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# the Catalyst

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May 2008

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**May Speaker**  
**Madeleine Jacobs**

Chair's Column, p. 68

Review: *Spectroscopy  
in Catalysis*, p. 74

Poster Session Photos,  
p. 75

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# *the Catalyst*

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## ADVANCE NOTICE

### JUNE MEETING

#### 50-Year Member Luncheon

Catherine (Katie) Hunt, Rohm and Haas Company and Immediate Past President, American Chemical Society

Thursday, June 19<sup>th</sup>, 2008

See the June *Catalyst* for details,  
call the Section Office at 215-382-1589, email PhilaACS@aol.com

## From The Chair

**Ella L. Davis**



It is May and the year is nearly half over. So far I have found each meeting enjoyable and informative. I hope those of you who have had a chance to attend one or more of these meetings agree. If you have not had the chance to join us yet this year I hope you will consider attending one of the varied meetings that are coming up.

At our meeting this month we recognize outstanding area science teachers. This year we will be honoring a teacher in one of our area colleges for excellence in teaching undergraduate chemistry. This award is known as The Philadelphia Section ACS Award for Excellence in Undergraduate Teaching in Chemical Science. The award consists of a \$1500 honorarium and a plaque and it is to be presented to an individual who teaches at an academic institution within the geographical boundaries of the Philadelphia Section. From 2003 – 2007, this award was sponsored by Merck & Co., Inc. We are currently looking for a sponsor or sponsors for this award. If you or your corporation would like to sponsor this award in coming years, please contact me or the Section Office.

The Section also sponsors two awards for teaching excellence in pre-college grades:

✱ Philadelphia Section Award for Outstanding Teaching of Science in the Pre-High School Grades; and

✱ The Philadelphia Section Award for Outstanding Teaching of Chemistry in Grades 9-12.

Both of these awards were established in 1991 and are supported by the Philadelphia Section. They are given in recognition of outstanding work to promote science in the pre-high school grades and in grades 9-12 respectively. Each award consists of a certificate, \$250 award and a \$250 grant for

teaching support — supplies, tuition, etc. However, this year these two awards will not be presented because we received no nominations. I encourage you to examine area schools and nominate a deserving teacher next year. I am sure there are excellent teachers out there whose talents should be acknowledged!

Our speaker this month is Madeleine Jacobs, ACS Executive Director. In keeping with the theme of teaching excellence, Ms. Jacobs is scheduled to discuss the importance of teaching communication skills in the education of today's chemists. She wrote the forward for the book *ACS Style Guide: Effective Communication of Scientific Information*, 3<sup>rd</sup> ed. — the definitive resource for correct style in scientific writing. If you want a hint about what we can expect in her talk, I encourage you to check out the book and read her forward. This meeting will be an excellent opportunity to ask all of your burning questions about writing and to perhaps determine what each of us can do to improve scientific communication.

In June we are planning the traditional 50-year members' recognition luncheon. Dr. Catherine (Katie) Hunt, Rohm and Haas Company, and ACS Immediate Past President is again scheduled to honor our long-term members.

As mentioned last month, we expect a busy summer as we prepare for and participate in the ACS National Meeting coming to Philadelphia in August. Among the plans that are in the works is a special edition of *the Catalyst* that will be given out to attendees at the meeting at the hospitality booth. This special edition is intended to give the attendees an insider's feel for our beloved home town. We have received a few contributions, however, there is still room to share your exceptional Philadelphia experience with our expected guests in this special publication. Please pass along your favorite things about our area to Libby Harper in the Section Office ([philaACS@aol.com](mailto:philaACS@aol.com)) or to me ([philaacschair@aol.com](mailto:philaacschair@aol.com)). We will organize the contributions and forward them to the Publications Committee. As in

2004, we are also planning to have other small give-a-ways at our booth. If you or your employer have anything we can offer attendees at our booth, please get in touch with me. The Section will be co-sponsoring select events at the meeting and so you may see some decidedly "Philly" icons at these events. We thank all Section members who have contacted us to volunteer to help during the meeting; however, we are still looking for volunteers, so if you can help, please let us know.

