

# the Catalyst



Official publication of the Philadelphia Section, ACS  
<http://philadelphia.sites.acs.org/>

May 2012  
Volume 97, No. 5



**Marbling Paper  
Philadelphia Section Booth  
at the Science Carnival  
on the Benjamin Franklin Parkway  
April 21, 2012**

## HIGHLIGHTS

Chair's Column	85
MARM Programming for Education	91
Third Career Workshop	94
Suburban Summer Networking Event	95
Postdoc to Faculty Workshop	97
2012 Calendar	104

## ADVANCE NOTICE

### JUNE MEETING

**Thursday, June 21, 2012**

**50-Year Awards  
Chemical Heritage Foundation**

See the JUNE issue of *the Catalyst* for details,  
call the Section Office at (215) 382-1589 or email [PhilaACS@aol.com](mailto:PhilaACS@aol.com).

## STAFF

### EDITOR-IN-CHIEF

Robin S. Davis

### EDITORS

*News Atoms:* Alan Warren

*Proof Editors:* Georgia Arbuckle-Keil  
Kendra Luther  
Marge Matthews  
Alan Warren

### ADVERTISING MANAGER

Vince Gale

### COMMUNICATIONS COMMITTEE

#### **Chair: Marge Matthews**

Anthony W. Addison  
Georgia Arbuckle-Keil  
Robin S. Davis  
Vince Gale  
Robert Gates  
Judy Summers-Gates  
Kendra Luther  
Victor Tortorelli  
Alan Warren

## CONTENTS

June Advance Notice . . . . .	83
Chair's Column . . . . .	85
Want to Work for ACS? . . . . .	85
News Atoms . . . . .	86
2012 Middle Atlantic Regional Meeting . . . . .	86
May Meeting . . . . .	87
Teaching Awardees . . . . .	88, 89
Seeking Help. . . . .	89
Philadelphia ACS on Twitter . . . . .	90
MARM Programming for Education. . . . .	91
February Board Meeting Minutes . . . . .	92
Third Career Workshop. . . . .	94
Suburban Summer Networking Event. . . . .	95
Local ACS on LinkedIn . . . . .	95
Election 2012 . . . . .	95
Chemical Consultants Network . . . . .	96
Postdoc to Faculty Workshop . . . . .	97
Edgar Fahs Smith Lecture Photo . . . . .	97
Historical Events in Chemistry. . . . .	98
Volunteers for ACS National Meeting Wanted. . . . .	99
YCC's Fun Run . . . . .	100
ACS Webinars. . . . .	101, 102
Directory of Services . . . . .	103
2012 Calendar . . . . .	104

Published monthly except July, August and December by the Philadelphia Section of the American Chemical Society. All views expressed are those of the editors and contributors and do not necessarily represent the official position of the Philadelphia Section of the American Chemical Society. Editorial matters should be sent to the attention of the Editor-in-Chief c/o the Philadelphia Section ACS, Department of Chemistry, University of Pennsylvania, 231 South 34<sup>th</sup> Street, Philadelphia, PA 19104-6323 or philcatalyst@aol.com.

Advertising: Vince Gale, MBO Services, P.O. Box 1150, Marshfield, MA 02050

phone: (781) 837-0424; email: cust-svc@mbo-services.net.

### From The Chair



### Rick Ewing

The Spring National ACS meeting in San Diego was a great success. Attendance was high; I had heard a number of 16,000 on the first day of the meeting, Sunday, with attendance numbers going up daily. Also impressive was the number of student attendees at >5,000. It was a particularly nice venue, but counter-balanced by the pace that ACS National kept with presentations, poster sessions, committee meetings, award ceremonies and the Council meeting. I want to give thanks and appreciation to our Philadelphia Section councilors. This is an active, dedicated group that is vocal in their participation and sharing of information and we are also

fortunate as a Section to have several councilors leading National committees. The Section is indeed in good hands. I also, for the first time, attended the Council meeting as an ACS member; while a member cannot vote at Council, this meeting is open to everyone. I encourage you to read John Crawford's report in the June *Catalyst* on the National Meeting which also details some of the discussion and decisions that took place at the Council meeting. One fun activity was a quiz on climate chemistry. The ACS is developing a scientific-based educational tool on climate science for the general public which teaches information related to atmospheric chemistry and general climate facts called the ACS Climate Science Toolkit. All present at the Council meeting were given a hand-held RF voting device that captured everyone's response to questions such as:

Which planet has the highest average surface temperature?  
a. Mercury, b. Venus, c. Earth, d. Mars.

Which gas contributes most to the Earth's temperature? a. CO<sub>2</sub>, b. H<sub>2</sub>O, c. CH<sub>4</sub>, d. N<sub>2</sub>O.

There were 15 or so relatively familiar (in one way or another) questions, and I think what was most surprising to the leader of the discussion was that a fairly large proportion of the audience got these questions wrong. This is a testament to the need for better education about the science behind climate and temperature change to the general public who may not have a science background. More information is available at [ACS Climate Science Toolkit](#). This is a beta version of the site as it is under construction, but the site does already contain some interesting information including the answers to the above questions and much more. Also, I want to remind everyone that the fall National ACS meeting is here in Philadelphia. If you are able, this is a great opportunity to attend topics related to chemistry at all levels: scientific, general interest, community, world issue and politics.

---

### Interested in Working for ACS?

We are drawing up the slate of candidates for the fall 2012 election. Specifically, there are openings for chair-elect, treasurer, directors and councilors. 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. The treasurer is mainly responsible for paying the bills and keeping those records. Directors form the governance of the local Section and meet monthly September-June. Councilors represent the Section at ACS National meetings.

