

the Catalyst



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February 2014
Volume 99, No. 2



February Meeting
Dr. Guy Crosby
Cooking with Chemistry

HIGHLIGHTS

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ADVANCE NOTICE

MARCH MEETING

Thursday, March 20, 2014

Edgar Fahs Smith Memorial Lecture
Carolyn Bertozzi, University of California Berkeley
at the University of Pennsylvania

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

the Catalyst

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**Comments
From
The
Chair**



Dr. Steven A. Fleming

We had a pleasant and informative January meeting of the Philadelphia Local Section of the ACS. It was all about Project SEED. There were three Project SEED alumni (Constance Ewing, Jin Gao and Mazi Richburg) who reported on their experiences in the program. We also heard from Melissa Ramirez, who is an ACS

Scholar at UPenn. It was interesting to hear about each student's passion for science and their desire to learn. Keep in mind, Project SEED isn't just a mechanism for bringing more students into chemistry, it is about providing a real research lab opportunity for high school students who might not otherwise have such a chance. Constance, Jin and Mazi have each taken a different route after their Project SEED stint.

It was a good meeting. One of the obvious take-home messages from the evening of learning about Project SEED is that there are three groups of chemists who need to be involved.

- 1) Chemists can provide financial support for Project SEED.
- 2) Chemists (particularly high school teachers) can identify potential students/candidates for Project SEED.
- 3) Chemists involved in research can be mentors for Project SEED participants.

I was disappointed by recent information showing very low Project SEED participation in the Philadelphia area. In particular, there is a need for local researchers to be mentors. If you are interested and able to work with high school students, please contact Cecilia Hernandez (c_hernandez@acs.org). If you are looking for a way to promote Project SEED in the Local Section, consider volunteering as the Philadelphia Project SEED Coordinator. Let me know if you are interested. You can learn more about Project SEED by checking out the ACS video on Project SEED: www.acs.org/seed

I hope to see you at the February Local Section meeting. Guy Crosby will join us as we learn more about *Cooking with Chemistry*. The details for the meeting are on page 26 of *the Catalyst*.

DELAWARE VALLEY SCIENCE FAIRS

It's not too late! Judging for the Delaware Valley Science Fairs will be starting in early March. Judges and mentors are always needed. Check the website www.dvsf.org for more information and to volunteer.

FEBRUARY MEETING
THE PHILADELPHIA SECTION,
AMERICAN CHEMICAL SOCIETY

presents

Dr. Guy Crosby
guy@cookingscienceguy.com

Cooking with Chemistry

Thursday, February 20, 2014

7:00 PM

Musser Auditorium, Pfahler Hall
Ursinus College
Collegeville, PA 19426

Dinner at 5:45 PM
Bear's Den, Wismer Center

Dinner cost: \$20; Students with ID: \$10

RESERVATIONS should be made by calling Mrs. Libby Harper at the Section Office, (215) 382-1589, by **5:00 PM** on **Thursday, February 13th**. Cancellations, if necessary, cannot be accepted after **NOON** on **Tuesday, February 18th**. **UNCANCELLED RESERVATIONS WILL BE BILLED.**

DIRECTIONS at <http://www.ursinus.edu/netcommunity/page.aspx?pid=344>. Campus map at <http://www.ursinus.edu/netcommunity/page.aspx?pid=1026>

FREE PARKING is available in the West Lot #5 off 9th Avenue.

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

SPEAKER'S ABSTRACT AND BIOGRAPHY

Dr. Guy Crosby

Cooking with Chemistry

Abstract: Cooking is all about chemistry. Ever wonder why vegetables become soft, beans burst, egg whites foam, onions make us cry, water is “hotter” than oil, and John Hodge deserves more recognition? Come and learn how chemistry answers these questions, and more. The chemistry of cooking can be largely explained in terms of the four macronutrients that make up food: water, carbohydrates, proteins and fats. Flavor, texture and the nutritional quality of food are the most important attributes in determining what we choose to eat. In this lecture the impact of cooking on the development of texture and flavor will be discussed in terms of the chemistry of the four macronutrients.

Biography: Dr. Guy Crosby developed an early fascination with chemistry in high school. With the help of his father he built a small laboratory in the basement of their home where he first experimented with the chemistry of food. Guy went on to obtain a BS in chemistry from the University of New Hampshire, and PhD in organic chemistry from Brown University, where he studied the chemistry of cholesterol. Following graduate school he moved to Palo Alto, CA to spend two wonderful years as a postdoctoral research associate at Stanford University, where he met other organic chemists interested in food, wine and cooking. Soon a position opened at a local Silicon Valley startup company developing new food ingredients where Guy was able to combine his expertise in organic chemistry with food science.

