

# *the Catalyst*



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October 2011  
Volume 96, No. 8



**October Meeting**  
**2011 Philadelphia Section Award**  
**Dr. Larry G. Sneddon**

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## ADVANCE NOTICE

**NOVEMBER MEETING**  
**Thursday, December 1, 2011**

**Ulliyot Public Affairs Lecture**  
**Dr. Michael Christman**  
**President and CEO, Coriell Institute for Medical Research**

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



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Founded April 15, 1899

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From  
The  
Chair



### John Tierney

We are half way through September already, and Fall approaches. I mentioned in the August *Catalyst* that the September meeting would be held at the Penns Woods Winery in Chadds Ford, PA. Well, as I write this, the meeting date still has not arrived, but it's about to take place and I will be reporting on the event in the next issue of *the Catalyst*.

The September meeting at Penns Woods is a joint meeting with the American Institute of Chemical Engineers (AIChE), Delaware Valley Section. At this point it appears that this is going to be a very well attended meeting – we continue to move into the use of new areas of modern technology—the registration for the meeting is being conducted through *PayPal*. This is technology that we are testing (thanks to Sue Schultz at AIChE) with the idea of introducing it as the standard method for monthly meeting registration. The Section would like your feedback as to whether you feel this is a good move or not.

Two other important events, both organized by Joe Martino

and J.P. Northrop, will soon be upon us. A lot of credit must be given to these individuals for spearheading this initiative to aid and assist our members in finding new positions in the field of chemistry

Event 1 is a “Networking Event” to be held on Wednesday, September 28<sup>th</sup> in Philadelphia from 3 to 5 PM at the 20<sup>th</sup> and Walnut Street Irish Pub. This event is an open social networking event allowing you to interact with other chemists in the Philadelphia area. In the words of J.P. Northrop—“These networking events have shown to be very helpful in growing personal network of connections which has led many to career opportunities and/or volunteer efforts that they would not have otherwise been aware of.” Registration for the event is at <http://acs-philadelphia.eventbrite.com/>

Event 2 is the “Second Career Workshop” to be held on Friday, October 21<sup>st</sup>. This full-day workshop is designed for members who are seeking new employment opportunities, for whatever reason, to hone their interview skills, and more. The meeting is to be held at the La Salle University, satellite location in Plymouth Meeting.

You can find out more about job postings, employment information and networking meetings at our *LinkedIn* site

under ACS Philadelphia Section.

## NEWS ATOMS

In its third year of the ACS Fellows Program, the Society is honoring over 200 members from academia, industry, and government agencies for their contributions to science, the profession, and to the ACS. Many of the Fellows continue to serve as mentors, consultants, advisors, conference organizers, working with scouts, and mentoring the next generation. Among those so honored are **Lyle H. Phifer** of Chem Service, **Donna M. Huryn** of Penn's chemistry department, and **Michael H. Tunick** of the USDA—Agricultural Research Service's Eastern Regional Research Center.

**John J. Baldwin**, recipient of the 2008 Philadelphia Section Award, recently received the University of Delaware's College of Arts and Sciences 2011 outstanding alumni award. The Chemical Heritage Foundation announced that 18 fellowships have been placed for the 2011-2012 academic year. **Michelle Francel** of Bryn Mawr College was named the Herdegen Fellow and will study “Sideline Science: Critical Commentaries in 19<sup>th</sup> Century Journals and 21<sup>st</sup> Century Blogs.”

Continued on Page 163

**The Philadelphia Section, American Chemical Society**

presents the

**2011 Philadelphia Section Award**

**Thursday, October 20, 2011**

to

**Dr. Larry G. Sneddon**

Blanchard Professor of Chemistry  
University of Pennsylvania

***Amineborane Based Chemical Hydrogen Storage***

6:00 PM

Carolyn Hoff Lynch Lecture Hall  
Chemistry Building, University of Pennsylvania  
34<sup>th</sup> and Spruce Streets, Philadelphia, PA

The reception and lecture are free

**Social Hour:** 5:00-6:00 PM in the Alumni and Faculty Hall of Fame, Chemistry Building, University of Pennsylvania

**Dinner:** following the lecture at Penne Restaurant, 3611 Walnut Street, Philadelphia.

**Dinner cost:** \$50.00; Students with reservations and ID: \$25.00

**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, October 13. Cancellations, if necessary, cannot be accepted after NOON on Tuesday, October 18. **UNCANCELLED RESERVATIONS WILL BE BILLED.**

**PARKING** is available in the Drexel University garage on Ludlow Street (from Market Street go south on 34<sup>th</sup>; it's the first left) and a University of Pennsylvania garage on 34<sup>th</sup> Street just past Ludlow. Metered street parking may also be available.