If you would like to run, please get in touch with John Tierney ([jxt4@psu.edu](mailto:jxt4@psu.edu)) or Libby Harper ([PhilaACS@aol.com](mailto:PhilaACS@aol.com) or (215) 382-1589).

## NEWS ATOMS

**Dennis E. Discher**, the Robert D. Bent Professor of chemical and biomolecular engineering at the University of Pennsylvania, was elected to the National Academy of Engineering.

**Mark Lemmon**, professor and chair of biochemistry and biophysics in the Perelman School of Medicine at Penn, will receive the 2012 Dorothy Crowfoot Hodgkin award from The Protein Society, for exceptional contributions to protein science.

**Eileen Moison**, senior at Penn studying biochemistry and business in the Vagelos program of life sciences and management, has been awarded a Gates Cambridge scholarship to pursue a master's degree in biochemistry at Cambridge University in the United Kingdom.

**Shu Yang**, associate professor in materials science and engineering at Penn, has been chosen with her research group to

receive the Arthur K. Doolittle award from the ACS division of polymeric materials science and engineering. The honor recognizes their paper presented at the PMSE division at the National meeting in San Diego.

**Gary Molander**, Hirschmann-Makineni professor of chemistry, and doctoral student **Sarah Trice**, developed a new type of reagent in Penn's high throughput experimentation laboratory. The reagent allows for simpler synthesis of boronic acids, one of the main ingredients in creating carbon-carbon bonds in critical biaryl systems.

### DEATHS

**Andre G. Susanin**, retired chemist and company owner, March 9<sup>th</sup> at 78. He joined Rohm and Haas' water treatment division in 1955 and retired in 1978. He then operated his own firm, Susanin Equipment Co. for 25 years. He was a volunteer for

Wheels of Wellness and Habitat for Humanity.

**T. Frank Decker**, retired chemical engineer, March 18<sup>th</sup> at 84. He worked for Atlantic Refining and then joined Rohm and Haas in 1955, retiring as an executive in 1985. He was a volunteer with Meals on Wheels for over 30 years.

**Arnold S. "Sam" West**, retired chemical engineer, March 19<sup>th</sup> at 90. He joined Rohm and Haas in 1946 where he worked as an engineer, supervisor, manager, and eventually as a specialist in government and regulatory affairs. He retired in 1987 and operated his own consulting service as A.S. West Associates. He served the American Institute of Chemical Engineers as treasurer, vice president and president. West was a member of the board of directors of the Chemical Heritage Foundation and was president of United Engineering Trustees.



#### 43rd MARM – "Chemistry on the Chesapeake"

May 31 - June 2, 2012

To be held at the *University of Maryland, Baltimore County*  
Sponsored by the *Maryland Section of the ACS*

Registration is now **open** at the website,  
[www.marmacs.org!](http://www.marmacs.org!)

## **MAY MEETING**

**THE PHILADELPHIA SECTION, AMERICAN CHEMICAL SOCIETY**

**Presents the 2012 Awards for**

**EXCELLENCE IN UNDERGRADUATE TEACHING IN CHEMICAL SCIENCES**

**Dr. Linda Mascavage, Arcadia University**

and

**EXCELLENCE IN CHEMISTRY TEACHING AT THE SECONDARY LEVEL**

**Dr. Scott Best, Conestoga High School**

Thursday, May 17, 2012

7:00 PM

Desmond Hotel  
One Liberty Boulevard  
Malvern, PA 19355

Dinner at 6:00 PM

Dinner cost \$35.00; Students with reservations and ID: \$18.00

**RESERVATIONS** should be made by calling Mrs. Harper at the Section Office, (215) 382-1589, or emailing PhilaACS@aol.com by 5:00 PM Thursday, May 10<sup>th</sup>. Cancellations, if necessary, cannot be accepted after NOON on Tuesday, May 15<sup>th</sup>. UNCANCELLED RESERVATIONS WILL BE BILLED.

**DIRECTIONS:** <http://www.desmondgv.com/map/drive.htm>

The Board of Directors will meet at 4:00 PM at the Desmond Hotel.



## UNDERGRADUATE TEACHING AWARDEE

Dr. Linda M. Mascavage

Arcadia University

Dr. Mascavage received her BS in Chemistry and Secondary Education from Georgian Court College and went on to earn an MS and PhD in organic chemistry from Seton Hall University. From Seton Hall she joined Temple University where she still assists with teaching and continues as an Adjunct Research Professor. Since 1992 she has been teaching organic chemistry at Arcadia University (formerly Beaver College) full time and significantly revised

her courses to incorporate critical thinking and effective technical writing. She has been elected to Phi Kappa Phi Honor Society, received the Dougherty Faculty-Student Research Award and the Ellington Beavers Award for Intellectual Inquiry.

A meticulous organizer, Dr. Mascavage's students always come to lab with an excellent understanding of the theoretical basis behind the experiment or preparation they are about to perform. She maintains the highest intellectual standards, reflected in her stu-

dents' high scores on MCATs and the ACS standardized exams in organic chemistry. Her students have been motivated to appreciate the basics of the chemistry related to an applied career as well as to seek further training in graduate school in organic chemistry.

Linda and her students are also involved in research projects. Her particular interest is in gas phase kinetics on which she and her students have published in peer-reviewed journals and presented at local, regional and national ACS meetings.

## STOP WASTING \$\$\$ on vacuum pumps!!

### Rebuilding is smart.

A new pump costs **four times** what rebuilding costs.

### Rebuilding is easy.

Just call 978 667 2393 for service second-to-none.

### Mass-Vac does the job right.

- Factory trained technicians.
- Rebuilt and new pumps in stock.
- No-hassle parts and labor guarantee.
- Complete line of filtration and trap systems.

