

the Catalyst



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May 2016
Volume 101, No. 5



**May Meeting
Dr. Charles W. Bamforth**

HIGHLIGHTS

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ADVANCE NOTICE

JUNE MEETING

**Thursday, June 16, 2016
Luncheon Honoring 50- and 60-Year Members**

Chemical Heritage Foundation

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

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Comments From the Chair



Dr. Rick Ewing

The Spring National ACS meeting in San Diego was a great success. There were over 16,000 attendees including nearly 6,000 being students. It was a particularly nice venue counter-balanced with the pace that ACS National keeps 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.

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 participate in chemical topics at all levels: scientific, educational, chemical policy, chemistry advocacy and general interest topics. If you are interested in volunteering to help the Philadelphia Section at the ACS National meeting in Philadelphia, please contact the Section Office, Daria Walsh, at Philaacs@gmail.com.

Our May meeting celebrates teachers, as we will present the Awards for Excellence in Pre-College and Undergraduate teaching. The event will occur on May 12th at the University of the Sciences, Philadelphia, PA. We are pleased and excited to have Professor Charles W. Bamforth giving a lecture as part of the event. Charlie is the Distinguished Professor, Department of Food Science and Technology at University of California, Davis. He is also the President, Institute of Brewing and Distilling. The title of his talk is *The Captivating Chemistry of Beer*. More details about the event are contained in this edition of *the Catalyst*.

NOTICE

The Philadelphia Section ACS will be transitioning the Section's email account to a gmail address: PhilaACS@gmail.com. Kindly start using this email address immediately, as the AOL address (PhilaACS@aol.com) will be discontinued at a future date, to be announced. If you have any questions, kindly call Ms. Walsh in the Section Office at (215) 382-1589. Thank you.

MAY MEETING

THE PHILADELPHIA SECTION, AMERICAN CHEMICAL SOCIETY

presents

Dr. Charles W. Bamforth

Anheuser-Busch Endowed Professor of Malting and Brewing Sciences
University of California, Davis

and

Presentation of the 2016 Philadelphia Section Teaching Awards

- Undergraduate Award: Dr. Maryellen Nerz-Stormes (Bryn Mawr College)
- High School Award: Ms. Dana L. Puskas (Neshaminy High School, Langhorne, PA)

Thursday, May 12, 2016

University of the Sciences
Integrated Professional Education Complex (IPEX)
2nd Floor, 4306 Woodland Avenue
Philadelphia, PA 19104

Reception at 5:30 PM, Lecture at 6:00 PM, Dinner at 7:00 PM

Dinner cost: \$35; Students with reservations and ID: \$18

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

DIRECTIONS: <http://www.usp.edu/visiting/default.aspx>

PARKING: Free, between McNeil and IPEX; follow to parking area.

The Board of Directors will meet at 4:00 PM in Room 201 in the McNeil Science and Technology Center. The address is 4320 Woodland Avenue.

SPEAKER'S BIOGRAPHY

Dr. Charles W. Bamforth

Anheuser-Busch Endowed Professor of Malting & Brewing Sciences and
Distinguished Professor at UC Davis

The Captivating Chemistry of Beer

Dr. Charles W. Bamforth holds the titles of Anheuser-Busch Endowed Professor of Malting & Brewing Sciences and Distinguished Professor at UC Davis. He has been part of the brewing industry for over 35 years. He is formerly Deputy Director-General of Brewing Research International and Research Manager and Quality Assurance Manager of Bass Brewers. Charlie is a Fellow of the Institute of Brewing & Distilling, Fellow of the Society of Biology and Fellow of the International Academy of Food Science and Technology.

Bamforth is Editor-in-Chief of the *Journal of the American Society of Brewing Chemists*, is on the editorial boards of several other journals and has published innumerable papers, articles and books on beer and brewing. He was a member of the Advisory Board and a contributor of many entries in *The Oxford Companion to Beer* (2012). In October 2010 he was on The Honor Roll as one of the 20 professors who are changing the classroom in the US.

Charlie has been featured extensively in the media, including by the BBC, Discovery Channel, NPR's *Science Friday*, PBS, *New Scientist*, *Popular Mechanics*, *Los Angeles Times*, *San Francisco Chronicle*, *Popular Science* and many more. He has presented at numerous venues including Google, the New York Academy of Sciences, the Bohemian Club, the National Press Club, Xerox Parc Forum and The Smithsonian Institution. In 2011 Charlie was honored by the Award of Distinction from the American Society of Brewing Chemists for "exceptional contributions and long diligent service to brewing science and the brewing industry".