The Board of Directors will meet at 4:00 PM in the Makineni Room of the Chemistry Building (Room 260 in the Cret wing), University of Pennsylvania.

## SPEAKER'S BIOGRAPHY AND ABSTRACT

**Dr. Larry G. Sneddon**

**Blanchard Professor of  
Chemistry**

**University of Pennsylvania**

***Amineborane Based Chemi-  
cal Hydrogen Storage***

**Abstract:** The development of efficient methods for hydrogen storage is a major hurdle that must be overcome to enable the use of hydrogen as an alternative energy carrier. Owing to its high hydrogen content (19.6 wt%) and recently demonstrated regenerability, ammonia borane (AB) has been identified as one of the most promising materials for a chemical-hydride based hydrogen storage system for transportation applications. As a result, there has been intense recent research focused on both increasing the rate and extent of H<sub>2</sub>-delivery from AB and elucidating the mechanistic pathways by which AB dehydrogenation reactions occur. Our studies demonstrating that AB H<sub>2</sub>-release can be activated by the use of ionic liquids, chemical-additives and/or metal catalysts will be presented along with investigations that have shown that, depending upon the activation method, AB H<sub>2</sub>-release can occur by a number of distinctly different

mechanistic pathways. These studies suggest that an optimal AB H<sub>2</sub>-delivery system may require the use of synergistic dehydrogenation methods to induce H<sub>2</sub>-loss from the chemically different intermediates formed during the release reactions.

**Biography:** Larry Sneddon was born in Morrilton, AR in 1945. He received his undergraduate education at Centenary College of Louisiana before carrying out his graduate studies in boron hydride chemistry with Professor Riley Schaeffer at Indiana University. After obtaining his PhD in 1971, he held post-doctoral appointments with Professor Russell Grimes at the University of Virginia and Professor Richard Lagow at the Massachusetts Institute of Technology. In 1974, he moved to the University of Pennsylvania where he has spent his whole career, rising through the ranks to become full professor in 1984 and the department chair during 2002-2005. He presently holds the appointment as *Blanchard Professor of Chemistry* at Penn.

Dr. Sneddon is currently overseeing research on the syntheses and properties of a wide range of molecular, polymeric

and solid-state materials. His fundamental research on the development of new synthetic methods has resulted in the development of general metal-catalyzed methodologies that enable the systematic, high-yield syntheses and transformations of numerous important polyboranes. His interdisciplinary research on advanced nonoxide ceramics has led to the formation of these technologically important materials in previously unattainable nano- and micro-structured forms. Most recently, he is leading a new research program focused on the development of methods for chemical hydrogen storage, a key technology needed to enable the use of hydrogen as an alternative energy carrier in transportation applications.

Dr. Sneddon has coauthored more than 220 publications and he and his group have delivered over 150 presentations at conferences. He has also served on the editorial boards of the American Chemical Society journals *Inorganic Chemistry* and *Organometallics* and as an examiner for the 1995 *Organisation for Economic Cooperation and Development (OECD) Review of the Science and Technology Policy of Korea*. In recognition of his contributions to the chemical

sciences, he has been awarded the *Alexander von Humboldt Foundation Award for Senior US Scientists*, the *Boron in the Americas Award for Distinguished Achievements in Boron Science*, the *Reilly Lectureship* at Notre Dame, the *Riley Schaeffer Lectureship* at the University of New Mexico and an *Alfred P. Sloan Foundation Fellowship*. He also recently received a 2007 *US Department of Energy Award for Outstanding Achievement in Hydrogen Storage Research and Development*. His awards at Penn include appointment to the *Edmund J. and Louise W. Kahn Chair* (2005-2006) and a 1997 *Charles and Mary Lindback Award for Distinguished Teaching*.

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## DEATHS

**George Schweiker**, retired vice president and director of R&D for PQ Corporation, July 12<sup>th</sup> at 87. He held various research and development management positions with Occidental Chemical (1953-57), Velsicol Chemical (1957-60), Celanese (1960-65), Borg Warner (1965-71), and was VP and director of research and development of PQ Corporation 1971-1987. Following retirement he relocated to California and continued as a consultant from 1987 to 2010.