Be on the lookout for other extraordinary events during the remaining months of this year. In particular the September meeting at the Victory Brewing Company is expected to be fun. Keep your eye on *the Catalyst's* announcements, this column and our local Section web site for additional forthcoming details - <http://membership.acs.org/p/philadelphia/index.html>.

As we continue through 2008, I once again invite you to personally get involved with your Section. You can participate on one of the several Section committees, participate in a Section outreach event or you can simply attend monthly meetings.

Please get in touch me if you have questions or suggestions for future events. You can send me an email at: [philaacschair@aol.com](mailto:philaacschair@aol.com). In any event, I look forward to seeing and meeting with many of you as we continue through 2008.

---

## NEWS ATOMS

ACS Project SEED college scholarships have been won by the following students in the greater Philadelphia area. **Boris Feldman** attends the University of the Sciences and worked at the Forensics Mentors Institute of the Fredric Rieders Family Renaissance Foundation in Willow Grove. **Kristine Kohler** attends West Chester University and also worked on a special project at the Forensics Mentors Institute. **Nastasia James** attends the University of Pennsylvania and worked on a special project at Rutgers University.

Additional 2008 ACS national award winners were honored at the New Orleans

meeting in April. **Magid Abou-Gharbia** of Wyeth received the Alfred Burger award in medicinal chemistry, sponsored by GlaxoSmithKline. **Michael L. Klein** of the University of Pennsylvania received the Peter Debye award in physical chemistry, sponsored by E.I. DuPont de Nemours & Co.

Winners of the Arthur C. Cope scholar awards will be honored at the Philadelphia ACS meeting in August. **Jeffrey W. Bode**, associate professor of chemistry at the University of Pennsylvania, will receive a Cope award at that time.

**Ken Aldridge**, who received a Philadelphia Section ACS excellence in teaching award in 2000, was recently named principal of Germantown Friends Middle School.

This past February, three Rohm and Haas executives presented addresses at the prestigious Charles D. Hurd lecture series at Northwestern University. **Cathie Markham** is vice president of technology and chief technology officer. **Catherine (Katie) Hunt**, immediate past president of the American Chemical Society, is leader of technology partnerships. **Cheryl Martin**, past section chair, board member and currently a section councilor, is vice president and general manager of paint and coating materials.

**Katie Hunt** was recently recognized by her alma mater with the Smith College Medal, awarded to alumnae who exemplify the work and true purpose of a liberal arts education.

## DEATHS

**William Lyon Porter**, analytical chemist, April 4, 2003 at 89. From 1941 to 1972 he was employed at the Eastern Regional Research Laboratory of USDA using analytical chemistry for developing new uses for farm products. He published 75 technical papers, authored 5 patents and portions of 2 books. After retiring he moved to Wyoming where he volunteered at the Buffalo Bill Historical Center in Cody. He was a 68-year member of ACS.

**David M. Gardner**, physical chemist formerly with Pennwalt, April 29, 2007 at 78. In the 1950s he worked for the Naval

Air Rocket Test Station in Lake Denmark, NJ, Reaction Motors, and was co-founder of the Fulton-Irgon Corp. and then the Montco Research and Development Corp. In 1960 he joined Pennwalt as a project chemist in process R&D, retiring in 1991 as research manager. In 1995 he served as a senior scientist for an archaeological expedition to northern Alaska. He was a 57-year member of ACS.

**Kathryn M. Donovan**, a 47-year member of ACS, October 21, 2007 at 71. No further details available.

**Michael J. Komar**, January 9, 2008. No further details available.

**A. Judson Wells, Jr.**, retired DuPont chemist, February 19, 2008 at 90. He joined DuPont in 1941 and retired in 1989 as director of the industrial products division of the fabrics and finishes department. After retiring he studied epidemiology with a focus on the effects of secondhand smoke. He served as a consultant to the American Lung Association, OSHA, EPA, and was vice chairman of the National Council for Clean Indoor Air.

**Richard H. Golder**, former professor at Temple University, February 17, 2008 at 85. He engaged in cancer research at the University of Pennsylvania in the early 1960s and then joined Temple University in 1964. He retired from Temple in 1987 as professor of biochemistry.