Ten years later he moved to Princeton, NJ to work for FMC Corporation, initially in the Agricultural Products Division, then as Director of R&D for the Food Ingredients Division, establishing a global network of laboratories. One more move brought him home to Massachusetts in 1996 where Guy worked as Vice President of R&D for Opta Food Ingredients, Inc. until the end of 2001, culminating over 30 years in food-related research and development.

Instead of retiring, Guy launched a new career in teaching. He started as a visiting lecturer teaching food science in the Department of Nutrition at the Harvard School of Public Health, and shortly thereafter with the Department of Chemistry and Food Science at Framingham State University, where he taught chemistry and food science as a full-time associate professor beginning in 2005. In August of 2011 he retired from full-time teaching, but continues teaching as an adjunct associate professor at Harvard. In that time he has focused his research on the chemistry of food and taught food science to more than 350 students.

Looking for new avenues to combine science with his enthusiasm for cooking, Guy approached *Cook's Illustrated Magazine* in 2004 to see if they needed help with food science. The magazine prides itself in taking a scientific approach to recipe development. In early 2005 he began with the magazine as a consulting editor, and then as Science Editor a few years later. Six years ago Guy began recording a small number of science segments for the magazine's PBS

television show, *America's Test Kitchen*. Since then he has recorded many television science segments with *America's Test Kitchen* founder Christopher Kimball, and has recently worked with Chris to provide science commentary for ATK's new radio program on NPR.

Guy is a member of the ACS, Institute of Food Technologists, and American Society for Nutrition. He is also an external advisor for the first of its kind EcoGastronomy program at the University of New Hampshire. He has published 42 scientific papers, is the inventor on 17 US patents, and co-author of a new book on *The Science of Good Cooking*, published in the fall of 2012 by *America's Test Kitchen*.

On April 1, 2013 Guy was officially included in the first group of Certified Food Scientists (CFS) approved by the Institute of Food Technologists.

NEWS ATOMS—*Alan Warren*

Amos B. Smith, III, the Rhodes-Thompson professor of chemistry at the University of Pennsylvania, will receive the New York section's William H. Nichols medal in March during a symposium to recognize Smith. The Nichols medal was established in 1903 by this former president of the ACS to honor those who distinguish themselves in chemical research and development and who support science education.

DEATHS

Pegram Anne Johnson, biochemist, November 25, 2013 at 62. She was employed by FMC Corporation's BioProducts Division in Rockland, ME and in Philadelphia. She managed product and sales development for specialty gelling polymers for 12 years until 1999. She then became senior product manager for Cambrex Bio Science in Walkersville, MD, for polymers used in separating proteins and DNA. She enjoyed drawing, painting and modern dance as well as hiking, kayaking and skiing.

Walter H. Seitzer, research chemist, November 27th at 91. Following service in the Army in Europe during WWII, he completed his studies and joined Sun Company as a research chemist. His field was catalytic upgrading of petroleum to fuels and chemicals. Seitzer authored numerous technical papers and patents. He was former chairman of the Catalyst Society of Philadelphia and an emeritus member of ACS. During the 1970s and '80s he served on the board of the Philadelphia Science Council. He was an avid gardener, orchardist and beekeeper.

Jack Weaver, chemical engineer, December 11th at 76. He joined Rohm and Haas research in 1969 and retired in 1990 as vice president for environmental health and safety. He then worked for eight years for the Institute of Chemical Engineers in New York. Weaver was a volunteer science presenter at the Franklin Institute and a docent at the Philadelphia Zoo.

I. Victor Mattei, former research chemist, December 27th at 88. He was employed at Rohm and Haas' Spring House laboratory for over 40 years, working with acrylic polymers, among other things.

CALL FOR NOMINATIONS

The 21st Annual Philadelphia Section, American Chemical Society AWARDS FOR EXCELLENCE IN PRE-COLLEGE TEACHING

The Philadelphia Section of the American Chemical Society will honor two outstanding science teachers from the Delaware Valley with its Awards for Excellence in Pre-College Science Teaching. One award will be given to a full-time educator involved in teaching science in grades K-8. The second award will be given to a full-time educator at the secondary level (grades 9-12) who teaches chemistry. Nominees must teach in the Philadelphia Section's geographic area (Philadelphia, Montgomery, Delaware, Chester, Bucks, Burlington and Camden counties).