In June 2014 he was elected President of the Institute of Brewing and Distilling. In January 2014, he was the star of the film that won the Food Awards medal in Hollywood for viewers' choice, short documentary. He received an Outstanding Service Award for the academic year 2012-2013 from UC Davis Extension.

NEWS ATOMS—*Alan Warren*

Thomas Straub, past chairman of the department of chemistry and biochemistry at La Salle University, was named a Local Section outreach volunteer by the ACS Committee on Community Activities. Tom is past chairman of the Philadelphia Section and has served as a director, councilor, and on several committees. He was recognized for his work as chair of the Education Committee and his involvement with National Chemistry Week, the annual Herb Bassow Memorial Chemistry Demonstrations, and the National Chemistry Olympiad among other activities.

Joseph Subotnik, associate professor of chemistry at Penn, was awarded a 2016 Guggenheim Fellowship.

DEATHS

Claus Victorius, August 31, 2010 at 87. He was employed by DuPont and Conoco.

Kenneth D. Kopple, retired peptide chemist, June 30, 2013 at 82. He taught chemistry at the University of Chicago from 1954 to 1962 and then joined General Electric as a research chemist. In 1965 he moved to the Illinois Institute of Technology where he served as research assistant and then professor in the chemistry department. He chaired the department 1970-1972.

In 1985 he joined SmithKline & French Laboratories as director of biophysical and physical technologies. He retired from the firm, renamed GlaxoSmithKline, in 2000. Kopple was active in the American Peptide Society and was a founding participant in the American Peptide Symposium. He authored several books on peptides and amino acids.

Robert C. Wendt, September 6, 2015. He was active in the fields of carbon fiber structure and analytical chemistry. More recently he was a consultant in business services.

Thomas R. Koszalka, retired professor, November 16, 2015 at 88. He was a professor of biochemistry and pediatrics at Thomas Jefferson University for nearly 30 years, and authored over 30 scientific papers. He was an accomplished violinist.

Robert C. Melucci, chemistry professor, December 18, 2015 at 74. He taught chemistry at the Community College of Philadelphia for 45 years.

Using Glucose Monitors to Detect Other Diseases

["Enzyme Encapsulated Liposome-Linked Immunosorbent Assay Enabling Sensitive Personal Glucose Meter Readout for Portable Detection of Disease Biomarkers"](#)

Adapted from ACS News Service Weekly PressPac: Wed Apr 20

Diagnosing disease can be highly technical, costly and time-consuming, which are all challenges that become particularly problematic in low-income and remote locations. Now scientists are reporting in the journal *ACS Applied Materials & Interfaces* a new way to repurpose portable glucose monitors to harness these simple devices' practicality and low cost for the detection of other diseases.



Scientists are repurposing glucose monitors to detect other conditions in a practical, low-cost way.

Credit IgorSPb/iStock/
Thinkstock

There are many benefits to diagnosing disease quickly. Treatment can start earlier, which can lead to better outcomes. It saves time and money. It can also minimize patients' anxiety as they wait for results. But rapid diagnoses aren't always possible using current technology. The personal glucose monitor, however, is one medical testing device that can deliver results rapidly. Building on its success, scientists have started repurposing it to test for other substances, such as cocaine or *Salmonella* bacteria in milk. But the methods they used so far required complicated and time-consuming steps. Chaoyong James Yang and colleagues wanted to take a simpler approach and apply it to biological disease markers.

The researchers started with tiny spherical pouches called liposomes and filled them with enzymes that produce glucose. In the presence of a target molecule, the liposomes were designed to burst open and cause an increase of glucose in the test solution. The researchers tried it with thrombin, a protein that can indicate restricted blood flow or heart disease. A commercial glucose monitor accurately detected the levels of glucose, which corresponded to the amount of thrombin in samples. In addition, the researchers say their method could be used to detect other disease-associated proteins

The authors acknowledge funding from the [National Science Foundation of China](#), the [National Basic Research Program of China](#), the National Instrumentation Program of China and the National Foundation for Fostering Talents of Basic Sciences (China).



The 2016 lecturer, Professor George Schatz (Northwestern University), gave an exceptional lecture on his research on silver and gold nanoparticles to a full house at the Lynch lecture hall/University of Pennsylvania. (L to R – Rick Ewing, Chair of the Philadelphia Section, ACS; Professor George Schatz; and Dr. Joseph Subotnik, Associate Professor of Chemistry, University of Pennsylvania; *Photo – Courtesy of Joel Perlish Photography*)



(L to R) William Smith, Past Chair; Alan Heldon, Secretary; Ella Davis, Board Member – at the 83rd Edgar Fahs Smith lectureship which was held on March 3rd. *Photo – Courtesy of Joel Perlish Photography*