Schweiker authored a number of technical papers and patents. He held active roles with the American Chemical Society's Committee on Corporation Associates, the Research Management Group of Philadelphia, the Association of Research Directors, and the board of editors and the public communications committee of the Industrial Research Institute. He was a very accomplished golfer and chess player.

**Emmett L. Buhle**, retired pharmaceutical chemist, July 31<sup>st</sup> at 93. In 1950 he joined the pharmacology department of Johns Hopkins school of medicine. In 1954 he moved to DuPont's experimental laboratories in Philadelphia to work on polymer research. He joined Wyeth Laborato-

ries in 1958 and retired in 1984 as product development coordinator. Buhle helped organize the Delaware County Youth Orchestra.

**Gerald E. Hollenback**, retired chemical engineer, July 28<sup>th</sup> at 83. He worked for Allied Chemical from 1952 until he retired in 1992.

**Vincent DePaul Skahan**, retired research chemist, August 22<sup>nd</sup> at 99. After service in World War II as an infantryman in France and Germany, he joined Sun Oil where he worked as a research chemist until he retired in 1984. He was a Little League coach.

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## 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>



## **Guidelines for Student Affiliate Chapters to Request Funds to attend National ACS Meetings**

Undergraduate students from ACS Student Affiliate Chapters in the Philadelphia Section are encouraged to consider attending National Meetings of the American Chemical Society. In this regard, a limited amount of funding will be provided to chapters requesting sponsorship based on the following general guidelines.

### **General Guidelines**

- 1) First consideration will be given to student(s) who wish to attend a National Meeting of the American Chemical Society (ACS) to give a presentation (oral or poster). Students attending for other purposes, i.e., to receive an award or attend a specific workshop, etc., are also eligible to apply for support.
- 2) The student(s) must have requested support from their College or University (including department and/or advisor) to assist in defraying the travel costs. Please attach a copy of the correspondence.
- 3) The student(s) should have a clear idea of the benefits of attending the conference. Please attach a short paragraph from each student indicating which sessions, including workshops, etc., the student plans to attend and why these sessions will help them obtain their professional goals.

All applications must include an itemized list of the projected costs of the trip, i.e, registration, air-fare, train or car expenses, hotel, etc., and indicate which of these costs (if any) are being provided by other sources.

An application for travel support can be made at any time to the Philadelphia Section, but for full consideration, the application must be received by the Section Office by January 31<sup>st</sup> for the Spring meeting and May 31<sup>st</sup> for the Fall meeting.

The Philadelphia Section will evaluate all applications received by the deadline and vote at the February meeting for the Spring ACS meeting applications and at the June meeting for the Fall ACS meeting applications. The amount of funding available may be influenced by the number of applications for a particular meeting and the costs of attending that meeting, i.e., where it is being held.

The successful applicant must submit a brief report highlighting the conference experience to the Philadelphia Section at the completion of the trip. The original receipts should also be submitted to the section office for reimbursement.

## CHEMICAL CONSULTANTS NETWORK

OCTOBER 12, 2011 MEETING

### How to Set Up Your Business and Protect Yourself

Michael J. DeLaurentis, Esq.

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

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

#### Abstract:

Legal and tax considerations in starting, operating, and disposing of a consultancy, including the engagement contract; insurance and liability; entity choices; income, employment, estate/gift taxes and filings; and estate planning.

#### Biography:

**Michael J. DeLaurentis** is the principal of the Elkins Park, PA international tax and business law practice U.S. International Tax Services LLC. Prior to setting off on his own in 1994, Michael was an attorney in tax departments of large law firms in San Francisco and Philadelphia, head of the tax department of a large suburban law firm, and assistant VP for strategic initiatives in a Manhattan life insurance company. He has taught courses in tax at Villanova and Temple Universities and courses in philosophy at LaSalle University. He holds BAs from Amherst (cum laude) and Oxford (First Class Honours), MAs from Oxford and Brown, and a JD from Yale. He is the president of three local charities, the founder of another, and on the board of a fourth. He is an adjunct professor of philosophy at Drexel University.

**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 the 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.

**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 & sodas), is \$25 by the deadline, Thursday, October 6, \$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.

## SECOND CAREER WORKSHOP

### Presentation and Communication Skills

**Friday, October 21<sup>st</sup>**

**8:30 AM to 4:00 PM**

This full-day workshop will again be packed with great speakers from the region and will be held at the La Salle University Annex in the Metroplex Center, 4000 Chemical Road in Plymouth Meeting, PA. For anyone who attended the first workshop, you remember the dynamic and diverse speakers we had. The second workshop will focus on Presentation and Communication skills, but will lightly touch on two aspects that were asked for in the last workshop: "Influence of Age in Career Searches," and "What the ACS national organization has for unemployed chemists."