Nominations for 2014 will be accepted until Thursday, February 27, 2014. The nomination package should consist of a letter of nomination, the nominee's resume and at least two letters of recommendation. Other supporting information, such as students' comments, is welcome. However, the total nomination package should not exceed 30 pages. The nomination package may be emailed to PhilaACS@aol.com or a copy of the nomination materials may be mailed to:

Dr. William R. Smith
Chair, Awards Committee
Philadelphia Section, ACS
Department of Chemistry
University of Pennsylvania
Philadelphia, PA 19104-6323

For more information, please contact the Philadelphia Section, ACS office:

phone: (215) 382-1589 or email: PhilaACS@aol.com

Award recipients will be honored at our May 2014 Section meeting with a certificate and an honorarium.

CALL FOR NOMINATIONS



**The 12th Annual
Philadelphia Section, American Chemical Society
AWARD FOR EXCELLENCE IN UNDERGRADUATE TEACHING IN
CHEMICAL SCIENCES**

The Philadelphia Section of the American Chemical Society will honor an outstanding undergraduate teacher from the Delaware Valley with its Award for Excellence in Undergraduate Teaching in Chemical Sciences. The award will be given to a full-time educator involved in teaching an undergraduate course in the chemical sciences (chemistry, biochemistry). Nominees must teach in an institution that is within the Philadelphia Section's geographic area (Philadelphia, Montgomery, Delaware, Chester, Bucks, Burlington and Camden counties).

Nominations for 2014 will be accepted until Thursday, February 27, 2014. The nomination should consist of a letter of nomination, the nominee's resume and at least two letters of recommendation. Other supporting information, such as students' comments, is welcome. However, the total nomination package should not exceed 30 pages. The nomination package may be emailed to PhilaACS@aol.com or the nomination materials may be mailed to:

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Department of Chemistry
University of Pennsylvania
Philadelphia, PA 19104-6323

For more information, please contact the Philadelphia Section, ACS office:

phone: (215) 382-1589 or email: PhilaACS@aol.com

The award recipient will be honored at our May 2014 Section meeting with an honorarium and a plaque.

2009 ACS FELLOW DR. PAUL S. ANDERSON

During a career that has spanned almost 40 years Paul S. Anderson has received many awards. In 2006 he received the Priestley Medal, ACS's highest honor. As a result of receiving this award he was part of the inaugural group of ACS Fellows selected in 2009. Some of the other awards he has received are the Philadelphia Section Award in 1992, Perkin Medal in 2002, and in 2003 the NAS Award for Chemistry in Service to the Society. In 1997 Paul served as ACS President.

Paul received a BS in chemistry from the University of Vermont in 1959. In 1963 he received his PhD in chemistry from the University of New Hampshire. In 1963-1964 he was a NIH Postdoctoral Fellow at Cornell. He then joined Merck and rose through the ranks and served as Vice President of Chemistry from 1988-1994. In 1994, he retired from Merck and moved to DuPont Pharmaceuticals serving as Sr. Vice President of Chemical and Physical Sciences from 1994-2001. Paul served as Vice President of Drug Discovery at Bristol-Myers Squibb from 2001-2002.

During his career Paul and his collaborators synthesized numerous compounds that became leading pharmaceutical products. He has published over 100 papers and has 19 patents. At Merck he was part of teams that led to the discovery of Crixivan and Sustiva. During retirement Paul has been asked to serve on the Scientific Advisory Board or the Board of Directors of many companies such as Albany Molecular Research, Vertex, Acadia, Centrose, and Kosan Biosciences, among others.

The article about Paul receiving the Priestley Medal can be found at <http://pubs.acs.org/cen/news/83/i24/8324paulanderson.html> and was published in *C&EN* on June 13, 2005.

CHEMICAL CONSULTANTS NETWORK

FEBRUARY 12, 2014 MEETING

Visit our website at www.chemconsultants.org

If you are not already a CCN member, please consider joining by signing up at www.chemconsultants.org.

We have recently enhanced our website and will be adding many more features to serve our membership as the year progresses. For just \$30 per year you get your own webpage to promote yourself. Whether you are in transition between jobs, embarking on a career as a consultant or starting your own business you will find joining and networking with us most valuable. We look forward to seeing you at this and our subsequent meetings.