**Because a really old, really healthy vacuum pump is a beautiful thing!**



**Mass-Vac, Inc.**

247 Rangeway Road ■ PO Box 359 ■ North Billerica, MA 01862  
978 667 2393 Fax 978 671 0014 sales@massvac.com www.massvac.com

## HIGH SCHOOL TEACHING AWARDEE

Dr. Scott A. Best

Conestoga High School

After initially teaching on the college level, Dr. Scott Best moved to secondary education at Conestoga High School where he has hit his stride, teaching all levels of chemistry over a 12-year career. He engages students who find chemistry difficult and has expanded AP Chemistry participation with outstanding results. A sought-out mentor, Dr. Best has organized a

Chem Club and coaches the Science Olympiad team. In executing lessons, he actively engages students in the learning process and critical thinking and consistently provides quality instruction. His students recognize the importance of chemistry and know he will help prepare them for success in their future lives.

In addition to exceptional classroom work, Dr. Best is a leader in the school community. As a senior class advi-

sor, he worked with the administration to coordinate events such as graduation and the senior prom, balancing the constituencies of students, parents, teachers and administrators.

Dr. Best attended Ohio State University and received a BS from Wheeling Jesuit College and a PhD in Chemistry from Penn State University. He is Chair of the Science Department at Conestoga.

---

### SEEKING HELP

We are seeking help from the membership of the Philadelphia Section of the ACS. In most cases, this would only require indicating an appropriate contact person. The Philadelphia Section of the American Chemical Society has developed a web site that will post summer positions available in a laboratory setting for undergraduate students majoring in chemistry or related areas.

We are seeking companies, governmental agencies and non-profit institutions that have summer positions available for the aforementioned group of undergraduates. These positions can be in either a research or a non-research laboratory environment. We would like to post the information about these positions on the Philadelphia Section of the American Chemical Society's website: <http://philadelphia.sites.acs.org/internshipquestionnaire.htm>. There is no cost to post a position, and there is no obligation to continue this position from one year to the next. You may remove it at any time. The organizational contact for applicants may be an individual or referral to the company web site.

If you hire undergraduates in chemistry or related areas to work in a laboratory setting, we urge you to go to our website and complete the questionnaire. Or, if you know of the person in your organization that oversees such an undergraduate program, either urge them to post the position(s) on our website or email me (see below) with their contact information. If you have any questions, please contact: Sheldon L. Miller, PhD: email [millers@chc.edu](mailto:millers@chc.edu) or call at (215) 248-7175.

### S U R P R I S E

our editor by calling and saying you appreciate the quality and content of our newsletter. Our editor works hard to maintain a publication of interest to our membership. Oh, and by the way you could also give credit to our advertisers who financially support us.

The Philadelphia Section of the  
ACS has taken to the social  
media airwaves

Follow us on Twitter  
@PhilaACS



@PhilaACS

*Following or directly contacting the Philadelphia Section through Twitter and other social media outlets allows you to stay up to date on upcoming news and events relevant to chemists in the Philadelphia region. Join the next generation of communication!*



*Great Programming for Education*



*Come, Present, Learn, Network!*

[www.marmacs.org/2012](http://www.marmacs.org/2012)

*Undergraduate Students*

**Friday, June 1<sup>st</sup>**

Panel Discussion on Careers in  
Chemistry  
Poster Session on Student Member Group  
Activities  
Chromatography Forum of the Delaware  
Valley Awards Symposium

**Saturday, June 2<sup>nd</sup>**

Undergraduate Research Poster Session

*K-12 Students and Teachers*

**Friday, June 1<sup>st</sup>**

Environmental Chemistry for High Students  
Forensic Chemistry for High School  
Students

**Saturday, June 2<sup>nd</sup>**

Environmental Chemistry for High School  
Teachers  
Forensic Chemistry for High School  
Teachers  
STEM for Elementary School Teachers  
Kids in Chemistry - Hands on Experiments  
for Elementary Students

*Teachers in Higher Ed*

**Thursday, May 31<sup>st</sup>**

The Chemistry Classroom for the 21st  
Century  
On-line and Hybrid Chemistry Courses

**Friday, June 1<sup>st</sup>**

Companion Software for Freshman and  
Organic Texts: Enhancing Student  
Learning

**Saturday, June 2<sup>nd</sup>**

Active Learning in the Chemistry Classroom  
and Laboratory

Thursday, February 23, 2012  
Room 108A Barton Hall  
Temple University  
Philadelphia, PA

**Present:** R. Ewing, J.P. Northrop, D.J. Wolf, D. Cichowicz, J. Tierney, D. Cook, E. Davis, A. DeMasi, S. Fleming, K. Lysko, C. Palmer, W. Smith, M. Tunick.

**Conference Call:** J. Summers-Gates, M. Cichowicz, K. Shaginaw, T. Straub, D. Thomas, V. Tortorelli.

**Also:** J. Crawford, L. Harper, K. Lammers, J. Martino.

Meeting was called to order by Chairman R. Ewing at 4:00 PM.

1. Approval of minutes – 2<sup>nd</sup> the Motion.

Council Affairs: J. Crawford to take over role.

Approval of minutes as amended.

Abstention by J. Summers-Gates.

2. Communications: D. Hausner has asked to be excused from this meeting.

3. **COMMITTEE REPORTS:**

- A. **Awards:** Status of Section and MARM Teaching Awards – J.P. Northrop

Information for MARM – Nothing has come in for section awards yet.

Deadline: 3/20/12 for MARM

Deadline for Teachers awards (3/30/2012) in *the Catalyst* - two H.S. nominations.

Resubmit Jim Murray for MARM (Signed by R. Ewing).

ACS Section Award: need nominations.

- B. **Bylaws:** J. Tierney, D. Cichowicz and R. Ewing

Corrections: Page 4 Program Committee: Chaired by chair elect.

