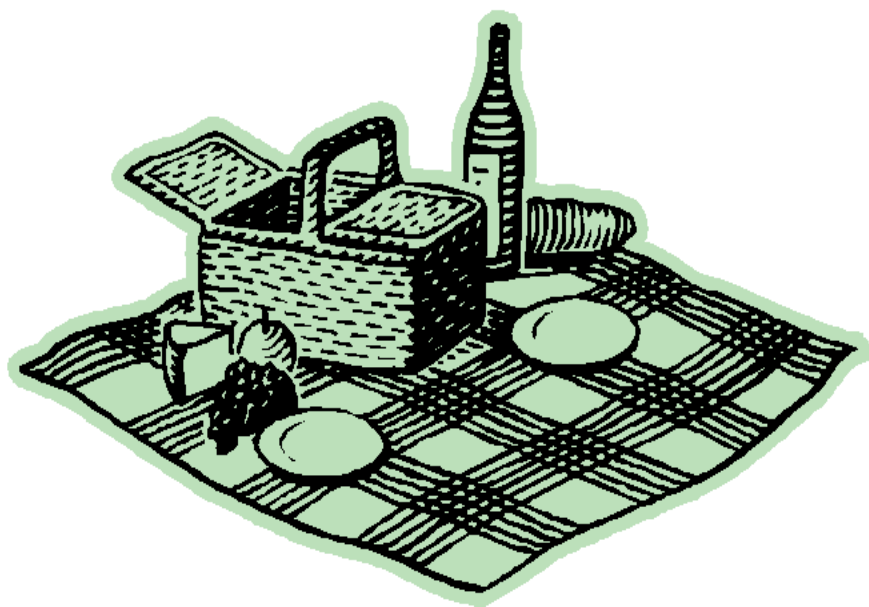




# Chemical Bond

Volume 57  
Number 5  
May 2006

St. Louis Section, American Chemical Society



Don't miss our  
**Member Picnic!**

# PICNIC

The St. Louis Section of the  
American Chemical Society

announces a

## Member Picnic

Saturday June 3, 2006

Location: Tower Grove Park\*

Time: 12:00 PM

Last year was so much fun we're doing it again!

*If you are a member of St Louis section and have never been to a section event this one is for you .*

***Do not miss this event!***

**Face Painting, Favors, Games, Balloons, Prizes**

**Section Picnic sponsored by the St. Louis Section ACS**

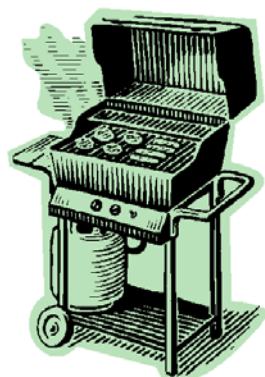
**Bring the family! Enjoy the food, friends, and Spring weather.**

**Just \$5 per person. Kids under 12 free.**

**The event will be held at the North Humboldt Shelter.**

**Questions & Reservations by May 26,  
please.**

**Contact: Ted Gast - [ted@cfgastco.com](mailto:ted@cfgastco.com)  
2 Layton Terrace  
St. Louis, MO 63124  
Phone: (314) 993-2870  
Fax: (314) 993-0496**



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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:** May 11

**Social hour:** 5:30 pm

**Dinner:** 6:30 pm

Business Meeting will start during dinner.

Future meetings: September 14

## University of Missouri- St. Louis

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

May 1

### The 19th Annual Distinguished Alumni Lecture

*Alicia M. Beatty*

Mississippi State University  
*From 'Dimethyl Tar' to Clay Mimics: a Sticky Path to Crystal Engineering*

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*from p. 6 of February 2006*

# 2006 Regional Science Fair Results

by Pat Burrell-Standley

Congratulations to the following students for winning special awards from the American Chemical Society, St. Louis Section at area science fairs this year:

## St. Charles/Lincoln County Science and Engineering Fair (3/13/06):

Grades 6-8

1<sup>st</sup> Place: Elena Baluyut, "Going With the Flow – An Experiment with Temperature and Viscosity", Grade 8, Fort Zumwalt South Middle.

2<sup>nd</sup> Place: Cassie Elam, "How Does the Temperature of a Liquid Affect its Ability to Absorb a Solid?" Grade 6, Sts. Joachim and Ann.

3<sup>rd</sup> Place: Rachel Mollison, "Crystal Growing", Grade 6, Sts. Joachim and Ann.