Date & Time: Wednesday, February 12th, at the Cynwyd Club, Bala Cynwyd, PA; Networking, 5:30 PM; Dinner, 6:30 PM; Talk and Business Session, 7:30 PM.

Resources for Consultants

John Newport

Abstract: Finding work and having access to free or inexpensive resources are key imperatives for those of us in the consulting community. In this presentation these topics will be addressed from both a personal perspective and together it is hoped with generous input from the audience. Subsequently the Resources section on the website will be fully updated for the benefit of all.

Biography: Dr. John Newport, the current Chair of CCN, provides consulting and R&D services through Chemventive LLC and ChemInnoLab LLC, in which he is a partner. Previous to this he was a Senior Research Fellow at Hercules Incorporated where, in his 34-year career there, he worked on the R&D side of the fibers, film, RIM, resins and paper chemicals businesses. His areas of expertise cover polymer chemistry, surface chemistry, emulsions, rheology and transport phenomena.

Location: The Cynwyd Club, 332 Trevor Lane, Bala Cynwyd, PA 19004. From I-76, drive S on City Line Ave. (US Rte. 1). Turn right on Conshohocken State Rd. (Rte. 23); stay in right lane. After second light watch for white left-turn arrows painted on street (about 0.14 mile). Do not follow Rte. 23 left at turn but instead go straight ahead onto Llandrillo Rd. (passing to the right of Valley Press printing). After one block bear left onto Trevor Lane at stop sign. Clubhouse and parking are on the left. Please park in lot if space is available; otherwise park on Trevor Lane. If lost, call the club at 610-667-4524, ext. 2. [MAP](#)

Reservation: To make or cancel a dinner reservation login to chemconsultants.org, or e-mail 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 & sodas), is \$30 by Saturday, February 8th, \$35 afterwards. Late reservations and walk-ins subject to availability. No-shows will be invoiced. Dietary restrictions accommodated on a limited basis. There is no charge for talk only, but registration is suggested using contact information above.

JANUARY MEETING: A PANEL OF FORMER PROJECT SEED GRADUATES

ACS held its January meeting at Temple University's Diamond Club. Members heard from three graduates of the Philadelphia Section's Project SEED program and one participant of the ACS Scholars program. Both are key outreach programs funded and organized by ACS to increase involvement of underrepresented minority groups in Chemistry and Chemistry-related fields. A discussion followed the presentations by the speakers on restarting the Project SEED program which in the recent years has stalled due to the absence of a local coordinator and mentors. ACS is interested in re-invigorating the program. There are a large number of research hubs in the city yet Philadelphia falls short of Pittsburgh in nurturing Project SEED graduates.

What is Project SEED?

Project SEED is a paid summer internship program for low income high school rising juniors and seniors in underrepresented ethnic groups. The program matches students with a mentor from nearby universities and companies; it typically lasts 8-10 weeks and students receive a stipend. ACS also helps fund Project SEED graduates' college expenses should they decide to go through a non-renewable scholarship during their first year and a three-year renewable scholarship for second year students continuing their college education in Chemistry or a related field.

The goal of the program is to motivate bright students to pursue a college degree when they otherwise would not and help them develop the skills to excel. In the 2012 student survey, a large percentage of Project SEED graduates expressed that the program helped them develop skills, responsibilities and better study habits, motivated them in continuing education after high school, and cultivated greater interest in scientific/technical areas. When asked about their education expectations, 19% said they expected to complete some college, 14.5% said 4-year college, and 66% said graduate school.

For the program to continue, it needs mentors and a coordinator. A mentor will be responsible for providing technical and safety training, as well as sharing their life experiences and technical expertise, and a coordinator is needed to connect mentors with high school teachers and students.

If you are interested and able to work in either capacity, please contact Cecilia Hernandez (c_hernandez@acs.org)

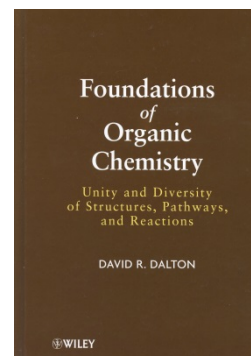
Speaker Panel

Mazi Richburg
Constance Ewing
Jin Gao
Melissa Ramirez

BOOK REVIEW—Alan Warren

Foundations of Organic Chemistry by David R. Dalton. 1434 pages, 7 by 10 inches, hardbound, John Wiley & Sons, Hoboken, NJ. ISBN 978-0-470-47908-7, \$149.95.

