

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

March 2011 Volume 96, No. 3

# International Year of CHEMISTRY 2011

**EDGAR FAHS SMITH LECTURE** 

Ada Yonath, Weizmann Institute

## **HIGHLIGHTS**

Chair's Column		48
Speaker's Abstract and Biography		51
Seeking Nominations	52-53,	55
Focus on a Section Member		54

58

73

**2011 MARM** 

2011 Calendar

## ADVANCE NOTICE

#### APRIL MEETING

Thursday, April 21, 2011

Scholastic Achievement Awards **McCall Meeting and Conference Center** Highland Park, PA

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

# 50<sup>th</sup> Eastern Analytical Symposium & Exposition

November 14 - 17, 2011

Garden State Exhibit Center, Somerset, New Jersey



# CALL FOR PAPERS March 1 – April 15, 2011



International Year of CHEMISTRY 2011

# "Celebrating Innovation in Analysis"

The Eastern Analytical Symposium and Exposition is the second largest conference and exposition for laboratory science in the U.S. dedicated to the needs of analytical chemists and those in the allied sciences. We offer high quality cutting-edge technical sessions and state-of-the-art short courses, workshops and seminars. We invite you to be a part of the program by contributing a paper for oral or poster consideration. Please note that all abstracts must be submitted electronically via the EAS web site at <a href="https://www.eas.org/asubmit">www.eas.org/asubmit</a>. The submission deadline is April 15.

Please carefully review the following information:

- Invited speakers must not submit abstracts to EAS until requested
- All contributed abstracts must be submitted through our web site at <u>www.EAS.org/asubmit</u>. No faxed, e-mailed, or mailed abstracts will be accepted.
- Please note that no one author may submit and present more than two posters.
- All abstracts must be a maximum of 250 words or less.
- All abstracts will be acknowledged via e-mail.
- The title of the presentation and the list of authors that you submit are final, and may not be changed.
- The abstract that you submit will be considered to be your final abstract that will be printed in the abstract book for the 2011 Eastern Analytical Symposium.
- Presenting authors of contributed submissions will be notified in July 2011 of the status of the abstract and its session assignment.

#### **AREAS OF INTEREST**

Bioanalysis
Capillary Electrophoresis
Chemometrics
Chromatography
Conservation Science
Environmental Analysis
Forensic Analysis
Gas Chromatography
HPLC

Immunochemistry Industrial Hygiene Ion Chromatography IR Spectroscopy Laboratory Automation Laboratory Management LC/MS

Mass Spectrometry Microchemistry

Microchemistry Microscopy

Near Infrared (NIR) Spectroscopy

NMR Spectroscopy Pharmaceutical Analysis Process Analytical Science

Quality by Design

Quality/Regulatory/Compliance

Raman Spectroscopy

Sample Preparation Science Education

Sensors

Separation Sciences

Size Exclusion Chromatography

Solid State Analysis Space Analytics

Supercritical Fluid Chromatography

Surface Science

Very High Pressure LC/Ultra High

Pressure LC

Vibrational Spectroscopy

#### Contact information:

EAS Hotline 732-449-2280 Eastern Analytical Symposium & Exposition, Inc. EAS Faxline 732-612-1123 P.O. Box 185

EAS E-mail askeas@eas.org Spring Lake, NJ 07762

www.EAS.org

ACS Philadelphia Section Founded April 15, 1899

#### **STAFF**

#### **EDITOR-IN-CHIEF**

Robin S. Davis

#### **EDITORS**

News Atoms: Alan Warren

Proof Editors: Georgia Arbuckle-Keil

Marge Matthews Alan Warren

#### **ADVERTISING MANAGER**

Vince Gale

#### **PUBLICATIONS 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
April Advance Notice
Chair's Column
News Atoms49
March Meeting
Speaker's Abstract and Biography 51
Seeking Pre-College Teaching Award Nominees 52
Seeking Undergraduate Teaching Award
Nominees
Focus on a Section Member: Doug Hausner 54
Seeking Philadelphia Section Award Nominees 55
Philadelphia Section on LinkedIn
Seeking Summer Positions for Undergraduates 56
Chemical Consultants Network
2011 Middle Atlantic Regional Meeting
December 2010 Board Meeting Minutes 59
January 2010 Board Meeting Minutes 61
ACS-Hach HS Chemistry Grant 63
2011 Engineer of the Year
P.A.G.E.S. Needs Volunteers 64
ACS Short Courses
ACS Webinars
Historical Events in Chemistry
Delaware Valley Science Fairs
Directory of Services
2011 Calendar 73

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 philadelphia, PA 19

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

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

From The Chair



#### John Tierney

March is approaching as I am writing this piece and the operative word for the Philadelphia Section is "busy."

I would like to begin by reporting on the January meeting that was held at the Iron Hill Brewery in West Chester. A very lively presentation and tour was given by our host, and speaker, Larry Horwitz. Larry is the brewmaster at the West Chester location. The event attracted a respectable audience (as in numbers) with a sizeable contingent of attendees who were non-US born: the countries represented were China, Germany, England and Ireland. Interestingly, one member from Bucks County rearranged a doctor's appointment in the West Chester area just so that he could attend the meeting.

February 1<sup>st</sup> saw the world kickoff of the **International Year of Chemistry** celebration. The site for the festivities in the US was at the Chemical Heritage Foundation (CHF), in Philadelphia. CHF kindly hosted a dinner on January 31, at which Tom Tritton

(CHF President) welcomed the assembled chemistry community and introduced Andrew Liveris, President, CEO and Chairman of the Board of the Dow Chemical Company. Andrew's major point is that we should all be singing the praises of chemistry because we have the world stage. He further added that we should ensure that we do not "blow it" by not taking advantage of this opportunity. On February 1<sup>st</sup> CHF hosted a panel discussion entitled "Global Challenges/Chemistry Solutions," moderated by **Daniel** Nocera, the Henry Dreyfus Professor of Energy and Professor of Chemistry at the Massachusetts Institute of Technology. The panelists were Ellen Kullman (CEO, DuPont), Andrew Liveris (CEO, Dow), Joshua Boger (CEO. Vertex Pharmaceuticals), Rita Colwell (Professor, University of Maryland) and Janet Hering (Director, Swiss Federal Institute of Aquatic Science and Technology). A lively discussion ensued after each panelist gave their initial remarks. Questions were entertained by the panelists from the audience and the web: Daniel Nocera was a provocative and entertaining mediator.

