The program places participants in academic, industrial, and government research laboratories for eight to ten weeks during the summer.

Project SEED offers high school students two exciting research opportunities.

- The Summer I program provides first-time participants (rising juniors and seniors) a fellowship award of \$1,750.
- The Summer II program provides Project SEED Summer I students with an additional summer of scientific research. These students will receive a fellowship award of \$2,000.

Additionally, Summer II students will be eligible for a travel grant of \$100 to present their research at an ACS or other scientific meeting.

Each student conducts scientific research in chemistry or a related field under the direct supervision of a scientist/mentor. The student must be economically disadvantaged and must be enrolled in high school or be a recent high school graduate.

If you or your organization is interested in mentoring a potential future scientist, the St. Louis section Project SEED coordinator can answer your questions and provide application materials.

Sadiq Shah  
Project SEED Coordinator  
Western Illinois University  
309-298-2205  
S-Shah@wiu.edu

## Marcus Award Competition Slated at SLU

The 2001 Leopold Marcus Award competition will be held Wednesday, **April 3 at 4:00 pm in Lee Hall** (Lecture Hall) on the campus of Saint Louis University.

The Leopold Marcus Award was established by the late Jack and Gertrude Marcus in memory of his father. It is administered by the Department of Chemistry at Saint Louis University 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 Saint Louis University. The candidates, chosen by the faculty, will each make a fifteen-minute presentation.

The winner of the award is determined by vote of the professional chemists in the audience. All ACS members are invited to attend and vote. Refreshments will be available after the competition.

For further information, contact Bruce Kowert at (314) 977-2837 or [kowertba@slu.edu](mailto:kowertba@slu.edu).

## Midwest Regional Award Call for Nominations

The ACS Midwest Regional Award was established in 1944 to recognize outstanding achievement in chemistry in the midwest region. The award is conferred annually by the St. Louis section on a scientist who has made

meritorious contributions to pure or applied chemistry, chemical education, and the chemistry profession.

To be eligible, a nominee must have performed the cited work while residing within the Midwest Region of the ACS. The nominee does not have to be an ACS member and does not have to reside currently within the Region.

Nominations include a nominating letter, two or more seconding letters, a curriculum vitae, a brief biography, documented and objective information regarding the outstanding achievements of the nominee, and if the nominee is an academician, a list of persons who have received advanced degrees under his or her direction. Please submit nine copies of all nomination material to:

Leah O'Brien, Chair  
Midwest Award Committee  
Department of Chemistry  
So. Illinois Univ.-Edwardsville  
Edwardsville, IL 62026-1652

Nominations must be received on or before the deadline of March 31, 2002. The 57th Midwest Regional Award will be presented at the 37th Midwest Regional Meeting in October. The ceremonies will feature the Midwest Award Lecture, a dinner honoring the medalist, and the presentation of the Award (medallion and honorarium). Contact Leah O'Brien at 618-650-3562 or [lobrien@siue.edu](mailto:lobrien@siue.edu).

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# Recognition Night Reservation Form

Member Name \_\_\_\_\_

Number attending \_\_\_\_\_ x \$18.50= \_\_\_\_\_

Amount remitted \_\_\_\_\_


Reservations must be received by March 5th.


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# Continuity 2001

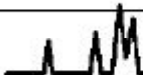
The Continuity Dinner was held at Spiro's East on December 13. About 30 members attended. The annual event centers around the ceremonial changing of the guard, wherein the retiring officers hand over their trappings of office to the incoming slate. The transfer of the chair's gavel actually marks four changes: the Immediate Past Chair becomes just one of the guys (or, this year, gals); the Chair becomes the Immediate Past Chair; the Chair-elect assumes the Chairship; and the winner of the October election becomes the new Chair-elect.

All of that was a little bit weird this year. In a transition that is usually sweet for all concerned, there was a big dollop of bitter. Sue Dudek, the outgoing Chair, could not attend and pass the gavel; just two days before, her husband had lost his life after a struggle against cancer. Shock and shared sorrow attended as Lisa Balbes broke this news to the attendees.



*Socializing before dinner in midground are (left to right) Jed White, Lol Barton, Karl Markl (back to camera), and Ray Mount.*

Lisa, standing in for Sue, chaired the business meeting. She then gave her own Chair-elect's report and read a brief message from Pauline Bellavance, the outgoing Immediate Past Chair. Finally, acting for Bill Doub (who was away on business), she gave the Treasurer's report. One could say that Lisa was not herself that night; rather, she was much more. She handled the situation with grace and as much humor as the circumstances permitted.




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At the Continuity Dinner each year, the agenda item "New Business" is highlighted by the Henry Godt Memorial Lecture. It was called that even when Henry himself gave this summing up of the section's year. With Henry gone, the outgoing Chair selects the lecturer and keeps the selection under wraps until the event.

This year, the call for that order of business had an "I've Got a Secret" feel to it. With Lisa as much in the dark as the rest of us, she asked, "Will the real Henry Godt Memorial Lecturer please (PLEASE) stand up?"



*Donna Friedman delivers the Henry Godt Memorial Lecture.*

Donna Friedman stood up and ran the year for us in fast-forward: the many successful events sponsored, the awards won, the smooth running of the section's affairs, and



*Alexa Serfis chats with 50-year member Glen Crum.*

the brief full stop everyone experienced as the world changed on September 11th.

Finally, Ray Mount was honored with the Distinguished Service Award for his many years of active involvement in section affairs. The award will be presented in a Recognition Night ceremony in March.

The weather was mild compared to last year's almost abortive snow storm. The comradeship was excellent; regular attendees got to meet and chat with some members we rarely get to see. The dinner was fine as well, thanks again to Samir El-Antably's stewardship and the staff of Spiro's. Samir provided the unusual dessert of cheese and chocolates. Almost every aspect boded well for a successful 2002.