**James C. Spitsbergen**, former chemist with Witco, March 15, 2008 at 81. After retiring from Witco he ran his own consulting business for 20 years.

National ACS also reported the death of **Irving Pincus**, a 65-year member of ACS. No further details available.

### Honors

Professor **Robert Hutchins** retired after 40 years of teaching at Drexel University. A special symposium in his honor will be held Saturday, August 16<sup>th</sup> at Drexel, the day before the 236<sup>th</sup> National Meeting of the American Chemical Society opens in Philadelphia. At the national meeting the Division of Organic Chemistry will celebrate its centennial.

The one-day program will include a poster session, technical presentations, and a banquet

in the evening to honor Professor Hutchins. Speakers are invited to present a topic at the Hutchins' technical program, including those who may be presenting posters or papers at the ACS meeting. Those interested in attending the one-day symposium or participating in it should contact Dr. Ira Taffer of BIOMOL at 610-941-0430 (email: [tafferim@biomol.com](mailto:tafferim@biomol.com)) or Dr. Cyndie Maryanoff of Cordis Corporation at 215-628-5650 (email: [cmaryano@crdus.jnj.com](mailto:cmaryano@crdus.jnj.com)).

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## CHEMICAL CONSULTANTS NETWORK

Visit our web page at [www.chemconsultants.org](http://www.chemconsultants.org)

**Date & Time:** Wednesday, May 14<sup>th</sup> Networking, 5:30 PM; Dinner, 6:30 PM; Talk and Business Session, 7:30 PM.

**Speaker and Topic:** Carl Utter—*Stop Selling and Start Closing*.

**Abstract:** *Stop Selling and Start Closing* is a customer-focused selling model designed to increase sales effectiveness. This program puts you in greater control of the sales process while at the same time creating a comfortable and safe experience for the buyer. This program is designed specifically to outsell your competition.

**Biography:** Carl Utter has been a sales consultant, trainer and speaker, as well as a leader in strategic planning for over 25 years. He has consulted with over 250 business clients from California to New York, many of which have reported doubling and tripling sales. Carl has authored several business programs.

**Location:** The Cynwyd Club, 332 Trevor Lane, Bala Cynwyd, PA 19004. See the website for directions and a map.

**Reservations:** To make or cancel a dinner reservation, e-mail [CCNReservations@aol.com](mailto:CCNReservations@aol.com) or call the ACS office at 215-382-1589. When reserving, please let us know if you are a member of CCN or IEEE or neither. Fee, including food and beverages (wine, beer & sodas), is \$35. Early Bird discount price is \$25 if reserved by Thursday, May 8.

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# MAY MEETING

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The Philadelphia Section, American Chemical Society

presents

**MADELEINE JACOBS**

Executive Director and CEO, ACS

*Communication Skills for Chemists*

and

**Presentation of Section Undergraduate Teaching Award**

**Thursday, May 15, 2008**

**6:00 PM**

Musser Auditorium, Pfahler Hall

Ursinus College

601 E. Main Street

Collegeville, PA 19426

**Social Hour:** 5:00 PM, Pfahler South Atrium

**Dinner:** 7:00 PM in the Wismer Center

**Reception Only Cost:** \$5; students with ID: \$3

**Dinner and Reception Cost:** \$25; students with reservation and ID: \$13

**RESERVATIONS** should be made by calling Mrs. Libby Harper at the Section office, 215- 382-1589, or emailing PhilaACS@aol.com by **5:00 PM** on **Thursday, May 8<sup>th</sup>**. **Cancellations**, if necessary, cannot be accepted after **NOON** on **Tuesday, May 13<sup>th</sup>**. **UNCANCELLED RESERVATIONS WILL BE BILLED.**

**DIRECTIONS AND PARKING:** [http://www.ursinus.edu/content.asp?page=StudentServices/campus\\_map\\_and\\_directions.html](http://www.ursinus.edu/content.asp?page=StudentServices/campus_map_and_directions.html).

The Board of Directors will meet at 4:00 PM in Room 202, Pfahler Hall.



## **SPEAKER'S BIOGRAPHY**

### **Madeleine Jacobs, Executive Director and Chief Executive Officer American Chemical Society**

Madeleine Jacobs is Executive Director and Chief Executive Officer of the American Chemical Society (ACS), the world's largest scientific society, with more than 158,000 members worldwide. She assumed her post on January 1, 2004.