The Section participated in an ACS outreach program at the **Franklin Institute** on February 5<sup>th</sup>. It was a fun event. The event consisted of 18 ta-

bles featuring 9 hands-on activities - Flubber, Making Snow, Colorful Lather Printing, Density Batons, New Sense about Cents, Pencil Electrolysis, Producing Oxygen Gas, X Marks the Spot, and Magic Nuudles. The Philadelphia Section notables working the tables included Dan King (Drexel) and Rick Ewing (Chair-Elect). Doug Hausner did an amazing job rallying the troops through the **Younger Chemists Commit**tee (YCC). Doug mobilized a contingent of undergraduate chemistry and chemical engineer volunteers from the University of the Sciences, Drexel, Penn and the University of Delaware to work each of the demonstration tables. There was a wonderful turnout of children and parents who participated in the handson activities and they clearly had a great time. As I was leaving the Franklin Institute, one parent with her two young children turned to me and said "that chemistry event was awesome!" I am aware that 'awesome' is possibly an overused word, but in this instance I think she hit the nail on the head. See page 70 for a photo from the event.

At our February meeting, undergraduate and graduate students presented their research at the Annual Poster Session, held at **Temple University's** Mitten Hall. **Dow** helped sponsor the event in conjunc-

tion with Temple University, and this sponsorship is very much appreciated. The poster event, like the one at the Franklin Institute, was put together by Doug Hausner. In addition to the undergraduate and graduate poster presentations, four high school seniors (Remy Bremner, Jennifer Cas-Henrici tor. Ryan Samantha Webster) from Conestoga High School (Chester County) presented excellent research work that they had carried out at their school with their teacher, Mr. Derrick Wood. There were 28 graduate student posters and 18 undergraduate posters. The winning graduate posters were submitted by Jacob Goldberg and Solongo Batjargal (Penn), Thuy Hien Nguyen (USP) and Tina Shah (Villanova). The winning undergraduate postwere Lena Hoober (Princeton), Tara Schisler (Eastern) and Justine Betzu (Ursinus). The awards were presented by Dr. Katie Hunt of Dow.

The judges for the event were José Cerda (St. Joseph's), Ann DeMasi (Chemtura), Rick Ewing (Bristol Meyers Squibb), Al Findeisen (Temple), Robert Giuliano (Villanova), Chandra Harrington (Merck), Dan King (Drexel), Kathryn Lysko (Immaculata), Peter Palenchar (Rutgers, Camden), Jen

Palenchar (Rutgers, Camden), Jeffrey Pelletier (Northwestern), Jared Paul (Villanova), Heather Paul (Villanova), and Bill Smith (Bristol HS). The Section certainly appreciates the aforementioned individuals giving their time for this event. Please take some time to go to the website and review all the abstracts for this event, so you will gain some sense of all the work these students and their faculty advisors are involved in.

See you all at the Edgar Fahs Smith Lecture in March.

# **NEWS ATOMS**

#### **Deaths**

Edmund Thelen, retired research and development executive. December 18<sup>th</sup> at 97. He served in the Navy during WWII and then joined the US Naval Reserves, retiring with the rank of Commander. He worked in a variety of positions in industry and government, most notably the Franklin Institute Research Laboratories where he retired in 1977 as VP. While at Franklin he co-authored a design guide for porous pavement that has become widely cited.

His outside interests included Toastmasters International, hiking and photographing the mountains in California, and many environmental activities. He was founding president of the Pennsylvania Chapter of the Sierra Club.

Ann L. Farren, retired chemist and information services specialist, January 3<sup>rd</sup> at 85. After working several years in biochemical research at the Valley Forge Army Hospital and Jefferson Medical College, she joined Smith, Kline and French Laboratories. From 1953 to 1956 she was employed by Rohm and Haas in the ion exchange laboratories.

Ann then worked for the ACS News Service in New York for three years, following which she joined Biological Abstracts (BIOSIS) in 1959 as a technical assistant to the director. She served in several departments and developed the first education programs, which she took to many US and Canada locations to teach scientists how to use BIOSIS services. She became senior education specialist and education bureau manager at Bio Sciences Information Service.

She was active in the Philadelphia Section as a director, councilor and chair or member of many committees. Farren received the Section's service award in 1957 and the Ullyot service award in 1993. She was a 63-year member of ACS. She was active in the American Association for the Advancement of Science, and chaired the medical library education group in the Medical Library Association. Ann was past president of the Girl Scout Leaders group in Germantown.



#### MARCH MEETING

# THE PHILADELPHIA SECTION, AMERICAN CHEMICAL SOCIETY and THE UNIVERSITY OF PENNSYLVANIA

present the

2011 Edgar Fahs Smith Memorial Lecture

#### Thursday, March 17, 2011

#### Dr. Ada Yonath

Kimmel Professor, Department of Structural Biology Weizmann Institute of Science

#### Ribosomal Crystallography and Attempts at Combating Antibiotics Resistance

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**: \$47.00; Students with reservations and ID: \$24.00

**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, March 10. Cancellations, if necessary, cannot be accepted after NOON on Tuesday, March 15. 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 ABSTRACT AND BIOGRAPHY

Dr. Ada Yonath

Department of Structural Biology, Weizmann Institute, Rehovot 76100, Israel

Ribosomal Crystallography and Attempts at Combating Antibiotics Resistance

**Abstract:** Ribosomes are the universal cellular machines that translate the genetic code into proteins. Composed of proteins and RNA, among which the RNA moieties perform almost all functional tasks, they possess spectacular architecture accompanied by inherent mobility that facilitate their smooth performance in decoding, peptide bond formation and nascent protein elongation. Owing to their fundamental role, ribosomes are targeted by many antibiotics that paralyze the ribosomes by binding to their functional sites. Their binding modes, inhibitory action and synergism pathways will be demonstrated. Issues concerning their ability to differentiate between patients and pathogens, and mechanism leading to bacterial resistance to antibiotics will be discussed.

Biography: Born in Jerusalem, Israel, Professor Ada



Yonath, studied at the Hebrew University, earned her PhD from Weizmann Institute of Science (WIS) and completed her postdoctoral studies at MIT, USA. She studies protein biosynthesis, focusing on ribosomes, which translate the genetic code into proteins, and on their inhibition by antibiotics, including mechanisms for acquiring resistance.

She is using X-ray crystallography supported by molecular biology, mutagenesis and other biophysical methods. For this aim, she established in the seventies the first laboratory for protein crystallography in Israel, which was the only laboratory of this kind in the country for almost a decade. Currently she is a professor of structural biology at WIS, holds the Kimmel Professorial Chair, and is directing the Kimmelman Center for Biomolecular Structure and Assembly. From 1986-2004 she also headed the

Max-Planck Research Unit in Hamburg, Germany.