Temple University professor Dalton's textbook has a complete title of *Foundations of Organic Chemistry: Unity and Diversity of Structures, Pathways, and Reactions*. He has reorganized the fundamentals of the vast field of organic chemistry into new ways of presenting a complex topic. His text is broken into three major areas of Background, Middleground and Foreground.



Part I, Background, begins with an introduction to structures and bonding, followed by a discussion on spectroscopy. Other introductory chapters focus on nomenclature of hydrocarbons, dynamics, and classes of organic compounds. The last area leads the student through the fields of hydrocarbons, organic halides, alcohols, ethers, thiols, amines, solvents, and acids and bases. It ends with a section on computational methods emphasizing the MM force field.

Part II, Middleground, is devoted to reactions—oxidation, reduction, substitution, addition, elimination, and rearrangement. These reactions are described for various groups of compounds like hydrocarbons; alkyl, alkenyl, and aryl halides; alcohols, enols, and phenols; ethers; and selected thiols and thioethers. Subsequent chapters address reactions of aldehydes and ketones, carboxylic acids, amines, and some organophosphorus and organosilicon chemistry.

Part III, Foreground, moves on to more complex reactions of carbohydrates and steroids; amino acids, peptides, and enzymes; alkaloids and other heterocyclic compounds; a description of genetic code principles; and a section on tetrapyrrolic cofactors. One appendix reviews the Schrödinger equation and another briefly mentions the literature sources for organic chemistry.

A detailed index of over 40 pages concludes the work. The author provides a few problems at the end of each discussion topic to reinforce the material presented. With a book of nearly 1500 pages, a thin but opaque paper is needed. Unfortunately the choice for this book permits shadow bleed-through of text and illustrations that can be disconcerting.

Love Potion # 9

The Chemistry of Scent & Fragrance

Lure a loved one with chemistry this February!



Tuesday, Feb. 11, 2014

- 6:15 PM **Networking**
- 7:00 PM **Webinar**
- 7:40 PM **Live Q&A**

Speakers:

Ms. Virginia Hutchins,
Perfumer, Procter & Gamble

Dr. Jianjun Li,
Principal Scientist, Procter & Gamble

Dr. Diane Schmidt,
Section Head R&D, Procter & Gamble
2014 ACS President-Elect



Hill Conference Room

**LeBow Engineering Building
(31st and Market)
Drexel University**

Hands-on Demonstration

at 6:30 PM

**by our own Ivona Sasimovich of
International Flavors and
Fragrances**

A Collaboration with ACS Younger Chemists Committee, ACS Careers, and ACS Webinars

653nd BOARD OF DIRECTORS' MEETING

Thursday, October 17, 2013
Beury Hall, Temple University, Philadelphia, PA 19122

Present: David J. Cichowicz, Melissa Betz Cichowicz, Deborah H. Cook, Ella Davis, Rick Ewing, Steven Fleming, Douglas Hausner, Alan Heldon, John (J.P.) Northrop, Thomas S. Straub, Kathryn Lysko, Christine McInnis, Kathleen Shaginaw, William Smith, and James Tarver.

Also: Elisabeth Harper, Carol Jean Bruner and Joe Martino.

Excused: Anne DeMasi, Cynthia Palmer, Judy Summers-Gates, Denise Thomas, and Victor J. Tortorelli.

The October Meeting of the Philadelphia Section Board of Directors was called to order by the Chair at 4:15 p.m. A quorum was present.

1. Approval of Minutes

The September Board Meeting Minutes were approved as amended at Other Business No. 7. with no nays or abstentions.

2. Committee Reports

A. Career Services Workshop Joe Martino acsphillycareerservices@gmail.com

J. Martino reported a "Regional Event" was planned at Temple University for Saturday, October 19th at 2-6 p.m. The event is being widely publicized.

November 5th Networking Event, 6-8 p.m., is being co-hosted with Y.C.C. at the Great American Pub in Conshohocken, PA.

Career Services is considering a pilot for a Job Club for Chemists to launch in 2014.

At ACS National's request, the Section Career Services Committee is considering involving more consultants, especially older (> 35), into career services.

ACS National has expressed interest in the recruitment of new career consultants for the ACS Career Consultant program. Though any ACS member who is interested in serving as an ACS Career Consultant may apply, a target demographic are chemists who are 35+ years old and toward the end of their service with YCC.