As Executive Director and CEO of ACS, Jacobs has worked closely with the society's 1,900 employees and the Board of Directors to help reinvent ACS and prepare it to serve its members and the chemical profession during a time of radical change in the chemical enterprise. She is working closely with other organizations around the world to enhance ACS collaboration in the chemical sciences.

In 2005, the ACS had revenues of more than \$400 million and managed approximately \$1 billion in assets, including \$525 million in the Petroleum Research Fund. PRF distributes between \$20 million and \$25 million a year in peer-reviewed research grants, making it one of the largest private philanthropies devoted to chemical research. ACS publishes 35 scientific journals through its Publications Division and numerous scientific literature and patent databases through the Chemical Abstracts Service Division.

Jacobs received a BS in chemistry at George Washington University (with honors and distinction) in 1968. She completed course work for a MS in organic chemistry at the University of Maryland in 1969. Jacobs received an honorary Doctor of Science from George Washington University in 2003.

Prior to her selection by the ACS Board of Directors as Executive Director and CEO, Jacobs served for eight and a half years as Editor-in-Chief of *Chemical & Engineering News* magazine, the weekly newsmagazine of the chemical world published by ACS, and two years as Managing Editor. She has held other senior management positions in a wide variety of scientific and educational organizations including the National Institutes of Health, the National Institute of Standards

and Technology, and the Smithsonian Institution, where she served as the director of Public Affairs at the world's largest museum complex.

Major honors include the Smithsonian Institution Secretary's Gold Medal (1993), the New York Academy of Sciences Women History Month Award (2001), the 75<sup>th</sup> Canadian Society for Chemistry Conference Lecturer (2002), the ACS Award for Encouraging Women into Careers in the Chemical Sciences (2003), and the American Crystallographic Association Public Service Award (2004). A much-honored science journalist, she has also received more than three dozen awards for outstanding science writing from national organizations. She is a Fellow of the American Association for the Advancement of Science, a member of the Board of Directors of the American Chemical Society and the Council for the Advancement of Science Writing. She is also a member of the Board of Governors of the New York Academy of Sciences.

Jacobs' professional interests include trends in the chemical industry, the public image of chemistry, employment trends, minority representation, and gender equality of scientists. She has given speeches on these topics for more than 30 years and is a sought-after speaker.

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### **INTERESTED IN WORKING FOR ACS?**

We're drawing up the slate of candidates for the fall 2007 election. Specifically, there are openings for chair-elect, directors, councilors and secretary. The chair-elect has several responsibilities, including chairing the Section awards and program committees during the first year of the term and running the Section during the second year. Directors form the governance of the local section and meet monthly September-June. Councilors represent the Section at ACS national meetings. The secretary is primarily responsible for taking the minutes at board meetings.

If you would like to run, please get in touch with David Cichowicz ([cichowicz@lasalle.edu](mailto:cichowicz@lasalle.edu) or 215-951-1264) or Libby Harper ([PhilaACS@aol.com](mailto:PhilaACS@aol.com) or 215-382-1589).



**598<sup>th</sup> Board of Directors Meeting**  
**Thursday, February 28, 2008**  
**The Cynwyd Club**  
**Bala Cynwyd, PA**

This is the edited version of the minutes. A full copy of the minutes can be obtained from the Section Office.

**Present:** C.J. Bruner, D. Cichowicz, M. Cichowicz, D. Cook, E. Davis, S. Miller, K. Thrush-Shaginaw, T. Straub, D. Thomas, J. Tierney, V. Tortorelli, K. Yoder.

**Excused:** A. DeMasi, J. Falcone, Jr., M. Falcone, C. Petucci.

**Also Present:** E. Harper.

**Absent:** P. Cao, C. Rulli, R. Gates, J. Summers-Gates.

The meeting was called to order at 4:07 PM per Chair Davis. The minutes for the January 2008 meeting were approved as amended.