Grades kindergarten-6th: 72 purple participation ribbons & letters

## Illinois Junior Academy of Science Region 12 Science Fair (3/25/06):

Grades 9-12

1<sup>st</sup> Place: Jonathan Naber, "The Effect of AC Frequency of the Electrical Characteristics of a  $\text{YBa}_2\text{Cu}_3\text{O}_7$  High Temperature Superconductor", Grade 11, Waterloo Senior High School.

2<sup>nd</sup> Place: Rose Alyea, "The Effects of Heat on Actinidin", Grade 11, Alton H.S.

3<sup>rd</sup> Place: Eddie Folk, "Does the Size and Charge of an Ion Affect How Fast it Travels in an Electric Field?", Grade 9, Governor French Academy.



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Grades 7-8

1<sup>st</sup> Place: Lexi Dunnells, "Polymer Construction", Grade 8, Shiloh Middle School.

2<sup>nd</sup> Place: Morgan Dolphy, "Potential Energy", Grade 7, Whiteside Middle School.

3<sup>rd</sup> Place: Jordan Chamberlin, "Green With Envy", Grade 7, Columbia Middle School.

Grades kindergarten–6th: 64 purple participation ribbons & letters

**Greater St. Louis Science Fair (4/7/06):**

Honors Division

1<sup>st</sup> Place: Cynthia Spahn, "Studies of a Hydrogen Fuel Cell", Grade 11, Ursuline Academy.

Grades 9-12

1<sup>st</sup> Place: Sarah Knoll, "Can the Life Span of Soap Bubbles be Extended?", Grade 12, Hazelwood Central High School.

2<sup>nd</sup> Place: Peter Holly, "The Effects of Different Insulators on Temperature", Grade 9, Parkway West High School.

3<sup>rd</sup> Place: Andrew Davidson, "The Effects of Fruit and Vegetable Type on Conductivity", Grade 9, Parkway West High School.

Grades 6-8

1<sup>st</sup> Place: Maureen Mahon, "The Effects of pH on the Vibrancy of Fabric Dye", Grade 8, St Justin Martyr School.

2<sup>nd</sup> Place: Peter Hilboldt and John Szatkowski, "The Effects of Acid Rain on Plant Germination and Growth", Grade 6, Incarnate Word School.

3<sup>rd</sup> Place: Ian Cassmeyer, "The Great Vitamin C Showdown", Grade 6, Compton-Drew ILC Middle School.

Grades kindergarten–6th: 376 purple participation ribbons & letters

I would like to express my thanks to all of the ACS members who gave of their time and talents to help with the judging this year: Phyllis Bennet, Sue Dudek, David Haselbauer, Norbert Mason, Ettigounder Ponnusamy, Eric Ressler, Bruce Ritts, Marty Rhine, Alexa Serfis, Keith Stine, Vidyullata Waghulde, and Brent Znosko.

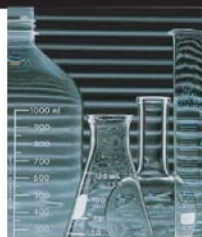
**Don't miss out  
- because of my mistake!**

SO SORRY!! If you tried to submit your e-mail address to the list before, and it was returned, PLEASE try again to the address shown below. The address was incorrectly printed in previous issues. As the editor I wish to apologise for any inconvenience this has caused. If you would like to be reminded of upcoming ACS events, subscribe to our e-mail notification list. List members will receive periodic reminders of ACS-St. Louis Section activities.

To become list member, send your e-mail address to:  
**barnoski@slu.edu**

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## 100<sup>th</sup> 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](mailto:lbarton@umsl.edu), Phone 516-5334 (O); 382-7355 (H).

## 23rd Annual Career Awareness Fair

It's finally here! The 23<sup>rd</sup> Annual Career Awareness Fair for City and County Public Schools 8<sup>th</sup> Grade Students, which will be held on May 2-3, 2006 in Halls 1 & 2 at the America's Center. This is your opportunity to help mold the lives of our future scientist. The Section has participated in over half of the Career Awareness Fairs and have been interviewed by approximately 10,000 students. It is never too early to volunteer for this program. To volunteer, contact Greg Wall by telephone at 800-325-5832 ext. 3139 or by e-mail at [gwall@sial.com](mailto:gwall@sial.com).