B. Younger Chemists Committee Christine McInnis Christine McInnis, by telephone, reported:

a. The October Webinar in a Box was held at Drexel on October 8. The event kicked off at 6 p.m.

See page 194 of the November *Catalyst* for the full report.

b. Also noted; the above-reported November 5th Networking Event in collaboration with Career Services.

c. The Poster Session Monday, March 24, 2014

At the University of the Sciences gymnasium

Free parking, trolley access

The University will be donating poster boards and other supplies. Abstract deadline is January 15, 2014.

d. October 19, 2013, A Harry Potter Event at Chestnut Hill

3. Officers' Reports

A. Chair JP Northrop John.northrop@anton-paar.com.

The Chair will host the December meeting of the Board. The date is to be determined.

Brief discussion of Finance and Budget Committee changes. Victor Tortorelli will chair that committee with continuing support from Jim Falcone, who will consult.

Work on the Section's Work Manual is continuing. The portions of the Manual relevant to the function of various Section committees will be forwarded to the committees for comment during 2014.

B. Chair-Elect S. Fleming sfleming@temple.edu.

The Chair-Elect thanked Carol Jean Bruner for her work in making the award ceremony that follows tonight's Board Meeting possible and a success.

High School Teaching Award winner will be submitted to MARM for their teaching award. The process was very competitive this year.

The Chair-Elect advised of a need to increase Section budgeting for student travel awards to ACS National Meetings.

The current amount budgeted by the Section is \$500.00 annually. An increase to \$2000.00 is proposed. Allowing for the greatest flexibility in varying annual meeting needs, the proposed \$2000 could be allocated to travel expenses for a single meeting or both meetings and for one or more groups. Per example, \$1000 could be allocated for Spring National Meeting needs with an additional \$1000 for the Fall Meeting. Alternatively, \$1000 each might be awarded to two groups for one meeting.

In discussion of this proposal it was noted that the Section's travel funding is supplemental, with the principal amount coming from the school and/or other sources within the ACS. Guidelines are already in place to facilitate such a change.

The actual amount that can be budgeted needs to be determined based on all other budget needs.

2014 Program Budget for 2014 Meetings. A handout itemized meeting costs per month.

Total meeting costs budget at \$6050 for the 2014 year budget.

The Chair-Elect is looking for former/current SEED students for participation in the January 2014 Section meeting. Please contact the Chair-Elect at the above-address.

C. Secretary A. Heldon alanheldon@comcast.net

The Secretary reported with pleasure his participation in the September 25, 2013 annual meeting of the Friends of Joseph Priestley House at Priestley's house in Northumberland, Pa. The American Chemical Society can take pride in its role in keeping the Priestley House open in spite of draconian state budget cuts just a few years ago. Beginning this year, Priestley House is able to display reproduc-

tions of Priestley's original glassware reproduced by Corning under commission from the ACS. For historical purposes and to give a better understanding of chemistry in the eighteenth century, a reproduction of Priestley's own laboratory within the Northumberland house was opened this year. It is worth the 2.5 hour drive.

D. Treasurer D. Cichowicz cichowicz@lasalle.edu

Catalyst advertising income is down about \$7000 but this is minus commissions of about \$2000. But the commission of about \$2000 is saved, reducing the total loss. No transfers this month into or among any funds.

The Section has more than enough funding available for current needs. The Section might not need to allocate additional funding for 2014 and will be able to roll over funds as in the last fiscal year.

Investments are still providing a positive yield.

Motion to accept Treasurer's Report made and accepted without nays or abstention.

4. Other Business

1. Kathy Shaginaw — The next PAGES™ is November 2, Chestnut Hill College, 9:30 to 2:00. Volunteers are needed. The keynote speaker will be Joan Amatriek of Bristol-Myers Squibb.

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2. D. Cichowicz advises that budget submissions are due as of the instant meeting. Late budget submissions will be accepted on or before November 14th.

3. It is with great pleasure that, on the occasion of the 653rd Meeting of the Board of Directors of the Philadelphia Section, the Section conferred the Volunteer of the Year Award for 2013 on Kathleen Shaginaw for her boundless and unselfish service.

There being no additional business before the Board, on motion, the meeting was adjourned at 5:06 PM.