Page 5: (Section)

Page 8: Duties of chair: Program Committee: Program Planning Committee.

Page 9: Chair elect Responsible for Ulliyot.

Page 11: Chaired by past chairs and Board of Directors.

Agreed to amend Bylaws: Sending Bylaws to National for approval:

Sending them to *the Catalyst*.

- C. **Career Services:** Update – J. Martino

2/29/12 Networking Event at Iron Hill Brewery in North Wales from 6:00 PM to 8:00 PM – 27 people signed up – Another meeting in June.

La Salle's Montgomery County booked for May 7<sup>th</sup> – 8:00 AM to 4:00 PM – Networking. J.P. Northrop is going to speak there.

YCC – Top priority this year: three core members, two advisory.

P. Fishbein and Tsuie will coordinate – P. Fishbein submitted for CHEMLUMINARY. E. Davis will collaborate with NOBCCHE Chapter.

- D. **Nominations:** Approval of members of Awards Committee – J. Tierney

Slate given to Libby Harper.

No chemical engineer nominated.

M. Cichowicz (Organic Chemistry).

J. Tierney (Education).

P. Walsh (Inorganic Chemistry).

Motion to Approve – 2<sup>nd</sup> Motion.

E. **Public Relations:** E. Harper for D. Hausner

D. Hausner (Twitter handle and LinkedIn)

F. **Younger Chemists** – K. Lammers

Annual Poster Session – 18 Schools, 96 Presenters

3<sup>rd</sup> Fall National Meeting with Christie McInnis – Looking for a Forensic

Chemist – D.J. Wolf.

4. **OFFICERS' REPORTS:**

A. **Chair Ewing**

ACS Fall National Meeting

\$500 SEED Money to be sent to Local Section: D. Cichowicz.

\$5000 Additional Funding (Accounting Record).

Planning Committee (email L. Harper if interested).

Charged with recruiting 10 to 15 students for administrative support –

Paid position by ACS National in August.

Staff the Local Section booth during registration hours (Meet and Greet).

B. **Chair-elect Northrop:** Nothing to report.

C. **Secretary Wolf:** Nothing to report.

D. **Treasurer Cichowicz**

Balanced Budget – reflects nothing from National.

\$500 not received yet.

Motion to approve and 2<sup>nd</sup> motion – passed.

5. **OTHER BUSINESS:**

K. Shaginaw – Looking for Volunteers for PAGES™ (April 21, 2012)

Sponsoring Graduate School Forum (18<sup>th</sup> Year). Needs Committee home.

YCC (by A. DeMasi) Late October, Early November (Monday Night at Villanova).

YCC heavily involved in getting panel discussion.

A. **2011 Annual Report** – J. Tierney

Nothing to add.

ChemLuminaries Nominations – J. Tierney and J.P. Northrop.

B. **Student Travel request for San Diego meeting\***

Ursinus College student received \$300 from ACS Section and airline ticket.

Will work with Dr. A. Reig – receive \$450 total.

\$500 Line item budget for entire year for local.

Students should provide receipts for reimbursement from ACS.

A motion approved for up to \$300 and 2<sup>nd</sup> motion.

(Abstaining – V. Tortorelli).

Meeting was adjourned at 5:15 PM.

Respectfully submitted,

D.J. Wolf, Secretary

AMERICAN CHEMICAL SOCIETY PHILADELPHIA SECTION

THIRD CAREER WORKSHOP

*Networking*

Thursday, May 17, 2012

8:30 AM to 4:00 PM

La Salle University Montgomery County Center

4000 Chemical Road

Suite 110

Plymouth Meeting, PA 19462

This full day workshop will again be packed with great speakers from the region. If you have attended our previous workshops, you remember our dynamic and diverse speakers, so we're excited to present this new workshop just for you! This third workshop will focus on the concept of networking and why it has become so important in managing your career. Topics will include:

- \* A general overview of networking
- \* Networking for chemists
- \* Branding: What is it?
- \* Job clubs: How they work

Lunch will be provided.

This is a free event, but registration is required so that we have the correct seating and enough food for everyone. Please note: Registration for this workshop ends at midnight, May 10, 2012 -- please order your tickets early!

La Salle University's Montgomery County Center is located in Plymouth Meeting, Pennsylvania, and is conveniently located near I-476 (the "Blue Route" and the "Northeast Extension") and I-276 (the Pennsylvania Turnpike) as well as the Plymouth Meeting Mall and the Metroplex Shopping Center.

For more information and to register, please visit <http://acsphillycareerworkshop3.eventbrite.com/>



## CAREER SERVICES COMMITTEE

The Career Services Committee of the ACS Philadelphia Section is working hard to actively promote connecting the members of the Section with each other as well as providing exciting workshops to develop your professional skills. Take a look at what's in store for you in June . . .

### ACS PHILADELPHIA SECTION SUBURBAN SUMMER NETWORKING EVENT

June 19<sup>th</sup>

Come and join us as we continue our increasingly popular series of networking events around the Philadelphia area! This event will be held at Houlihan's on Germantown Pike in Plymouth Meeting, PA from 6:00 PM to 8:00 PM. Meet other chemists from the Section and beyond in an informal and casual setting. You may be surprised at what you will discover and how you can help others, too. If you would like to register for this event, please visit:

<http://acsphillynetworkingevent3.eventbrite.com>

. . . and this is just the beginning! Keep reading *the Catalyst*, visit the ACS Philadelphia Section website, or join the ACS Philadelphia Section's group on LinkedIn to find out more about our future events.