## **James Chickos**

### **St. Louis Award Winner 2006**

James S. Chickos was born in Buffalo, NY of Greek parents. He received a BS in chemistry at the University of Buffalo, now SUNY-Buffalo, and his doctoral degree in organic chemistry from Cornell University with Donald G. Farnum. After 2 postdoctoral fellowships, first at Princeton with Kurt Mislow and then at Wisconsin-Madison with Bob West, he joined the faculty at UM-St. Louis where he is now Professor of chemistry. He was trained as a physical organic chemist and has done all of his research in that or a related area. His complete research record is outstanding. He has about 115 publications including refereed articles, invited articles, a textbook, and a web-based text. He has lectured extensively abroad and collaborates with scientists from several countries. During his first few years at UM-St. Louis his research was in the area of cyclic unsaturated ketones, something he had gained an interest in from his graduate and postdoctoral work. Much of his earlier work was published as either single author papers or papers resulting from collaborations with UM-St. Louis colleagues, and appeared in *JACS*. His work on small ring compounds continued in the 1970s along with his interest in chiral compounds derived from the presence of deuterium.

Over the last 22 or so years, his laboratory has established an international reputation in thermochemistry, resulting in many collaborations and publications with scientists in France, Portugal, Russia, England, Spain, Israel, Japan, Italy, Germany, Switzerland, Romania, China, Mexico, and the US. He and his students and collaborators' efforts in this area have been directed in developing new and simpler instrumental methods for making thermochemical measurements and applying these techniques to specific compounds. Jim has coupled this effort with a systematic attempt to compile and critically evaluate existing thermochemical data in the area of organic thermodynamics dealing with transport properties. With participation of students enrolled in the UM-St. Louis' Chemical Literature class, a valuable collection of thermochemical information was assembled and is currently available on line at "[webbook.nist.gov/chemistry/](http://webbook.nist.gov/chemistry/)". This collection along with other databases are currently maintained by the National Institute for Standards and Technology (NIST) in Washington DC and is available free of charge.

The establishment of extensive databases has provided Jim with valuable information, which he and his students used to develop various mathematical algorithms to simulate these data. This information propelled a second research interest and resulted in the development of several valuable estimation techniques. The synergistic relationship between the database information and the estimation techniques developed has had and continues to have an impact in widely divergent areas such as in air and water pollution, pharmaceuticals, proteins, and even polymer chemistry. His work is of interest to chemists, chemical engineers, crystallographers, and physicists who need information regarding transport properties of the condensed phase. A colleague once pointed out that because of Jim's imaginative and innovative approach, he has made what appears to be a rather dull subject very interesting.

Jim has three children and lives close to the UM-St. Louis Campus in the Normandy area. He enjoys cycling, playing racquetball and keeping fit, when he is not in the office or laboratory.



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## 2006 LEOPOLD MARCUS AWARD

Anna Kinsella was named the winner of the Thirty-Sixth Annual Leopold Marcus Award competition held at Saint Louis University on April 10, 2006. Given to a senior chemistry major doing undergraduate research at Saint Louis University, the Marcus Award was established by the late Jack and Gertrude Marcus in memory of his father. It consists of a \$160 cash award and a certificate of merit. In addition to Kinsella, Cassandra Caldwell, Mark Mans, Dianne Tran, and Jennifer Fraser were finalists in the competition; their awards are \$80 and a certificate of merit. The Marcus Award is administered by the Saint Louis University Department of Chemistry and the St. Louis Section of the American Chemical Society. The winner, finalists, and other participants received their awards and citations at the Awards Night Banquet of Chemical Progress Week, held at Kemoll's Restaurant in downtown St. Louis, on April 17, 2006.

Kinsella was chosen on the basis of her presentation, "Development and Optimization of a Microchip-Based Biofuel Cell," carried out under the direction of Drs. Shelley Minter and R. Scott Martin. Caldwell's talk, "ESR Studies of a Nickel Complex in a Series of Ethers," was prepared in collaboration with Dr. Bruce Kowert. Mans, working with Dr. Michael Lewis, discussed "Cation- $\pi$  Interactions Involving Positive Quadrupole Moments." Tran, also working with Dr. Lewis, presented "A Model for Predicting Aromatic Quadrupole Moments." Fraser developed "Characterization of Langmuir Monolayers of Phospholipid and Oxysterol" under the supervision of Dr. Alexa Serfis.

Dr. Bruce Kowert was the 2006 Marcus Chair. He can be reached at 314-977-2837 or [kowertba@slu.edu](mailto:kowertba@slu.edu).

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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](mailto:susan.dudek@pfizer.com)

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