She is a member of the US National Academy of Sciences (NAS); the American Academy of Arts and Sciences; the Israel Academy of Sciences and Humanities; the European Academy of Sciences and Art; the European Molecular Biology Organization; the International Academy of Astronautics.

Additionally, she has honorary doctorates from Tel Aviv, Ben Gurion and Bar Ilan universities in Israel; KEK, Japan and Oxford University in UK.

Her awards include the first European Crystallography Prize: the Israel Prize: the Paul Karrer Gold Medal: the Israel Prime Minister EMET award; the Rothschild Prize; the Louisa Gross Horwitz Prize: the Paul Ehrlich-Ludwig Medal, Germany; the Linus Pauling Gold Medal; the Anfinsen Prize; the Wolf Prize; the Massry Award and Medal; the UNESCO Award for Women in Science: the Albert Einstein World Award for Excellence: the Erice Prize for Peace; the DESY pin, the Exner medal, the Nobel Prize for Chemistry and the Indian Prime Minister Gold medal.

### **EXTENDED DEADLINE!**

## **CALL FOR NOMINATIONS**

#### The 20th 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 2011 will be accepted until Tuesday, April 5, 2011. 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 <a href="mailto:PhilaACS@aol.com">PhilaACS@aol.com</a> or nine copies of the nomination materials may be mailed to:

Dr. William R. Ewing 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: <a href="mailto:PhilaACS@aol.com">PhilaACS@aol.com</a>

Award recipients will be honored at our May 2011 Section meeting with a certificate and an honorarium.

### NOTE EXTENDED DEADLINE!

## **CALL FOR NOMINATIONS**

#### The 9th 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 2011 will be accepted until Tuesday, April 5, 2011. 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 <a href="mailto:PhilaACS@aol.com">PhilaACS@aol.com</a> or nine copies of the nomination materials may be mailed to:

Dr. William R. Ewing 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

The award recipient will be honored at our May 2011 Section meeting with an honorarium and a plaque.

# Focus on a Section Member – Dr. Doug Hausner

Doug graduated with a PhD in Chemistry from Temple University. He is presently a Visiting Assistant Professor of Chemistry at Rutgers Camden. Doug is also a member of the ACS's National Younger Chemists Committee and the Chair of the local section's YCC group. It is in his position with the Philadelphia Section that he truly shows his excellence.

You will see in other sections of *the Catalyst* that Doug was able to mobilize a large group of dedicated undergraduate volunteers to help with an **International Year of Chemistry** ACS Outreach event at the Franklin Institute on February 5, 2011. In addition to this he has helped organize and run the Section's Student Poster Session, which this year was held at Temple Uni-

versity's Mitten Hall on February 10, 2011. Note that these two large events were a very short period apart. Doug has amazing organizational skills and is dedicated to serving the larger ACS community with much work that he does behind the scenes. His efforts need to be noted and next time you see Doug, give him a hearty pat on the back for all his good work.

# A good vacuum system needs a great vacuum trap:

# **Posi-Trap** positive flow vacuum inlet traps!

- No "blow-by". . . ever!
- Filter elements matched to your application.
- Easy cleaning and changing.

When you want the best, you want MV Products.



A Division of 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



#### NOMINATIONS INVITED FOR THE

#### 2011 PHILADELPHIA SECTION AWARD, AMERICAN CHEMICAL SOCIETY

The Philadelphia Section invites its members and regional and topical groups to consider recommending candidate(s) for the Philadelphia Section Award.

This Award recognizes an individual, "who, by conspicuous scientific achievement through research, has made important contributions to man's knowledge and thereby aided the public appreciation of the profession." Any member of the American Chemical Society, Philadelphia Section, may be nominated for this award. Recent awardees include: Eric Borguet (Temple University 2009), John J. Baldwin (Vitae Pharmaceuticals 2008), Robert J. Levis (Temple University 2007).

#### INSTRUCTIONS FOR SUBMITTING NOMINATION

- (1) The nominator should provide detailed biographical data of the nominee, showing educational and employment data, a list of publications and a record of other accomplishments pertinent to consideration for this award.
- (2) One or two seconding letters (at least one of which should be from a person in an organization other than that of the nominee) should be requested in support of the nomination.
- (3) Nominators and seconders should be identified with addresses and telephone numbers so that they can be contacted, if necessary, for additional information.
- (4) Unsuccessful nominees from previous years may be renominated. In fairness to the nominee, however, renominations must be accompanied by an updating of the nominee's biographical data and list of accomplishments in order to make the nomination competitive. Unsuccessful nominees who have been considered three years in a row should not be renominated for the fourth year in succession without prior consultation by the nominator with the chair of the Awards Committee.

Nomination forms are available from the Section Office. Contact the Administrative Secretary, Mrs. Libby Harper at:

Philadelphia Section, ACS
Department of Chemistry
University of Pennsylvania
Philadelphia, PA 19104-6323
(215) 382-1589; email PhilaACS@aol.com



#### Philadelphia Section ACS Group on LinkedIn

As many members of ACS are already aware, the website LinkedIn (<a href="http://www.linkedin.com">http://www.linkedin.com</a>) 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

To join, please click on the following link:

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

#### SEEKING SUMMER POSITIONS FOR UNDERGRADUATES

We are seeking help from the membership of the Philadelphia Section of the ACS. In most cases, this would only require indicating appropriate contact people.

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: <a href="http://philadelphia.sites.acs.org/internshipquestionnaire.htm">http://philadelphia.sites.acs.org/internshipquestionnaire.htm</a>. There is no cost to post a position; there is no obligation to continue this position from one year to the next; you may have it removed at any time; and 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 who 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 or call at (215) 248-7175.

Thank you for your participation.

Sheldon L. Miller





# CHEMICAL CONSULTANTS NETWORK MARCH 9, 2011 MEETING

Visit our website at www.chemconsultants.org

**Date & Time:** Wednesday, March 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.

#### Starting a Custom Synthesis Company

#### Ron Bihovsky

#### Abstract:

An entrepreneur interested in starting a custom synthesis company must overcome all of the challenges faced by a consultant as well as additional issues inherent to manufacturing. These include finding a location, securing funding, purchasing equipment, finding a niche of products, marketing, pricing and identifying clients. These challenges are balanced by the satisfaction of knowing that one has succeeded in manufacturing valuable products. Ron Bihovsky will discuss how he addressed these issues when he founded Key Synthesis LLC ten years ago, as well as the difficulties, successes, and the insights gained.