**COMMITTEE REPORTS:**

**Council Affairs (E. Harper for A. DeMasi):** Anne DeMasi was elected chair of the council affairs committee for 2008. Judith Currano and Peter Wade will be serving as alternates at the spring 2008 council meeting for Deb Kilmartin and Cheryl Martin.

**Tellers (T. Straub):** An alternate councilor is needed to replace the 2008 term for Ella Davis. Mike Prushan was proposed and appointed.

**OFFICER'S REPORTS:**

**Chair:** E. Davis had a communication from Kevin Osterhoudt (Director, Poison Control Center -PCC, CHOP). Kevin wishes to foster a productive relationship with the Philadelphia Section ACS and use local expertise in the safe disposal of chemicals. A discussion about the PCC's view of the ACS's involvement needs to take place; Russ Phifer and Dwight Davis are possible contacts with expertise in the area of safe disposal of chemicals.

Carolyn Rulli, Chemical Education Group Chair, is in charge of the ACS High School day program at the National Meeting in August. She is requesting \$250 to support the symposium entitled *Hands and Minds on Science*. Russ Phifer, The Chemical Health and Safety Division, requests \$500 for a 'wine and cheese party' at the National Meeting; the party has funds from a co-sponsor. The requests were tabled until later in the meeting when additional funding requests were to be considered.

Edgar Fahs Smith Dinner is to be held at the White Dog Café on March 17, 2008.

The Student Awards, April 17, 2008, is tentatively scheduled to be held on the campus of West Chester University.

The Teacher Award's location, May 15, 2008, is to be announced.

Catherine (Katie) Hunt is the speaker for the 50-year member recognition luncheon, to be held during the June 19, 2008 meeting. Location is to be announced.

A search for a location to host the December Children's Chemistry Demonstrations Day is under way.

The search for volunteers to staff the Hospitality Booth at the National ACS Meeting, to be held in Philadelphia in August, is in progress. An information booth at the New Orleans meeting is under consideration. Deb Cook indicated that she would be going to New Orleans early and might be able to help out.

The National ACS is looking for paid student helpers for the week of the Philadelphia Meeting in August. Pay could be up to \$13/hour.

**Chair-Elect (R. Gates):** No report.

**Secretary (J. Tierney):** No Report.

**Treasurer:** C. J. Bruner handed out the new version of the January report. C.J. indicated that this report now showed all the cells adding correctly both vertically and horizontally for the totals. C.J. indicated that she has yet to get all the data for investments. The present report shows a year-to-date gain of 1.34%. The MARM accounts have been closed out. V. Tortorelli indicated that next month's budget needed to show the excess funds from the MARM. A committee will be looking into a positive use for those funds. A motion to accept the treasurer's report passed unanimously.

Further discussion ensued on requests for funding from various sources. There were additional requests, beyond those already mentioned, from two groups of students for funding to go to the ACS National Meeting in New Orleans. The Delaware Enzymology Topical Group wants funds from the Philadelphia Section, and they also wish to affiliate with the Section.

A motion was passed that one of the student's requests be met by the amount of \$150.

The decision was made to allocate some funds to the *Hands and Minds on Science* symposium and the Chemical Health and Safety Division party. The funds will come from those already allotted for the National Meeting. Funding for the Hospitality Committee's String Band request, and the request for funding by Alan Heldon (see minutes of the 597<sup>th</sup> Board meeting) 'Legislator Award' both need a formal, detailed written proposal in order to make an informed decision.

A motion was passed for the Delaware Enzymology Topical Group to gain affiliated status with the Philadelphia Section without funding in 2008.

#### OTHER BUSINESS:

A request has been made of the Section by a university to gain access to the Section's email address list of chemistry department chairs. It was unanimously decided that the mailing list would not be distributed.

Dave Cichowicz volunteered to administer the website again and keep it updated until a suitable web-person could be found.

Kathleen Thrush-Shaginaw indicated volunteers were needed for the "Expand Your Horizons" program at Chestnut Hill College.

Dave Cichowicz announced that the 2007 Section Report was submitted on time.

There being no other business, the meeting was adjourned at 5:42 PM.