673rd BOARD OF DIRECTORS' MEETING
Thursday, October 15, 2015
Dow Chemical, Collegeville, PA

Present: David J. Cichowicz, Melissa Betz Cichowicz, Deborah H. Cook, Ella Davis, Anne DeMasi, Rick Ewing, Alan R. Heldon, Christine McInnis, Cynthia Palmer, Kathleen Shaginaw, William Smith, Thomas S. Straub, Judy Summers-Gates, James Tarver, Denise Thomas and Victor Tortorelli

Excused: Steven Fleming

Absent: Judith Cohen, Douglas Hausner and John (J.P.) Northrop

Also present: Carol Jean Bruner, Joe Martino

The 673rd Board Meeting of the Philadelphia Section, ACS, was called to order at 4:05 PM. A quorum was present.

1. Minutes

Submission of the Minutes of the September Board of Directors Meeting was deferred.

2. Committees

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

1) At last count, the "Preparing for Life After Graduate School" (PFLAGs) workshop from October 21 to October 23 on Temple's campus has 75 registered participants. Joe Martino would like to once again thank Steve Fleming and Lori Spangler for their efforts in making this happen. Lori will be the main presenter of this multi-day workshop, and Lori and Joe Martino will be serving as ACS Career Consultants on the final day of the workshop.

2) Our next session of the Career Club will be a virtual event held on October 28 at 7:00 PM and will be focusing on how to market one's self, whether it be for a new job or to sell one's skills during a performance review. Joe Martino will be moderating. Career Services will be utilizing the Section's access to Citrix's GoToMeeting service to hold the Career Club. Eventbrite has been used to obtain registered participants as well as to communicate to the registered participants how to access the event.

3) Joe Martino has been in touch with all of the chairs of the new Section outreach committees (Member Services, Industry Relations, and Education and Community Outreach). Joe has received excellent replies from the chairs and appreciates their willingness to help. Career Services is willing to provide support to the outreach committees where needed. However, it must be emphasized that Career Services expects the new outreach committees to fully publicize Career Services events. As Career Services has reached a critical point regarding consistently low turnout at Career Services events, such efforts toward publicity are critical to the future of Career Services.

Member Affairs will develop the Section's social media presence and will coordinate with the Communications Committee regarding the Section's website and *the Catalyst*.

B. August 2016 National Meeting Planning, Anne DeMasi

August National Meeting planning:

- 1) A team is in place and addressing a subcommittee structure suggested by ACS National.
- 2) The team is re-convening in January as National is currently focused on the Spring San Diego meeting.
- 3) The team is discussing plans for giveaways at the Local Section booth.
- 4) YCC will identify three individuals to work directly with National at the Philadelphia meeting.
- 5) Also, YCC has begun creating a list of potential activities and will work with Alvin Collins at National.

D. Younger Chemists Committee, Christine McInnis, CMcInnis@dow.com

Upcoming YCC Events

1) **October 20th – Program in a Box:** on Lab Safety at Temple University's Beury Hall, Room 166, Tuesday, October 20th, 6:00 PM-8:30 PM. Joan deVastey, EHRS Lab Safety Officer at Temple, will share her career path and be available to answer questions. For more information, please contact Graham Dobereiner at dob@temple.edu.

2) November 10, 2015 – Quizzo - Beau will lead it at Landmark Bar and Grill in University City.

3) February 9, 2016 - Program in a Box (Weapons of Mass Destruction) - Community College of Philly (17th and Callow Hill) – Tara and Kathy Sagana--alternative location is Wistar Institute

4) February 22, 2016 - Poster Session - U. Sciences

5) March 13-17 - ACS National Meeting

6) March - Evonik site tour and talk

- 7) April - Alex and ACS Career Councilors - Interview advice and resume reviews - Alex will organize
- 8) May - Philly Science Carnival - James

YCC at August 2016 National Meeting

- 1) Fun Run - Tom to organize - shirts for participants - Atithi to coordinate with graphic designer for shirt design or contest - need design by early January
- 2) YCC National Social at Field House on Friday - Beau and Mo will do social event on Saturday and/or Monday - get head count
- 3) Yards Brewery Tour - Beau and Craig
- 4) A Chemical Heritage Foundation Trip is being investigated

Note - Need to update the Philly YCC Facebook accounts and to create a new one. Ivona to look into it by the end of the week. Mo will also help with Facebook. Tom will manage Twitter account.

3. Officers

A. Chair, Bill Smith, willsmith2@aol.com

- 1) The Education and Community Outreach Committee has nine members so far.
- 2) Renee Harris, (rharris1004@gmail.com) will be organizing a poetry contest for National Chemistry Week.
- 3) The November Meeting is at the Chemical Heritage Foundation - Ulliyot Lecture.
- 4) December Meeting. No plans yet. Venue, theme, etc are open. D. Cook and A. DeMasi volunteered to organize party. Discussion of dates, 2nd Thursday, December 10th favored Poll will be sent about date.