Respectfully submitted,
Alan R. Heldon, Secretary alanheldon@comcast.net

Philadelphia Section email: PhilaACS@aol.com

TURNING WASTE INTO POWER WITH BACTERIA — AND LOOFAHS

Posted by [ACS Green Chemistry Institute®](#) in [Green Chemistry: The Nexus Blog](#) on Dec 16, 2013 1:11:34 PM

Loofahs, best known for their use in exfoliating skin to soft, radiant perfection, have emerged as a new potential tool to advance sustainability efforts on two fronts at the same time: energy and waste. The study describes the pairing of loofahs with bacteria to create a power-generating microbial fuel cell (MFC) and appears in the ACS journal *Environmental Science & Technology*.

Shungui Zhou and colleagues note that MFCs, which harness the ability of some bacteria to convert waste into electric power, could help address both the world's growing waste problem and its need for clean power. Current MFC devices can be expensive and complicated to make. In addition, the holes, or pores, in the cells' electrodes are often too small for bacteria to spread out in. Recently, researchers have turned to plant materials as a low-cost alternative, but pore size has still been an issue. Loofahs, which come from the fully ripened fruit of loofah plants, are commonly used as bathing sponges. They have very large pores, yet are still inexpensive. That's why Zhou's team decided to investigate their potential use in MFCs.



When the scientists put nitrogen-enriched carbon nanoparticles on loofahs and loaded them with bacteria, the resulting MFC performed better than traditional MFCs. "This study introduces a promising method for the fabrication of high-performance anodes from low-cost, sustainable natural materials," the researchers state.

The authors acknowledge funding from the [National Natural Science Foundation of China](#).

SINGLE CELL ANALYSIS

WEDNESDAY, MARCH 12, 2014
9:00AM-5:30PM

SMILOW CENTER
FOR TRANSLATIONAL RESEARCH
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SYMPOSIUM

Free, but registration required.
<http://www.genomics.upenn.edu/PGFsinglecell>

Questions? events@genomics.upenn.edu

Single cell analysis is an emergent area of research that offers powerful new approaches to understand how individual cells in the same tissue differ and how that variability affects biological function. Single cell analysis is revolutionizing our understanding of cells and their dynamics. Join us for a day of presentations on cutting edge research by leading investigators in single cell analysis.



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**THE AMERICAN CHEMICAL SOCIETY & THE YOUNGER CHEMISTS
COMMITTEE, PHILADELPHIA SECTION**

are hosting a poster session

Younger Chemists Committee Annual Poster Session

Monday, March 24, 2014

6:00-9:00 PM

Athletic Recreation Center, University of the Sciences

Bobby Morgan Arena

897 S. 43rd St

Philadelphia, PA

FINAL CALL FOR ABSTRACTS

The ACS and YCC are calling all scientists to submit abstracts for the annual YCC poster session. The FINAL registration date is February 15th. Please submit abstracts at www.PhillyYcc.org. Cash prizes will be given to scientists who clearly present and show an in-depth knowledge of their research. The judging rubric can also be found on the website. Please email Renee Harris at rharris1004@gmail.com with questions. If you plan on attending the poster session, and are not presenting a poster, the deadline for registration will be March 1st.

Interested in becoming a judge for the ACS poster session? Do you have a background or interest in science? Are you 40 years old or younger? If so, the YCC wants you! Please visit our website www.PhillyYcc.org/judge.php to register as a judge or email Renee Harris at rharris1004@gmail.com.

DIRECTORY OF SERVICES

*Residential School on Medicinal Chemistry
and Biology in Drug Discovery*
June 8-13, 2014
Drew University, Madison, NJ

This graduate level course concentrates on the fundamentals that are useful in drug discovery spanning initial target assay evaluation through clinical development. Several case histories of recent successful drug development programs will also be presented. The five-day program covers:

| | |
|-----------------------------|-------------------|
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| Lead ID & Optimization | GPCRs |
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W. Greenlee, V. Gullo and R. Doll – Co-organizers

For more information and application forms:
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CAREER DEVELOPMENT

Being a part of one of our teams can help you develop organizational and meeting skills as well as help you to network with people from the largest area companies. Public Relations, such as sending out meeting notices and press releases, can help you to develop a network and help you get noticed!

All committees are looking for new members and several are looking for "take charge" chairs. Some, like the Teller's Committee, involve minimal work—one night per year and pizza provided. Others, like positions on Communications or Social Committees, involve one or two hours per month.