Respectfully submitted,

John Tierney  
Secretary

## CALL FOR VOLUNTEERS

**Adult volunteers needed to distribute *the Catalyst* and serve at the Section's Hospitality Booth at the ACS National Meeting, August 17-21. If you would like to volunteer, please give your name and contact information to Mrs. Libby Harper, 215-382-1589 or [phillynatlm-tg@aol.com](mailto:phillynatlm-tg@aol.com).**

**Also looking for five to six students to serve as go-fers (paid positions) to assist the National staff during the meeting.**

## BOOK REVIEW

### *Spectroscopy in Catalysis*

J.W. Niemantsverdriet. Third edition, 344 pages, 6 ¾ by 9 ¾ inches, case bound, Wiley-VCH Verlag, Weinheim, Germany, 2007. ISBN 978-3-527-31651-9, \$130, John Wiley & Sons, 111 River St., Hoboken NJ 07030-5774.

This third edition is completely revised and enlarged. The intent is to provide a description of the analytical techniques applicable to the field of catalytic surface chemistry. Certain exclusions are noted in the author's preface. He limits his discussions to supported metals, oxides, sulfides, and metal single crystals, but excludes zeolites. In the techniques he omits nuclear magnetic resonance and electron spin resonance as he has had little personal experience with those methods.

The introductory chapter provides an overview of heterogeneous catalysis and the purpose of characterizing catalysts by spectroscopic methods. Next he discusses temperature-programmed techniques (reduction, oxidation, sulfidation, desorption, and reaction spectroscopies). These are followed by photoemission and Auger spectroscopy.

The ion spectroscopies include secondary ion mass and secondary neutral mass, ion-scattering, Rutherford back scattering, and low-energy ion scattering. Mössbauer absorption and emission spectroscopies are described as they apply to materials exhibiting the Mössbauer effect. X-ray diffraction and absorption including near edge spectroscopy are treated.

The chapter on microscopy and imaging covers SEM and TEM, field emission and ion microscopy, atomic force microscopy, and photoemission electron microscopy. The chapter on vibrational spectroscopy includes infrared emission and transmission and diffuse reflectance as well as related methodologies. The concluding chapter deals with some case studies in catalyst characterization such as supported rhodium catalysts, alkali promoters on metal surfaces, chromium oxide polymerization catalysts, and cobalt-molybdenum sulfide hydro-sulfurization catalysts.

An appendix provides insight to chemisorptions bonds for interpreting some of the spectroscopic data. The book includes a subject index and a list of acronyms used in these analytic fields. Literature references are provided at the end of each chapter.

—Alan Warren

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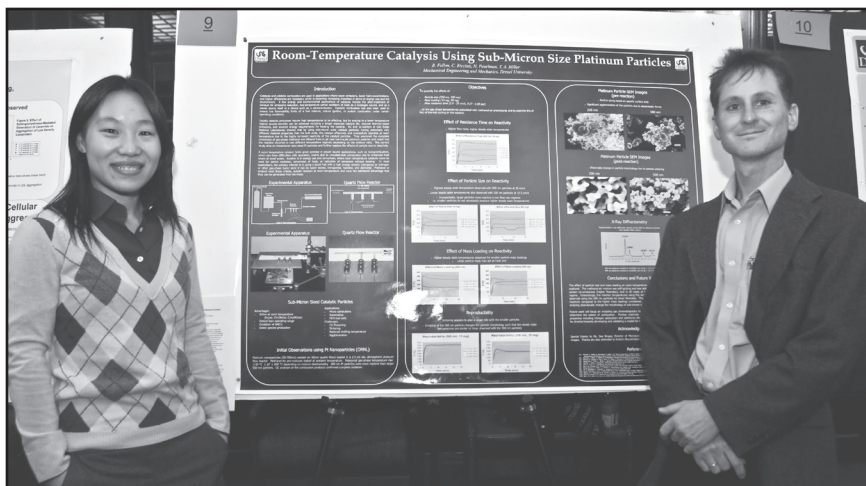
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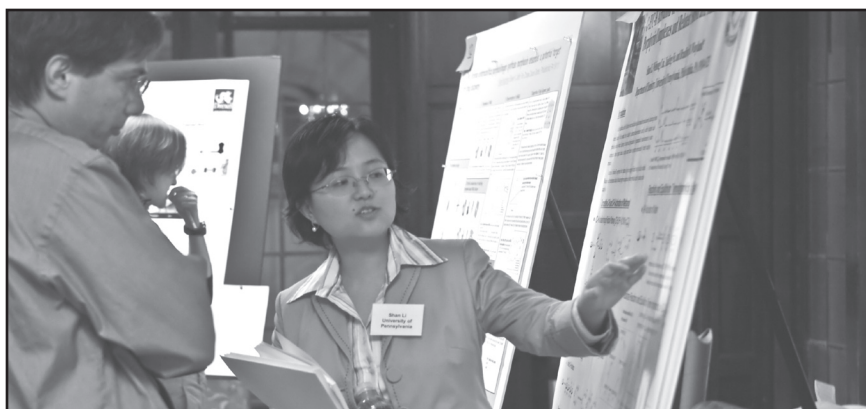
The Eighth Annual Graduate Student and Third Annual Undergraduate Poster Session was held on January 24, 2008 in the Great Court of Mitten Hall at Temple University. The following pages contain photos highlighting some of the session.