#### Biography:

**Dr. Ron Bihovsky** founded Key Synthesis LLC, a custom synthesis company specializing in synthesis of biologically active compounds, in 2001. He also consults, and has performed experimental work and testified as an expert witness in pharmaceutical patent cases. He previously conducted medicinal chemistry research in the pharmaceutical and biotechnology industry at Cephalon and Berlex Laboratories. Prior to that, he performed research on natural product synthesis as a professor of organic chemistry at SUNY Stony Brook. He currently serves as chairman of the Chemical Consultants Network.

**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. MAP

**Reservation:** To make or cancel a dinner reservation, e-mail <a href="mailto:CCNReservations@aol.com">CCNReservations@aol.com</a> 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, <a href="mailto:Thursday">Thursday</a>, <a href="mailto:March 3"d">March 3"d</a>, \$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.



#### MARM 2011 – May 21-24

#### You are cordially invited to participate in MARM 2011.

Registration and Abstract Submission Now Open!

The Chemical Society of Washington Section of the American Chemical Society will host the 42<sup>nd</sup> Middle Atlantic Regional Meeting (MARM 2011) on the campus of the University of Maryland in College Park, MD from Saturday, May 21 to Tuesday, May 24. The meeting's theme for this event is "International Year of Chemistry 2011." This meeting will feature national and international leaders in the chemical sciences and will include a broad selection of exciting and informative symposia.

#### Keynote speakers include Eric Wachsman and Clifton Barry.

Several Workshops are planned, and there will be events that feature career development, funding opportunities, and education.

Website: www.marmacs.org

Be part of this special event with speakers from industry, education and government at a variety of TECHNICAL AND POSTER SESSIONS.

Symposia focused on - Life Sciences, Materials Sciences, Chemical Education, Supramolecular Chemistry and Molecular Recognition, Advances in Organic Synthesis, Nucleic Acid Chemistry, Bioactive Small Molecule Design and Discovery, and Medicinal Chemistry of Anticancer Drugs. Synthetic Chemistry, Damage, Repair, and Mutation of DNA, Frontiers of Structure and Dynamics Using NMR Spectroscopy, Medicinal Chemistry of Anticancer Drugs, and Nanoparticle Metrology. New Technologies for Lithium Ion Batteries, Chemistry of Graphitic Materials, Advances in Terahertz and IR Spectroscopy. Redefining the Kilogram and Avogadro's Number, Metal-Mediated Small Molecule Activation and Functionalization, and Chemistry and Materials Composition of Cultural Heritage Materials. Ambient Ionization Methods in Biological Mass Spectrometry, Neutraceutical and Food Chemistry: An Exciting Career for Chemists, Applied Methods for Separation Science, the Chromatography Award Symposium, and Cheminformatics and Bioinformatics: Working Together to Address Systems Chemical Biology.

MEETING HIGHLIGHTS include a Sunday dedicated to Science Education & Career Development. There will be Workshops, Short Courses, Vendor Exhibitions, and a special symposium on Degree Opportunities at Federal Laboratories will also be featured.

# 626<sup>th</sup> BOARD OF DIRECTORS' MEETING

Thursday, December 9, 2010 William Penn Inn Gwynedd, PA 19436

Present: D. Cichowicz, E. Davis, R. Gates, M. Matthews, T. Straub, J. Summers-Gates, K. Thrush Shaginaw, J. Tierney, K. Lysko, R. Ewing, D. Cook, W. Smith, D. Thomas, M. Cichowicz.

Also: L. Harper, J. Cohen, A. Heldon, J.P. Northrop, C.J. Bruner.

**Excused:** A. DeMasi, K. Yoder Luther, S. Miller, M. Prushan, V. Tortorelli.

The meeting was called to order by Chairman J. Summers-Gates at 5:30 PM.

There were no minutes from the November meeting to approve.

#### **COMMITTEE REPORTS:**

Finance, Budget and Audit: D. Cichowicz discussed the 2010 budget and stated there is currently a balance of \$33,000 in checking, at least \$20,000 to carry over to 2011. The 2011 budget will be approved in January.

The Women Chemists Committee needs to be more specific in their requests. K. Shaginaw will itemize and send it to DC.

Social Committee should put requests for money for dinner guests in the program budget. J. Tierney concurred. This change is included in the 2011 budget.

CCN, 3100, Mailings @ \$2500; the board feels that this is an unnecessary expense that can be accomplished by email.

M. Matthews, line 2160 @ \$5000 is ok in the budget.

Everyone check the 2011 budget and be ready to discuss at the January meeting.

**Tellers Committee:** T. Straub said they re-ran the electronic election and limited each voter to one vote. There were 551 voters, approximately double the



The fine, custom & specialty chemicals connection

**DELIVERING THE RIGHT FORMULA** 

#### PERFECT LOCATION

Philadelphia is at the heart of the US custom chemicals industry (Pennsylvania, New Jersey and adjacent states) and is also a major hub of the whole life science sector. Over 60% of SOCMA members are within 100 miles and over 27% of ACS members are within the same distance of the city.

#### **SAMPLE OF PARTICIPANTS**

AMPAC Fine Chemicals • Lonza • Chemtura • Chemetall • Hovione • Sumitomo • Davos • Daikin • Almac Sciences • Dishman • Ash Stevens • TCI America • Kaneka • Adesis • Spectrum • Kalexsyn

#### CONTACT

Benjamin W Jones, Global Consultant, jonescentury@verizon.net, Tel: +1 610 225 2396

EXHIBITION & SYMPOSIUM | MAY 3-5 2011 PENNSYLVANIA CONVENTION CENTER | PHILADELPHIA | USA

#### **WORLD-CLASS SYMPOSIUM**

Top industry leaders will deliver two streams covering; pharma, chemical & crop protection, green chemistry, supply chain management, regulatory issues, mergers & acquisitions, investment & venture capital, outsourcing & biotechnology

#### RX-360 SEMINAR

Rx-360 is an international consortium of pharmaceutical and biotech companies and suppliers to the industry, that aims to develop and implement a global quality system to help members ensure product quality and authenticity throughout their supply chain to enhance patient safety.

#### ADDED VALUE

ACS Short Courses are running throughout the duration of the event and the Chemistry Innovation Knowledge Transfer Network (CIKTN) will host a full day of seminars and workshops on the latest developments in Formulation Science & Technology.

Registration Open - visit www.chemspecamerica.com for further details

first tally. The alternates are Hank Whalen and C.J. Bruner. We will look at bylaw changes to the election procedure. Instead of casting votes for the councilors and alternates we could cast votes for councilors and the alternates would come from the candidates with fewer votes.