Committee details can be found at:
<http://www.membership.acs.org/p/philadelphia>

or by calling Mrs. Libby Harper at
the Philadelphia Section Office
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PHILADELPHIA SECTION, ACS

2014 CURRENT CALENDAR OF ACTIVITIES

| Date | Event | Locations |
|-------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Tuesday, February 4 | PA BioPharma Networking Group Meeting | Pepper's King of Prussia, PA https://pabpng-02042014.eventbrite.com |
| Wednesday, February 5 | Free LRIG Symposium: Lab Automation: <i>The View from the Bench</i> | Holiday Inn Somerset, NJ http://bit.ly/1bXUoII |
| Monday, February 10 | Delaware Valley Mass Spectral Topics Discussion Group: Matthew Szapacs, GlaxoSmithKline: <i>Bioanalytical Approaches for Large Molecule Quantitation in Drug Discovery</i> | Room 154, Mendel Hall Villanova University Villanova, PA http://science.widener.edu/svb/msdg/ |
| Tuesday, February 11 | Webinar Event: Jianjun Li, Diane Schmidt, Virginia Hutchins, Proctor & Gamble and Ivona Sasimovich, International Flavors & Fragrances: <i>Love Potion #9: The Chemistry of Scents and Smells</i> | Hill Conference Rm, LeBow Engineering Bldg, 31 st & Market, Drexel University Philadelphia, PA http://www.phillyYcc.com/ |
| Wednesday, February 12 | Chemical Consultants Network: John Newport, Chemventive LLC and ChemInnoLab LLC: <i>Resources for Consultants</i> | The Cynwyd Club Bala Cynwyd, PA www.chemconsultants.org |
| February 14-22 | Engineers Week in Philadelphia | http://aiche-philadelphia.org/events |
| Tuesday, February 18 | Chromatography Forum of the Delaware Valley: Christopher Welch, Merck & Co.: <i>Chromatographic Separations of Closely Related Compounds</i> | Holiday Inn Lansdale Kulpsville, PA http://www.cfdv.org/ |
| Tuesday, February 18 | Distinguished Alumni Award Symposium: Joanne Stubbe, MIT | University of Pennsylvania Philadelphia, PA http://www.chem.upenn.edu/events-list |
| Thursday, February 20 | Dr. Guy Crosby, guy@cooking-scienceguy.com: <i>Cooking with Chemistry</i> | Ursinus College Collegeville, PA |
| Wednesday, February 26 (Postponed from January 21) | Delaware Valley Section, American Institute of Chemical Engineers: Bruce D. Rubin, Rubin Consulting, LLC: <i>Annual CEO Lecture</i> | The Union League Philadelphia, PA http://aiche-philadelphia.org/ |
| Thursday, February 27 | Philadelphia Organic Chemists Club: Amos B. Smith III, University of Pennsylvania: <i>Evolution of Anion Relay Chemistry (ARC): Design, Synthesis and Validation of Recoverable Siloxane-Based Transfer Agents for Palladium-Catalyzed Cross-Coupling Reactions</i> | Carolyn Hoff Lynch Lecture Hall Chemistry Building University of Pennsylvania Philadelphia, PA http://www.pocclub.org/ |
| Wednesday, March 12 | Single Cell Analysis Symposium | University of Pennsylvania, Philadelphia, PA http://www.genomics.upenn.edu/PGFIsinglecell |
| Thursday, March 20 | Edgar Fahs Smith Lecture: Carolyn Bertozzi, University of California, Berkeley | University of Pennsylvania Philadelphia, PA |
| Monday, March 24 | Younger Chemists Committee Annual Poster Session | University of the Sciences Philadelphia, PA PhillyYcc.org |
| Saturday, April 5 | Philadelphia Girls Enjoying Science Program for Sixth Grade Girls (PAGES™) | Chestnut Hill College Philadelphia, PA www.pagesprogram.org |
| Thursday, April 17 | Undergraduate Scholastic Achievement Awards | TBA |
| Thursday, May 15 | Philadelphia Section Teaching Awards | TBA |
| Thursday, June 19 | Luncheon Honoring Our Fifty- and Sixty-year Members | TBA |
| Thursday, September 18 | TBA | TBA |
| Thursday, October 16 | Philadelphia Section Award | TBA |
| Wednesday, November 12 | Ulliot Lecture: George Whitesides, Harvard | Chemical Heritage Foundation |

247th ACS Spring National Meeting, March 16-20, 2014, Dallas, TX