View of the central hall from above, Mitten Hall, Temple University.



Yi Ma, graduate student, and Christopher Ricciuti, Hess Honors undergraduate student, both from Drexel University, with their poster.



Students explaining posters.





Philadelphia Section Chair Ella L. Davis with some of the winners of the poster session.

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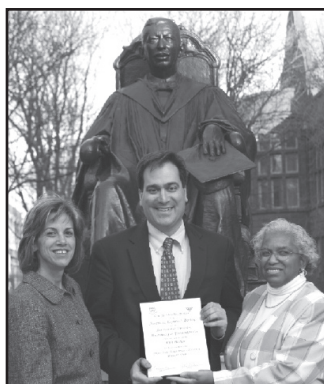
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## PHILADELPHIA SECTION, ACS 2008 CALENDAR OF EVENTS

DATE	EVENT	LOCATION
May 10-16	Chromatography Forum of the Delaware Valley: HPLC 2008 <a href="http://cfdv.org">http://cfdv.org</a>	Baltimore, MD
May 12	Delaware Valley Mass Spectrometry Discussion Group: Gary Van Berkel, Oak Ridge: <i>Ion Source Fundamentals</i> <a href="http://science.widener.edu/svb/msdg">http://science.widener.edu/svb/msdg</a>	Villanova Conference Center Villanova, PA
May 14	Chemical Consultants Network Carl Utter: <i>Stop Selling and Start Closing</i> . <a href="http://www.chemconsultants.org">www.chemconsultants.org</a>	The Cynwyd Club Bala Cynwyd, PA
May 15	<b>Undergraduate Teaching Award Madeleine Jacobs, ACS</b>	<b>Ursinus College Collegeville, PA</b>
May 18-21	Middle Atlantic Regional Meeting (MARM) <a href="http://www.marmacs.org/2008/index.html">www.marmacs.org/2008/index.html</a>	Queensborough Community Coll. Bayside, New York
June 19	<b>50-year Member Luncheon Catherine (Katie) Hunt, ACS and Rohm and Haas</b>	<b>TBA</b>
Aug. 16	Symposium Honoring Robert Hutchins	Drexel University Philadelphia, PA
Aug. 17-21	ACS Fall National Meeting	Philadelphia, PA
Sept. 18	<b>Victory Brewing Company Tour</b>	<b>Downingtown, PA</b>
Oct. 16	<b>Philadelphia Section Award</b>	<b>TBA</b>
Nov. 20	<b>Ulyot Lecture: Bernard Bigot Commissariat à l'énergie atomique France</b>	<b>Chemical Heritage Foundation Philadelphia, PA</b>
Dec. 13	<b>Herb Bassow Memorial Chemistry Demonstrations and Hands-on Activities</b>	<b>TBA</b>



### Edgar Fahs Smith Lecture

Marsha Lester, Chair of the University of Pennsylvania Chemistry Department, (left) and Ella Davis, Philadelphia Section, ACS, Chair, (right) presenting the 2008 lecturer, Chad Mirkin, with the Edgar Fahs Smith commemorative scroll in front of the statue on Smith Walk.