This year's electronic election is about one half the cost of mailed ballots.

A. Heldon said although the elections are not perfect we want to be fair.

J.P. Northrop is the one year replacement for D. Cichowicz who is now treasurer.

R. Ewing said the typos needed to be fixed. Motion made by D. Cichowicz to approve the election results, second E. Davis. Unanimously approved by voice vote.

**Salary:** Libby's bonus and salary raise. Approved by unanimous voice vote.

#### **OFFICERS' REPORTS:**

**Chairman:** J. Summers-Gates thanked us for our support during her year as chair.

Should the IYC Science Café in early February be combined with the YCC poster session? Discussion concluded that the non-science participants would probably not connect with the science presented in the poster session. Perhaps we could do profiles of scientists involved in local community activities.

Chair Elect: J. Tierney moved that we officially thank Judy. Seconded by D. Cook. Unanimously approved. E. Davis commented that Judy is a leader in handling all our new adventures.

The bylaws have been reviewed and each member needs to review the draft for January. Section 4, p. 11 has the Investment Board as a subset of the Finance, Budget and Audit Committee.

Number of members needed to vote on bylaw changes is changed.

D. Cichowicz - Page 12, section 5- duties of "publication" chair should be changed to "communications" chair to include web activities and email blasts.

Bylaw changes will be sent to national ACS with link to document and executive summary to mark the changes for their approval.

D. Cichowicz initiated a round of applause for J. Tierney's work on the bylaws.

Secretary (M. Prushan): no report.

Treasurer (D. Cichowicz): Presented the 2010 Treasurer's Report mentioning that line 600 should be \$87,873, and 4670 \$73 is interest. He needs receipts for 2010 by 1/5-6 in order to pay them and close the books for 2010. J. Tierney made a motion to accept the 2010 Treasurer's report. K. Lysko seconded. The report was unanimously accepted by voice vote.

#### **OTHER BUSINESS:**

Women's Chemist Committee: There is a Breakfast January 18<sup>th</sup> at CHF for IYC 2011 featuring a Madame Curie presentation. It is a meet and greet networking from 9-10:30 AM. Reservations must be made and information is on their website.

LinkedIn: John Northrop was thanked by D. Cichowicz for being the LinkedIn manager. J.P. Northrop encouraged us to sign up on the website under group subsection ACS, and to have our companies list internships and employment opportunities there.

J Tierney mentioned how impressed he was with this year's Ullyot lecture and reception, and others who attended agreed. D. Cichowicz said we need to allocate money for the lecture in 2011 if we want to support it. Libby said the bill for 2010 Ullyot lecture was \$2076 from CHF.

There being no other business, the meeting was adjourned by Chairman Summers-Gates at 6:55 PM.

Respectfully submitted,

Kathie Lysko on behalf of

Michael Prushan

Secretary

#### BOOSV OOR RAVINGS

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.

#### 627<sup>th</sup> BOARD OF DIRECTORS' MEETING

Thursday, January 20, 2011 Iron Hill Brewery and Restaurant West Chester, PA 19380

Present: J. Tierney, W. Ewing, D. Cichowicz, J. Summers-Gates, E. Davis, M. Matthews, T. Straub, K. Thrush Shaginaw, K. Lysko, D. Cook, W. Smith, M. Cichowicz, A. DeMasi, D. Hausner, K. Yoder Luther, J.P. Northrop, V. Tortorelli.

**Also:** L. Harper, A. Warren, C.J. Bruner, J. Cohen, J. Falcone.

**Excused:** C. Palmer, M. Prushan and D. Thomas.

The meeting was called to order by Chairman J. Tierney at 4:00 PM.

There were no minutes from the November meeting to approve. Minutes from the December meeting were approved.

#### **COMMITTEE REPORTS:**

Finance, Budget and Audit: J. Falcone sent the final budget for 2011 to the board members. J. Tierney made a motion to approve final budget; seconded by K. Lysko. Discussion initiated by D. Cichowicz: Budget item #680, Ullyot Fund, - \$2050, is a transfer from the Ullyot fund from last year. For 2011 \$2550 was added to #680, increasing the total to \$4550. The estimated cost of the Ullyot lecture for 2011 was added to account #4020, Ullyot Fund expenses,

which should zero out. Therefore, #4680, transfer to the Ullyot Fund, will be 0. #2112, Philadelphia Section Awards, has \$1500 instead of the \$1750 probably needed. #670, transfer from Awards Fund, should have \$1750 to use for 2011.

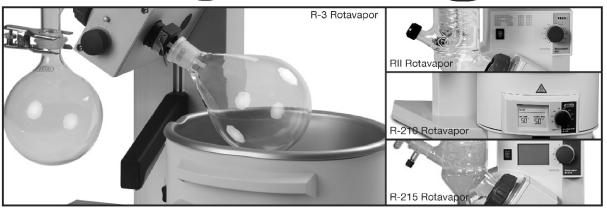
With friendly amendments to be included, D. Cichowicz moved to pass the 2011 budget, seconded by DeMasi and approved by unanimous voice vote.

J. Falcone went over the investment fund increases which had been circulated to the board members. They are up about \$1400 so far this year.

**Nominations Committee:** J. Summers-Gates reported that V.

# A BUCHI for every budget!

BUCHI



The Rotavapor® R-3 provides a value-priced high-quality BUCHI alternative to unreliable imitation brands for cost-conscious customers. Now, there is no longer a reason to compromise quality, safety, or peace of mind when choosing a rotary evaporator – there is a Buchi for every budget!

BUCHI Corporation 1-877-MYBUCHI or visit www.mybuchi.com

in You Tube (1) E f
Quality in your hands

Tortorelli is the current representative to the Middle Atlantic Regional Meeting (MARM) and was approved for another term, 2011-2012.

Philadelphia Section Awards Committee: M Cichowicz volunteered to be the organic committee member. Bob Stanley has declined to continue. Sue Varnum did not respond last year, but will continue on the committee. Possibly we can get a candidate from the Mass Spec Group. People will be emailed by Judy. It was suggested that we put an advertisement in the Catalyst, website and LinkedIn to solicit for new committee members and people to run for election. Descriptions of what each job entails should be included. All agreed.

Alternate councilors need to be identified and their names sent to National ACS. William Smith and Russ Phifer were elected in the fall election to serve for 2011. C.J. Bruner will remain in her current term until 2012. Two of the remaining three vacancies were filled from the list of previous nominees, Mark Forman and Sandy Burcham. V. nominated Tortorelli Cichowicz for the remaining vacancy for Alternate councilor. All approved the appointments.