#### **Tentative Speaker List:**

J.P. Northrop—Board of Directors—ACS Philadelphia Section

Scott Cass—Toastmasters Governor—Area 26B

Charlene Halsendorff—Right Management

Mario Di Cioccio—Catlyst4Change

More information and registration information can be gotten at: <http://acsphilly-careerservices.eventbrite.com/>.

Call J.P. Northrop [(215) 287-0208] or email [john.northrop@anton-paar.com](mailto:john.northrop@anton-paar.com) with any questions.

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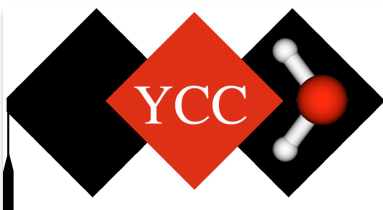
# October Historical Events In Chemistry

by Leopold May

- October 1, 1868 Georg Bredig, a researcher on anomalous atomic weights of lead from different sources, was born on this date. He also did research on the catalytic action of colloidal platinum, the “poisoning” of catalysts, and the preparation of colloids by electrical means.
- October 3, 1811 Two hundred years ago on this date, a long article on spontaneous combustion by A.S. (Adam Seyfert) appeared in the Philadelphia newspaper, *Aurora*. It was the second article submitted by the Columbian Chemical Society.
- October 5, 1861 One hundred fifty years ago on this date, The Chemical Society of Union College, the precursor of the American Chemical Society, was founded.
- October 9, 1718 Pierre J. Macquer who was born on this date, studied platinum (Pt, 78) and discovered arsenates of potassium and sodium.
- October 10, 1930 Ernest O. Lawrence invented the cyclotron on this date.
- October 18, 1955 Emilio Segré and Owen Chamberlain discovered a new sub-atomic sub particle, negative proton or antiproton, on this date.
- October 23, 1875 Gilbert N. Lewis who developed the theories of chemical bond and valency was born on this date. He also did research in thermodynamics.
- October 24, 1817 Hippolyte Mège Mouriés discovered margarine, an oral formulation of the drug Copahin used against syphilis, and various patents relating to tanning and sugar extraction. He developed a health chocolate with his calcium phosphate protein. He was born on this date.
- October 29, 1870 Robert Bowie Owens, who was born on this date, discovered radon and thorium from radium.

For more historical facts on chemistry, visit Dr. May's website at:  
<http://faculty.cua.edu/may/ChemistryCalendar.html>





**The Philadelphia Section of American Chemical Society 's  
Younger Chemist Committee  
&  
Drexel University's Graduate School Association  
Presents**

**If Grass is Green why isn't Blood Green?**

**"Theoretical and spectroscopic advances in the  
interpretation of the electronic spectra of porphyrins  
and phthalocyanines"**

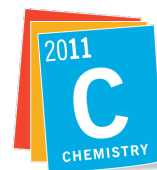
**Featuring:**

**Professor Martin Stillman**

**Department of Chemistry, The University of Western Ontario  
London, Ontario**

Celebrate the International Year of Chemistry & National  
Chemistry Week. In addition, there will be a charity auction to  
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**Wednesday, October 19, 2011  
Drexel University, Bossone Center  
Philadelphia, PA  
5:00 p.m.-8:00 p.m.**

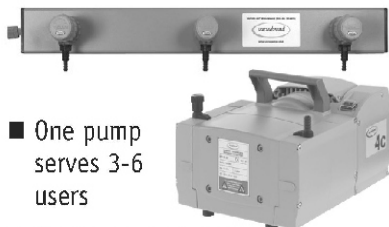


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All committees are looking for new members and several are looking for "take charge" chairs. Some, like the Teller's Committee, involve minimal work—one night per year and pizza provided. Others, like positions on Publications or Social Committees,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

Committee details can be obtained by calling  
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**PHILADELPHIA SECTION, ACS  
2011 CALENDAR OF EVENTS**