B. Chair-Elect, Rick Ewing, ewingwre@comcast.net

- 1) Philadelphia Section Award will be presented at the January Meeting, January 21, 2016.
- 2) February board meeting will be held in conjunction with the Undergraduate/Graduate Poster Session on Monday February 22, 2016 at the University of the Sciences.
- 3) March 3, 2016, Edgar Fahs Smith Lecture, Univ. of Pennsylvania.

C. Secretary, Alan Heldon, alan.heldon@live.com.

No report

D. Treasurer, D. Cichowicz, cichowic@lasalle.edu

October 2015 financial report submitted and distributed electronically.

On motion, the Treasurer's Report was approved with no abstentions and no nays.

4. Other Business

- A. Volunteer of the Year Award. The Executive Committee will determine awardee. The Board is invited to submit nominations.
- B. Congratulations were extended by the Board to Rick Ewing for the CEPA *C&EN* article on career consultants.
- C. Committee on Community Activities Grant (up to \$500.00). Applications are due on or before November 15, 2015.
- D. National Chemistry Week, October 18-23, 2015.

Discussion of Section NCW activities included the conclusion that the Section used to be involved in more National Chemistry Week activities.

More National Chemistry Week volunteers are needed.

National Chemistry Week Resolutions have been requested from PA Senator Greenleaf and PA Representative Roebuck.

- E. PAGES Mini-conference will be November 7, 2015 at Chestnut Hill College. Volunteers are needed.

- F. Section Election Ballots will be sent Monday, October 19th at 6:00 AM.

There being no additional business before the Board, the meeting was adjourned at 5:50 PM.

Respectfully submitted,

Alan R. Heldon, Secretary, alan.heldon@live.com

DIRECTORY OF SERVICES

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There are two important ways to recruit through our services. One is to place a print ad in the Catalyst. The other is to place a web site ad reaching out to 40,000 ACS members. We recommend using both low cost methods.

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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:

www.membership.acs.org/p/philadelphia

or by calling Ms.Daria Walsh at the Philadelphia Section Office (215) 382-1589.



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**PHILADELPHIA SECTION, ACS
CURRENT CALENDAR OF ACTIVITIES**

Date	Event	Location
Monday, May 2	Brown Bag Lecture: <i>Plant to Plant to Plant or Some Modes of Chemo-Capital Succession</i>	Chemical Heritage Foundation Philadelphia, PA 19106 http://www.chemheritage.org/visit/events/public-events/2016-5-2-bbl-shapiro.aspx
Monday, May 2	Organic Chemistry Seminar: Jared Lewis, University of Chicago	University of Pennsylvania Philadelphia, PA 19104 https://www.chem.upenn.edu/event/2016/05/organic-chemistry-seminar-jared-lewis-university-chicago
Monday, May 9	Delaware Valley Mass Spectrometry: Lingjun Li - University of Wisconsin, Madison: <i>Developing Mass Spectrometry-Based Molecular Imaging and Quantitative Proteomics Strategies for Biomedical Research</i>	Villanova University Conference Center Wayne, PA 19087 http://science.widener.edu/syb/msdg/
Thursday, May 12	Philadelphia Section Teaching Awards to Cr. Maryellen Nerz-Stromes (Bryn Mawr College) and Dana L. Puskas (Neshaminy High School)	University of the Sciences Philadelphia, PA http://www.usciences.edu/ipex/
Monday, May 16	Annual Heritage Day Event	Chemical Heritage Foundation Philadelphia, PA 19106 http://www.chemheritage.org/visit/events/public-events/2016-05-16-heritage-day.aspx
Tuesday, May 17	The Chromatography Forum of Delaware Valley: Milton Lee, H. Tracy Hall Professor of Chemistry Brigham Young University	Location: TBA http://www.cfdv.org/meeting/lee-title-be-announced
Saturday, May 21	Dr. Grant Krow Memorial Symposium	Temple University Science Education and Research Center (SERC) Philadelphia, PA http://cst.temple.edu/alumni/get-involved/krowsymposium
Thursday, June 16	Luncheon Honoring Philadelphia ACS 50- and 60-Year Members	Chemical Heritage Foundation Philadelphia, PA 19106
June 9-12	44 th MARM: <i>Chemistry, Past, Present and Future</i>	The College of Mount Saint Vincent Riverdale, NY www.marmacs.org

252nd ACS Fall National Meeting, August 21-25, 2016, Philadelphia, PA