#### **OFFICERS' REPORTS:**

**Chair:** J. Tierney brought a number of items to the meeting.

1. International Year of Chemistry Activities- Science Café at

CHF does not need our presence. He has been working with Suzette Schultz of AIChE on an event at the Franklin Institute on February 5<sup>th</sup>. The Franklin Institute does not know anything about a science café there. We are now on the FI website.

- 2. National ACS is not responding to our questions, there are no water kits as advertised. La Trease Garrison is the national contact. We hope to have some water kits for the Philadelphia Science Fair on April 16<sup>th</sup>.
- 3. Discussion of bylaw changes will be postponed until February. John has requested feedback on his proposed changes.
- 4. J.P. Northrop talked about the career workshop, and website for summer internship program information from companies. We need to solicit company contacts for internships. An email blast is going out tomorrow. The career workshop for unemployed chemists will be at Chestnut Hill on March 2<sup>nd</sup>. Wednesday, all day. Location is free. Snacks will be provided by corporate sponsors, and the speakers will be volunteers. They are soliciting speaker names. Jim Burke was mentioned and several people said they would forward names by email to J.P. Northrop. There will be something in the Cata*lyst*, on the website, LinkedIn and an email blast. He is working with the Princeton section.
- 5. Teaching Awards It is hard to get nominations, especially

from K-12. W. Smith as a H.S. Department Chair has access to mailing lists for this age group through the PA Science Teachers Association. D.Cook suggested contacting chairs of other associations in the area. V. Tortorelli also has lists from Science in Motion. Send emails to these contacts. The deadline has been extended to April 5<sup>th</sup>.

- 6. AIChE sponsors a resume workshop for college seniors in September which we can join in. The location is TBA. We should talk to career services offices at local colleges and universities.
- 7. Judges are needed for the Temple University Poster Session next month. W. Ewing, J. Tierney, and D. Hausner have volunteered. More judges are needed.
- 8. The cost of attending Section meetings was addressed. What is the legality of subsidizing with dues? Libby mentioned corporate sponsorships for events and D. Cook suggested separating meetings from events. M. Cichowicz mentioned partnering with other organizations such as the Delaware Section to draw a larger crowd.

#### Rick Ewing (Chair Elect):

1. Teaching Awards - can nominations be emailed? Yes. The nomination deadline has been moved to April 5th. Notices are in the February *Catalyst* and on the website with the extended deadlines.

2. For the Ullyot lecture in 2011 he is talking about meeting T. Tritton from the CHF.

Secretary (M. Prushan): no report.

**Treasurer (D. Cichowicz):** report to come.

#### **OTHER BUSINESS:**

- 1. K. Shaginaw was selected for the National Local Section Activities Committee. The April 9<sup>th</sup> date for PAGES is on the website under events.
- 2. William Smith gave out the remaining Merck Indices.
- 3. D. Cichowicz mentioned that #4060 in the Treasurer's report should zero out. Overall ex-

penses have net + in 2010 due to decrease in publications expenditures. We should be able to transfer \$23,000 to 2011 from 2010.

4. J. Tierney expressed his appreciation to D. Cichowicz for the treasurer's committee work. V. Tortorelli moved to include this sentiment in the minutes and R. Ewing seconded. All approved.

Meeting was adjourned at 5:30 PM by Chairman, J. Tierney.

Respectfully submitted, Kathie Lysko on behalf of Michael Prushan

#### ACS-HACH HIGH SCHOOL CHEMISTRY GRANTS

Transform your classroom with an ACS-Hach High School Chemistry Grant. The ACS-Hach High School Chemistry Grant is awarded to teachers interested in enhancing the teaching and learning of high school chemistry. Applicants can receive up to \$1,500 to support ideas that improve classroom learning, foster student development, and reveal the wonders of chemistry.

Applications are due on April 1, 2011. Apply for the ACS-Hach High School Chemistry Grant today at: <a href="http://www.acs.org/hachhttp://www.acs.org/hachwww

# 2011 Engineer of the Year – Douglas W. Kriebel, PE

Secretary

Congratulations to Doug Kriebel, a chemical engineer who was recognized as the Delaware Valley Engineer of the Year in February. Doug has been a leader in the engineered equipment business and a dedicated volunteer for the chemical engineering community. In 1989 he founded Kriebel Engineered Equipment, LTD and serves as its president and CEO. Kriebel Engineered Equipment is a manufacturer's representative and distributor of chemical process equipment that has been providing solutions to the chemical process industries, the hydrocarbon processing industries, the power generation industries and general industry in the Delaware Valley for over 20 years. At the same time, Doug has also been a dedicated Director and Communications Chief of the American Institute of Chemical Engineers Delaware Valley Section (AIChE/DVS) over the years.

With efforts to reduce energy, green house gases, and carbon footprinting becoming a national priority, Doug has launched programs at Kriebel Engineered Equipment to educate operating facilities to select equipment to accomplish these reductions. Despite a hectic work schedule, Doug stays focused on paying back to the profession by mentoring engineering students with technical training and career guidance. He is also a welcome speaker on technical topics.

For more information on Doug, please go to:

http://www.dvewc.org/awards/engineerOfTheYear.php



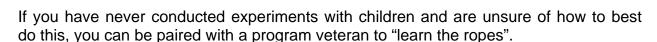
#### **Scientists Needed to Make**

#### Philadelphia Area Girls Enjoying Science™ a Success

On Saturday, April 9<sup>th</sup> the spring 2011 session of Philadelphia Areas Girls Enjoying Science<sup>™</sup> (PAGES<sup>™</sup>) will be held at Chestnut Hill College. Volunteers are needed to conduct experiments with the sixth grade girls.

Share your passion for science by bringing your favorite experiment to inspire small groups of girls.

The day is a great opportunity to network in the labs and at lunch with other local women interested in science.



Learn more about to PAGES™ by visiting our web site at http://PAGESprogram.org.

Please contact Kathy Thrush Shaginaw at 215-736-9285 or katt@verizon.net to volunteer.





...... turning the page to a bright chapter in the future of our girls.



# ACS Short Courses return to Philly by Popular Demand

April 30 - May 3, 2011

In conjunction with the inaugural <u>Chemspec USA</u> convention in Philadelphia, ACS Professional Education will showcase a suite of courses designed to keep you up-to-date on the latest in the industry. We've even arranged to have the courses before the conference so you won't miss anything.

Our course line-up includes:

# Organic Synthesis: Methods and Strategies for the 21st Century Chemist

#### **Statistical Analysis of Laboratory Data**

#### **Essentials of Medicinal Chemistry and Pharmacology**

# <u>Drug-like Properties: Optimizing Pharmacokinetics and Safety in Drug Discovery</u>

Discounts are available. Visit the website for details.