---

### Philadelphia Section ACS Group on LinkedIn

As many members of ACS are already aware, the website LinkedIn (<http://www.linkedin.com>) is an excellent networking site dedicated to keeping working professionals in touch with one another. As a result, and in an effort to assist in any way that we can, the Philadelphia Section of the ACS has established a group open for all to join. Within this group, discussions can be facilitated as well as the opportunity for new jobs and internships to be posted.

If you already have a profile in LinkedIn, feel free to go to the Groups Section and search for "American Chemical Society - Philadelphia Section." Send a message to the group administrator to become a member. If you are not already on LinkedIn, we highly recommend that you join. Establishing an account is free and easy to set up. For additional information or assistance, please feel free to contact J.P. Northrop, Liaison Committee, at

[john.northrop@anton-paar.com](mailto:john.northrop@anton-paar.com)

To join, please click on the following link:

<http://www.linkedin.com/groups?mostPopular=&gid=3366988>

---

## HEADS-UP: ELECTION 2012

This fall we will hold an electronic election again. **Please make sure that your email address is up-to-date with ACS National.** Paper ballots will be available on request. Early this summer we will be sending out postcards with the details to those with no ACS email and those with bounced email addresses.



## CHEMICAL CONSULTANTS NETWORK & AMERICAN INSTITUTE OF CHEMICAL ENGINEERS- DELAWARE VALLEY SECTION MAY 9, 2012 MEETING

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

**Date and Time:** Wednesday, May 9<sup>th</sup>, at the Cynwyd Club, Bala Cynwyd, PA; Networking, 5:30 PM; Dinner, 6:30 PM; Talk and Business Session, 7:30 PM.

### *Space Travel in the 21<sup>st</sup> Century – Safety Strategies and Direction*

**Abstract:** Our speaker will address the techniques and efforts that NASA is currently using to ensure safe space travel in this century. An analysis of the Lessons Learned from the Challenger and Columbia Shuttle incidents will also be shared, as well as a summary of the current thinking around commercial space travel. As a member of the NASA Aerospace Safety Advisory Panel since 2003, and as a consultant to Columbia Shuttle Accident Investigation Board, our speaker will be able to bring some clarity to NASA's safety efforts, and will tie common elements to issues in the process industries.

**Bio:** Deborah L. Grubbe has distinguished herself as an expert in engineering safety. She completed her bachelor's degree with highest distinction in chemical engineering at Purdue in 1977. She received a Winston Churchill Fellowship to attend the University of Cambridge in England and obtained a certificate of postgraduate study in chemical engineering. After Purdue, she joined the DuPont Co. and held progressive assignments over her 27-year tenure with the company. In 2005, she accepted an assignment with British Petroleum as vice president for group safety and industrial hygiene. Recently, Deb left British Petroleum and started her own consulting firm, Operations & Safety Solutions LLC, to address new challenges and effect positive changes within the industry. With a broad range of experiences, she is a leader in safety across many business sectors - chemicals and refining, and gas, solar, aerospace, and renewable energies.

She was recently appointed 2010 chair of the Institute for Sustainability, a technological community within the American Institute of Chemical Engineers. In addition, she currently serves on the NASA Aerospace Safety Advisory Panel and was a consultant to the Columbia Shuttle Accident Investigation Board. She is a former advisory board member of AIChE's Center for Chemical Process Safety and a director of its management division. She has received a number of honors and awards, including Outstanding Chemical Engineer in 1994 by Purdue's School of Chemical Engineering and Distinguished Engineering Alumna by Purdue's College of Engineering in 2002. She also has received the Trailblazer Award from the Delaware Alliance of Professional Women. She was named Engineer of the Year by the state of Delaware in 2002 and, in 1985, was the first woman and youngest elected member on the State of Delaware Registration Board for Professional Engineers.

**Reservation:** 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 (leave message on voicemail if necessary). Fee, including food and beverages (wine, beer and sodas), is \$25 by the deadline, Thursday, May 3<sup>rd</sup>, \$35 afterwards. Late reservations and walk-ins subject to availability. No-shows will be invoiced. Please advise of any special food requirements. There is no charge for talk only; registration is suggested using contact information above.

## POSTDOC TO FACULTY WORKSHOP

The **Postdoc to Faculty workshop** will be held in Philadelphia on August 17<sup>th</sup> and 18<sup>th</sup>, just prior to the National Meeting. This workshop introduces postdocs to the variety and expectations of junior faculty at academic institutions, shares strategies for fulfilling the academic responsibilities of scholarship, teaching, and service, and prepares postdocs for applying and interviewing for faculty positions. The application deadline for this competitive opportunity is **Monday, May 14<sup>th</sup>**. See [www.acs.org/P2F](http://www.acs.org/P2F).

If you would like more information on this program, please contact [Dr. Corrie Kuniyoshi](mailto:Dr.Corrie.Kuniyoshi) (cc'd) or for any other offerings from the ACS Graduate and Postdoctoral Scholars, please write to [GradEd@acs.org](mailto:GradEd@acs.org) or visit [www.acs.org/grad](http://www.acs.org/grad).



### Edgar Fahs Smith Lecture

March 15, 2012

Dr. William Miller (center) receiving the Edgar Fahs Smith scroll from Dr. Marsha Lester, Chemistry Department of the University of Pennsylvania, and Dr. Rick Ewing, Chair of the Philadelphia Section.