Date	Event	Locations
Tuesday, October 4	IEEE Philadelphia Consultants Network (CONET): Ron Reed, Bradford and Company, Inc.: <i>Tax Strategies for Self-Employed Consultants</i>	Sheraton University City Philadelphia <a href="http://www.PhilaConet.com">www.PhilaConet.com</a>
Wednesday, October 5	History Live: Dr. Dario Altieri, Wistar Institute Cancer Center and Dr. Stephen Lippard, MIT: <i>Cancer Therapies: 19<sup>th</sup> Century to Tomorrow</i>	Chemical Heritage Foundation Philadelphia <a href="http://www.chemheritage.org">www.chemheritage.org</a>
Saturday, October 8	Philadelphia Area Girls Enjoying Science (PAGES™) Program	Chestnut Hill College Philadelphia <a href="http://www.pagesprogram.org/">http://www.pagesprogram.org/</a>
Monday, October 10	Delaware Valley Mass Spectrometry Discussion Group: Dr. Sergio Nanita, DuPont Crop Protection: <i>Fast Extraction-Dilution Flow Injection Analysis applied to Agrochemistry</i>	Villanova University Villanova, PA <a href="http://science.widener.edu/svb/msdg/">http://science.widener.edu/svb/msdg/</a>
Wednesday, October 12	Chemical Consultants Network: Michael J. DeLaurentis, Esq.: <i>How to Set Up Your Consulting Business, Minimize Taxes and Protect Yourself</i>	The Cynwyd Club Bala Cynwyd <a href="http://www.chemconsultants.org">www.chemconsultants.org</a>
Thursday, October 13	C&EN free webinar: <i>EPA 525.2 for the Analysis of Organic Contaminants in Drinking water, Groundwater, and Raw Source Water in any Treatment Phase.</i>	Register FREE at <a href="http://tinyurl.com/6x35xja">http://tinyurl.com/6x35xja</a>
Wednesday, October 19	C&EN free webinar: Mark Stradiotto, Dalhousie University: <i>Exploiting "DalPhos" Ligands in Challenging Palladium-Catalyzed Cross-Coupling Reactions</i>	Register FREE at <a href="http://tinyurl.com/3fsxfe2">http://tinyurl.com/3fsxfe2</a>
Wednesday, October 19	Younger Chemists Committee Summit: Professor Martin Stillman, University of Western Ontario: <i>If Grass is Green, why isn't Blood Green? "Theoretical and spectroscopic advances in the interpretation of the electronic spectra of porphyrins and phthalocyanines"</i>	Bossone Center, Drexel University Philadelphia <a href="http://www.philaycc.org">www.philaycc.org</a>
Thursday, October 20	Joseph Priestley Society: Judith Giordan, Chair, Venture Well and Senior Advisor, National Collegiate Investors and Innovators Alliance	Chemical Heritage Foundation Philadelphia <a href="http://www.chemheritage.org/visit/events/joseph-priestley-society/index.aspx">http://www.chemheritage.org/visit/events/joseph-priestley-society/index.aspx</a>
<b>Thursday, October 20</b>	<b>Philadelphia Section Award Dr. Larry G. Sneddon University of Pennsylvania</b>	<b>University of Pennsylvania Philadelphia</b>
Friday, October 21	AWIS Conference Keynote Speaker: Nancy Jackson, 2011 President, ACS.	Chemical Heritage Foundation Philadelphia <a href="http://www.chemheritage.org/awis">www.chemheritage.org/awis</a>
Friday, October 21	Second Career Workshop: <i>Presentation and Communication Skills</i>	LaSalle Annex, Metroplex Center Plymouth Meeting, PA <a href="http://acsp Philly-careersservices.eventbrite.com/">http://acsp Philly-careersservices.eventbrite.com/</a>
Thursday, October 27	Philadelphia Organic Chemists Club Allan R. Day Award: Dr. Douglass F. Taber, University of Delaware: <i>Computational Organometallic Chemistry: Synthesis of (-)-Veratramine</i>	University of Pennsylvania Philadelphia <a href="http://www.pocclub.org/">http://www.pocclub.org/</a>
Thursday, November 10	Joseph Priestley Society: Skip Volante, Vice President and Global Leader, Process Chemistry, Merck Laboratories	Chemical Heritage Foundation Philadelphia <a href="http://www.chemheritage.org/visit/events/joseph-priestley-society/index.aspx">http://www.chemheritage.org/visit/events/joseph-priestley-society/index.aspx</a>
<b>Thursday, November 17</b>	<b>TBA</b>	<b>TBA</b>
<b>Thursday, December 1</b>	<b>Ulyot Lecture: Dr. Michael Christman, President and CEO, Coriell Institute for Medical Research</b>	<b>Chemical Heritage Foundation Philadelphia</b>
<b>Saturday, December 10</b>	<b>Chemistry Demonstrations and Hands-on Activities for Children of All Ages</b>	<b>TBA</b>