<u>Chemspec USA</u> has lined an impressive list of speakers from industry for the event. Visit their website for the exciting program.



More On-Demand Courses are Coming in March!

We know how important your time is. We heard your calls for courses that can be taken anytime and anywhere.

Beginning in March, ACS
Professional Education will launch its
new On-Demand catalog of courses.
Below is a partial list of courses that
will be available.

<u>Visit our website</u> for more information on this exciting addition to ACS Professional Education

# ACS Webinars<sup>TM</sup> CLICK \* WATCH \* LEARN \* DISCUSS

# Let ACS Careers be your Career GPS! "Planning Your Job Search"



Does the thought of searching for your next job make you feel queasy? It's no secret that the chemistry job market is tough right now. Fear not as we bring you expert guidance to survive and thrive through any economic roller coaster. Using these helpful hints and tips, you'll be on your way! Looking for employment doesn't have to make your stomach flop. By the end of this ACS Webinars Career GPS Series, you'll be pumped and prepped to make a lasting

impression on prospective employers. You may even have some fun along the way!



#### (http://acswebinars.org/MarchJobSearch2011)

#### Save the Dates

- Today's Job Search Strategies Tuesday March 1, 2-3pm
- Resume Writing for Scientists Tuesday March 8, 2-3pm
- Sharpening your Interviewing skills Tuesday March 15, 2-3pm
- > Get the most from the Anaheim ACS National Conference and Career Fair Tuesday March 22, 2-3pm

#### What You Will Learn

- Follow the changing times Where to target the job market
- Sell yourself on paper Preparing an effective résumé
- Make an impactful impression Insider interview tips
- Secure that offer and choose between multiple job offers
- And much more...

#### **Meet Your Experts**

**Lisa Balbes,** founder, Balbes Consultants and author, *Nontraditional Careers for Chemists*. **John Engelman,** project manager and formulator, S. C. Johnson & Son, Inc.

Mary Moore, Principal Technologist, Chemistry Research laboratory, Eastman Chemical Company.



#### ACS Webinars™

**CLICK \* WATCH \* LEARN \* DISCUSS** 

Learn more and register at www.acswebinars.org

Thursday March 10, 2011 | 2pm-3pm EST



# **Branding YOU! Why Marketing Yourself is Critical for Your Chemistry Career**

Learn the in's and out's of networking and building your personal brand! Dr. Dawn Mason and Dr. Catherine Hunt

Thursday March 17, 2011 | 2pm-3pm EST



#### **CSI Reality: Chemistry in the Crime Labs**

Get the inside scoop from an FBI chemist! Learn the different disciplines within forensic chemistry, and hear an in-depth perspective of day-to-day life in a forensic laboratory. Dr. Jason Schaff

Thursday March 24, 2011 | 2pm-3pm EST



# **Know Your Drugs – A Pharmacology Primer for Chemical and Life Science Professionals**

Learn insights into how pharmacology can help guide your structure-activity relationships in discovery chemistry, and what assays can (and can't) tell you.

Dr. Terry Kenakin

Thursday March 31, 2011 | 2pm-3pm EST



#### **Advanced Chemistry of Beer and Brewing**

Join Charlie to learn advanced insights and explanations about the chemistry behind beer brewing! Cheers!

Dr. Charles Bamforth





# **March Historical Events In Chemistry**

## by Leopold May

March 2, 1886	One hundred and twenty-five years ago, H. Jermain Creighton was born on this date. He was a researcher in electro-organic chemistry and developed the industrial process for electroreduction of glucose to sorbitol and mannitol.
March 7, 1788	One hundred and seventy-five years ago in 1836, Antoine-César Becquerel was the first to use electrolysis to recover metals from ores. He also invented an electric thermometer and was born on this date.
March 8, 1886	One hundred and twenty-five years ago, Edward C. Kendall was born. In 1915, he isolated thyroxine and shared the Nobel Prize in Physiology or Medicine in 1950 with Philip Hench and Tadeus Reichstein for their discoveries relating to the hormones of the adrenal cortex, their structure and biological effects.
March 12, 1824	One hundred and fifty years ago in 1661, Gustav R. Kirchhoff and Robert Bunsen discovered rubidium (Rb, 37). They invented the spectroscope in 1859 and discovered cesium (Cs, 55) in 1860. He discovered that substances that emit radiation absorb the same type of radiation when cool (Kirchhoff's Law).
March 12, 1838	One hundred and fifty years ago in 1861, William H. Perkin, with B.P. Duppa, synthesized tartaric acid. Also, he discovered mauve, the first aniline dye, in his home laboratory in 1856, the Perkin reaction for condensation of unsaturated aromatic acids, and coumarin. He elucidated relationship between tartaric, funaric and maleic acids and was born on this date.
March 22, 1788	One hundred and seventy-five years ago in 1836, Pierre J. Pelletier, with Philip Walter, obtained toluene by distilling pipe resin. He discovered quinine, strychnine, and other alkaloids and was born on this date.
March 22, 1868	Twenty-five years ago in 1986, Robert A. Millikan died. He measured the charge/mass ratio of the electron and received the Nobel Prize in Physics in 1923 for his work on the elementary charge of electricity and on the photoelectric effect. He was born on this date.

March 24, 1711	Three hundred years ago, William Brownrigg, the first to describe platinum and use pneumatic trough for collection of gases, was born on this date.
March 24, 1884	Seventy-five years ago in 1936, Peter Joseph William Debye received the Nobel Prize in Chemistry for his contributions to our knowledge of molecular structure through his investigations on dipole moments and on the diffraction of X-rays and electrons in gases. He was born on this date.
March 26, 1911	One hundred years ago, Bernard Katz was born on this date. He shared the Nobel Prize in Physiology or Medicine in 1970 with J. Axelrod and U. Von Euler for discoveries concerning humoral transmittors in the nerve terminals and the mechanism for their storage, release and inactivation.
March 27, 1861	One hundred and fifty years ago, Nikolai Y. Demjanov was born on this date. He was a researcher on decomposition of aliphatic diazonium ions and Demjanov-Tiffeneau rearrangement.
March 28, 1861	One hundred and fifty years ago on this date, George C. Pond was born. He was a chemistry teacher and preserver of the Priestley home in Pennsylvania
March 31, 1811	Two hundred years ago on this date, Robert Bunsen was born. One hundred and fifty years ago in 1861, he and Gustav R. Kirchhoff discovered rubidium (Rb, 37). They also invented the spectroscope in 1859 and discovered cesium (Cs, 55) in 1860. He invented the Bunsen burner, filter pump, a galvanic battery, and with Henry E. Roscoe, the actinometer.