## May Historical Events In Chemistry

by Leopold May

- May 2, 1912      One hundred years ago on this date, BF Goodrich Co was incorporated.
- May 3, 1892      Seventy-five years ago, George Paget Thomson's research on electrons in films and nuclear reactions shared the Nobel Prize in Physics with Clinton Joseph Davisson for their experimental discovery of the diffraction of electrons by crystals. He was born on this date.
- May 6, 1871      One hundred ago, F. Victor Grignard shared the Nobel Prize in Chemistry for the discovery of the so-called Grignard reagent, which in recent years has greatly advanced the progress of organic chemistry. He developed the magnesium reagent used in organic chemistry and was born on this date. The prize was shared with Paul Sabatier who received it for his method of hydrogenating organic compounds in the presence of finely disintegrated metals whereby the progress of organic chemistry has been greatly advanced in recent years.
- May 7, 1939      Sidney Altman, who proved that ribonucleic acid (RNA) can act as a catalyst in the cell, was born on this date. He shared the Nobel Prize with Thomas R. Cech in 1989 for their discovery of catalytic properties of RNA.
- May 8, 1873      Nevil V. Sidgwick, who was born on this date, was a researcher on molecular structure and theory of valency. He did research in bonding in coordination compounds and investigated phase equilibria and the solubility of organic acids and bases.
- May 11, 1904      Donald F. Othmer was a chemical engineer who developed the Othmer still and was born on this date. He was co-founder and editor of the Kirk-Othmer Encyclopedia of Chemical Technology.
- May 16, 1950      Twenty-five years ago, J. Georg Bednorz shared the Nobel Prize in Physics with K. Alexander Müller for their important breakthrough in the discovery of superconductivity in ceramic materials. He was born on this date.
- May 18, 1778      Andrew Ure, first to describe chemical solutions in terms of chemical equivalents, i.e., normality, was born on this date.
- May 19, 1914      Fifty years ago, Max F. Perutz shared the Nobel Prize in Chemistry in 1962 with John C. Kendrew for studies of the structure of globular proteins. He



studied structure of hemoproteins using x-ray diffraction and was born on this date.

- May 20, 1890 Francis O. Rice, a researcher in free radicals, was born on this date. He served as Head of the Chemistry Department at The Catholic University of America from 1938 to 1959.
- May 22, 1912 One hundred years ago, Herbert C. Brown was born on this date. He was a researcher in organoboron and carbocation chemistry and shared the Nobel Prize in Chemistry in 1979 with Georg Wittig for their development of the use of boron- and phosphorus-containing compounds, respectively, into important reagents in organic synthesis.
- May 24, 1640 John Mayow discovered that air contained two gases, one of which supported life and combustion, *spiritus nitro-aerous* (oxygen). He recognized the role of oxygen in the combustion of metals and recorded a correct anatomical description of respiration and was born on this date.
- May 28, 1887 One hundred and twenty-five years ago, Kasmir Fajans was born on this date. He established the radioactive displacement law and initiated the concept of heat of hydration of gaseous ions.
- May 29, 1794 Antoine A. B. Bussy, who isolated magnesium in 1828, was born on this day.
- May 30, 1912 One hundred years ago, Julius Axelrod was born on this date. He was a researcher on catecholamines. He shared the Nobel Prize in Medicine or Physiology in 1970 with B. Katz and U. Von Euler for discoveries concerning humoral transmitters in the nerve terminals and the mechanism for their storage, release and inactivation.

---

## AUGUST NATIONAL MEETING

As many of you already know, the Fall National Meeting of the ACS will be held in Philadelphia this August 19-23. The Section will need volunteers to help out with this event, particularly to staff the hospitality booth. Please send an email to [PhilaACS@aol.com](mailto:PhilaACS@aol.com) or call the Section Office at (215) 382-1589 if you would like to participate.

# SEE THE SIGHTS OF PHILADELPHIA WITH YCC'S FUN RUN!



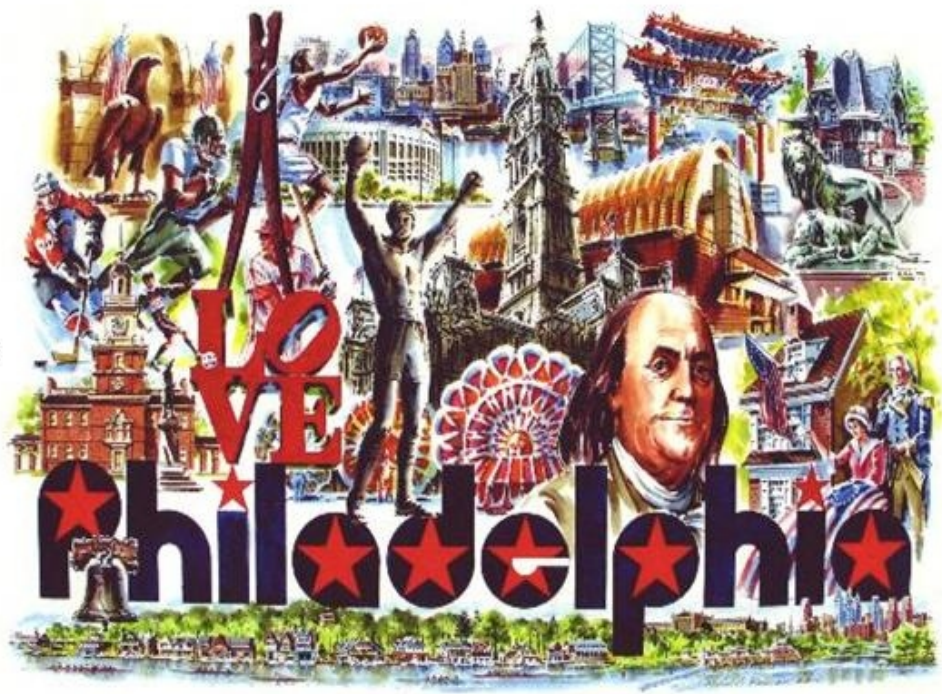
**MONDAY MORNING  
AUGUST 20, 2012**

Don't end up stuck inside the convention center for the whole conference! Come join us for some exercise, a tour of the city, and a great networking opportunity.

A professional guide will lead you on a 3.5 or 5 mile run through Philadelphia's tree-lined Fairmount neighborhood as you pass the Rodin Museum, the future Barnes collection and the famed Philadelphia Museum of Art. Run to the top of the "Rocky steps" and get a spectacular view of the city. Catch a glimpse of rowers gliding down the Schuylkill River and enjoy one of Philadelphia's most popular running trails. You'll also have a chance to run through downtown Philadelphia's most popular restaurant and shopping neighborhood.

Pick either 3  
miles or 5 miles  
at the running  
pace that's right  
for you:  
12-14 min/mile  
or 9-11 min/mile.

Cost: \$30,  
includes guided  
run, water, and  
souvenir bag



## ACS Webinars™

CLICK \* WATCH \* LEARN \* DISCUSS

Learn more and register at [www.acswebinars.org](http://www.acswebinars.org)

Featured Events – **May 2012** (page 1)

### ***Fireside Chat with Entrepreneurs – The Challenges of Scaling a Global Biomaterials Supply Chain***

Thursday, May 3, 2012 | 2pm-3pm EST



The market and need for biobased materials for everything from chemical feedstock to full composite reinforcement material is growing every day! How is this supply chain defined? What are the forces governing it? And what are the challenges facing those technologies that need to scale using biobased materials?

Speakers: Sharon Feng, Bayer Material Science and Blake Mosher, Natural Composites, Inc.



### ***Building an Innovative Research Culture: A Case Study of DNA Sequencing***

Thursday, May 10, 2012 | 2pm-3pm EST



Building an innovative research culture is a big challenge for any R&D organization. Entire volumes on innovative models, practices and cultures have been published. But do they work in practice? George Trainor will give us his first-hand account of how an innovative culture led to the discovery of one of the most valuable synthetic organic compounds ever –fluorescence-tagged chain terminators for use in automated DNA sequencing. Glean insights to foster an innovative culture in your own research and laboratory. No experience or magic required!

Speaker: George Trainor, 2011 Awardee, [\*ACS Heroes of Chemistry\*](#)

### ***From Cocoa Buds to Taste buds – The Chocolate Process and Sensory Experience***

Thursday, May 17, 2012 | 2pm-3pm EST



Chocolate began some 2,000 years ago. It's been the gift of gods and the gift of love. It is a cherished comfort food, an aphrodisiac, appetite suppressor, and even a health remedy. So what is the attraction?

Speaker: Greg Ziegler



ACS

Chemistry for Life™

## ACS Webinars™

CLICK \* WATCH \* LEARN \* DISCUSS

Learn more and register at [www.acswebinars.org](http://www.acswebinars.org)

Featured Events – **May 2012** (page 2)

### ***Creating Successful Research Proposals: Tips from the Trenches***

Thursday, May 24, 2012 | 2pm-3pm EST



Second to research, writing proposals is the scientists' life's blood. Yet, many scientists are not trained in the art of grant writing and what various agencies and programs look for. It is time to improve your odds – you too can create standout proposals, communicate your ideas more clearly and effectively and win that major grant!

Speaker: Celia Elliott, University of Illinois at Urbana-Champaign

### ***Pigments, Dyes and Chemical Fingerprints in Art Conservation***

Thursday, May 31, 2012 | 2pm-3pm EST



Is that painting in your attic an original Old Masters print? Is your grandmother's stained glass really 800 years old (Hint: metal nanoparticles)? Using modern instruments, a conservation scientist can identify the chemical make-up of pigment from just a single microscopic particle of the colorant. While chemistry cannot appraise the value of your art, it can help confirm if the item you have is historic (or a fake). Kristin Wustholz of the College of William and Mary will share analytical methods that are applied to art conservation. Do you have a piece for the Antiques Roadshow?

Speaker: Kristin Wustholz, College of William and Mary

#### **The Fine Print**

ACS Webinars™ does not endorse any products or services. The views expressed in this presentation are those of the presenters and do not necessarily reflect the views or policies of the American Chemical Society.



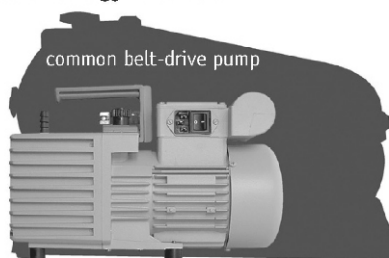
**ACS**  
Chemistry for Life™



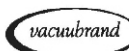
# DIRECTORY OF SERVICES

## Big Vacuum— Small Package!

VACUUBRAND® XS-Series rotary vane vacuum pumps have a footprint one-third that of common belt-drive pumps with comparable capacity. Quiet, corrosion resistant and energy efficient.



VACUUBRAND® RZ 2.5 vacuum



888-882-6730

www.vacuubrand.com  
info@vacuubrand.net

## WANT MORE ARTICLES

When you tell our advertisers that you saw their ads here they have more confidence in our newsletter's viability as an advertising medium. They advertise more. This supports our many activities.

## ELEMENTAL ANALYSIS

◆ C,H,N,O,S,P ◆ Halogens  
◆ Ash ◆ Metals ◆ TOC ◆ TOX  
◆ BTU ◆ ICP ◆ ICP/MS ◆ IC

Custom Analysis ◆ Problem Solving

### HUFFMAN

Laboratories, Inc.  
Quality Analytical Services Since 1936

4630 Indiana Street Golden, CO 80403  
Fon: 303-278-4455 Fax: 303-278-7012  
Chemistry@huffmanlabs.com  
www.huffmanlabs.com

## NMRService 500MHz

\*Mass

\*Elemental Analysis

NuMega Resonance Labs

numegalabs.com P- 858-793-6057

## VOLUNTEER

Committees seeking team members

- ✓ Career Services
- ✓ Chemical Health & Safety
- ✓ Diversity
- ✓ Industrial Relations
- ✓ Legislative Liaison
- ✓ Membership
- ✓ Planning
- ✓ Public Relations
- ✓ Social
- ✓ Student Affiliate Mentor
- ✓ Awards
- ✓ Continuing Education
- ✓ National Chemistry Week
- ✓ Program
- ✓ Communications
- ✓ Tellers
- ✓ Web Page
- ✓ Younger Chemists
- ✓ Women Chemists

Contact the Section Office at  
PhilaACS@aol.com or  
(215) 382-1589

Put "Volunteer" in the subject line  
or leave a message including contact  
information.



## Robertson Microlit Laboratories

*Where speed and accuracy are elemental*

Elemental CHN, S, X, Analysis ( same day service )

Metals by ICP-OES, ICP-MS, A/A

FTIR, UV/VIS Spectroscopy

Ion Chromatography

Bioavailability

Polarimetry

DSC, TGA, melting point

KF Aquametry, Titrimetry

1705 U.S. Highway 46 • Suite 1D • Ledgewood, NJ 07852 • 973.966.6668 • F 973.966.0136  
www.robertson-microlit.com • email: results@robertson-microlit.com

**Rapid Results • Quality • Accuracy • Competitive Pricing**



## Micron Analytical Services

COMPLETE MATERIALS CHARACTERIZATION  
MORPHOLOGY CHEMISTRY STRUCTURE

SEM/EDXA • EPA/WDXA • XRD XRF • ESCA • AUGER • FTIR • DSC/TGA

Registered with FDA • DEA GMP/GLP Compliant

3815 Lancaster Pike Wilmington DE. 19805  
E-Mail micronanalytical@compuserve.com

Voice 302-998-1184, Fax 302-998-1836  
Web Page: www.micronanalytical.com

## ADVERTISING INDEX

ACS	89, 103
Huffman Laboratories	103
Mass-Vac, Inc.	88
Micron Inc.	103
NuMega Resonance Labs, Inc.	103
Robertson Microlit Labs	103
Vacuubrand	103

Advertising: Vince Gale, MBO Services, P.O. Box 1150, Marshfield, MA 02050; phone: (781) 837-0424  
email: vincegale@mboservices.net

**PHILADELPHIA SECTION, ACS  
2012 CALENDAR OF EVENTS**

Date	Event	Locations
Tuesday, May 8	Chromatography Forum of the Delaware Valley: Maxim Berezovski, University of Ottawa: <i>Capillary Electrophoresis for the Quantitation of Viruses, microRNAs and Affinity Interactions</i>	Christiana Hilton Newark, DE <a href="http://www.cfdv.org/">http://www.cfdv.org/</a>
Wednesday, May 9	Chemical Consultants Network joint with American Institute of Chemical Engineers: Deborah L. Grubbe: <i>Space Travel in the 21<sup>st</sup> Century – Safety Strategies and Direction</i>	The Cynwyd Club Bala Cynwyd, PA <a href="http://www.chemconsultants.org">www.chemconsultants.org</a> or <a href="http://aiche-philadelphia.org/">http://aiche-philadelphia.org/</a>
Thursday, May 10	Joseph Priestley Society, Ralph Connor Memorial Lecture: Steven Deutsch, Rhodia Rare Earth Systems: <i>Rare Earths: How to Navigate the Rough Seas</i>	12 Noon, Chemical Heritage Foundation Philadelphia, PA <a href="http://www.chemheritage.org">www.chemheritage.org</a>
Monday, May 14	Delaware Valley Mass Spectroscopy Discussion Group: Gary Glish, University of North Carolina: <i>The New Tandem MS: Ion Mobility Spectrometry/Mass Spectrometry</i>	Villanova conference Center Villanova, PA <a href="http://science.widener.edu/svb/msdg/">http://science.widener.edu/svb/msdg/</a>
Thursday, May 17	Career Services Committee: Networking Workshop	La Salle University Montgomery County Center Plymouth Meeting, PA <a href="http://acsphillycareerworkshop3.eventbrite.com">http://acsphillycareerworkshop3.eventbrite.com</a>
<b>Thursday, May 17</b>	<b>Teaching Awards to Dr. Scott Best, Conestoga High School and Dr. Linda Mascavage, Arcadia University</b>	<b>The Desmond Hotel</b> <b>Malvern, PA</b> <a href="http://www.desmondgv.com/">http://www.desmondgv.com/</a>
Wednesday, May 3	Catherine Jackson, 2011-2012 Gordon Cain Fellow, Chemical Heritage Foundation: <i>Beyond Genius, Before Theory: Recovering the Lost World of Practice in 19<sup>th</sup> Century Chemistry</i>	Chemical Heritage Foundation Philadelphia, PA <a href="http://www.chemheritage.org/visit/events/public-events/2012-05-23-fellow-in-focus.aspx">http://www.chemheritage.org/visit/events/public-events/2012-05-23-fellow-in-focus.aspx</a>
Thursday, May 24	Philadelphia Organic Chemists Club: Sarah E. Reisman, California Institute of Technology: <i>New Methods and Strategies for the Total Synthesis of Polycyclic Natural Products</i>	University of Pennsylvania Philadelphia <a href="http://www.pocclub.org/">http://www.pocclub.org/</a>
<b>Thursday, June 21</b>	<b>Fifty-Year Luncheon</b>	<b>TBA</b>

43<sup>rd</sup> MARM  
*Chemistry on the Chesapeake*  
May 31 – June 2, 2012  
University of Maryland, Baltimore

ACS Fall National Meeting  
August 19-23, 2012  
Philadelphia, PA