Additional historical events can be found at Dr. May's website:

http://faculty.cua\_Hlt188259233\_Hlt188259236\_Hlt188259245\_Hlt188259251.BM\_1\_BM\_2\_B M\_3\_BM\_4\_edu/may/Chemistrycalendar.htm.

# **DELAWARE VALLEY SCIENCE FAIRS**

Judging for the Delaware Valley Science Fairs has started, but if you hurry you can still volunteer. Judges and mentors are always needed. Check the website www.dvsf.org for more information and to volunteer.



John Tierney (left) and Rick Ewing with the ACS mole at the Franklin Institute International Year of Chemistry outreach. To see more pictures, go to the web site, <a href="http://philadelphia.sites.acs.org">http://philadelphia.sites.acs.org</a> under events.

## DIRECTORY OF SERVICES



#### tele ond adventiseds

Membership surveys show that you want more articles in our newsletter. If you tell our advertisers that you saw their ad here, they will provide more financial support and this will allow us to add more articles.



VACUU-LAN® local vacuum networks

#### Central vacuum convenience...

- up to 8 users on each pump
- conserves bench space
- whisper-quiet

#### **Dedicated pump performance...**

- vacuum to 1.5 Torr!
- manual or electronic port controls

#### Details at www.vacuu-lan.com



www.vacuubrand.com info@vacuubrand.net

## DIRECTORY OF SERVICES

#### PROMOTE YOUR PRODUCTS AND SERVICES • ADVERTISE IN THE CATALYST

The Catalyst readership is greater Philadelphia's largest source for chemical and biochemical buyers. The Catalyst reaches more than 5,400 readers each month. It has been estimated that these buyers annually purchase more than \$150,000,000 of:

- EQUIPMENT
- SUPPLIES
- CONSULTING SERVICES

Placing an advertisement in The Catalyst is the lowest cost method of reaching this select audience.

For further information and other options for promoting your company's products and services visit:

www.mboservices.net

#### WANT MORE ARTICLES

When you tell our advertisers that you say their ads here they have more confidence in our newsletter's viability as an advertising medium. They advertise more. This sup ports 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

# MRService 500 MHz

**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
- Liaison
- Membership
- Planning
- **Public Relations**
- Social
- **Student Affiliate Mentor**
- Awards
- Continuing Education Natnl Chemistry Week
- Program
- **Publications**
- 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 6	0, 70, 71
BUCHI Corporation	61
CHEMSPEC USA Symposi	ium 59
Eastern Analytical Symposi	um 46
EMD Chemicals Inc.	70
Huffman Laboratories	71
Mass-Vac, Inc.	54
Micron Inc.	71
NuMega Resonance Labs,	Inc. 71
Robertson Microlit Labs	71
VACUUBRAND, Inc.	70
Villanova	72

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

# Villanova University's Master's Program in CHEMISTRY

Villanova offers a Master of Science degree in Chemistry for both part- and full-time students. The program is ideal for working professionals with complex schedules who wish to advance their careers with a graduate degree. Take courses during summer, fall or spring semesters. Apply now!

Graduate courses at Villanova can be taken for professional development or as credit towards a master's degree in chemistry.

#### **GRADUATE OPEN HOUSE**

March 8, 2011 • 3:30 - 7:00 p.m.

Attend the Open House and we'll waive your application fee! Meet with the program director, learn about the admissions process, tour the campus and more.

www.openhouse.villanova.edu

For more information please contact:
Dr. Eduard Casillas, Program Director
610.519.5236
eduard.casillas@villanova.edu
www.gradchem.villanova.edu





#### PHILADELPHIA SECTION, ACS

#### 2011 CALENDAR OF EVENTS

Date	Event	Locations
Wednesday, March 2	Philadelphia Section Career Workshop	Chestnut Hill College
		Philadelphia, PA
		john.northrop@anton-paar.com
Wednesday, March 9	Chemical Consultants Network: Ron Bihovsky,	The Cynwyd Club
	Key Synthesis LLC: Starting a Custom	Bala Cynwyd, PA
	Synthesis Company	www.chemconsultants.org
Monday, March 14	Delaware Valley Mass Spectrometry Discussion	Villanova University
	Group: John Masucci, Johnson and Johnson: MS	Villanova, PA
	Analysis in Drug Discovery	http://science.widener.edu/svb/msdg/
Thursday, March 17	Edgar Fahs Smith Memorial Lecture: Dr.	University of Pennsylvania
	Ada Yonath, Weizmann Institute of Science:	Philadelphia
	Ribosomal Crystallography and Attempts at	http://philadelphia.sites.acs.org
	Combating Antibiotics Resistance	
Tuesday, March 22	Chromatography Forum of Delaware Valley:	Christiana Hilton
	Kevin A. Schug, University of Texas at	Newark, DE
	Arlington: Trace Analysis of Estrogens and	http://www.cfdv.org/
	Endocrine Disruptors from Biological Fluids	
Wednesday, March 23	AIChE: Continuing Education Course - Facility	http://aiche-philadelphia.org/
	Planning & Siting	
Thursday, March 24	Philadelphia Organic Chemists Club: Joel M.	University of Pennsylvania
	Hawkins, Pfizer: The Development of Scalable	Philadelphia, PA
	Processes for the Synthesis of Heterocyclic	http://www.pocclub.org/
	Pharmaceutical Intermediates using Batch and	
	Flow Chemistry	
Saturday, April 9	PAGES <sup>TM</sup> Program for Sixth Grade Girls	Chestnut Hill College
		Philadelphia
		http://www.pagesprogram.org/
Wednesday, April 13	Chromatography Forum of the Delaware Valley:	Fort Washington Holiday Inn
	Microfluidics and Microchip Technology Short	Fort Washington, PA
	Course	www.cfdv.org
Thursday, April 14	Chromatography Forum of the Delaware Valley:	Fort Washington Holiday Inn
	Spring Symposium including exhibition	Fort Washington, PA
TT 1 4 11 24		www.cfdv.org
Thursday, April 21	Scholastic Achievement Awards	McCall's Meeting and Conference Center
		Highland Park, PA
M I M O		http://www.mccallgolf.com/
Monday, May 9 -	Chromatography Forum of the Delaware Valley:	West Chester University
Wednesday, May 11	Introduction to High Performance Liquid	West Chester, PA
Manday 16 W-JJ-	Chromatography Forum of the Delevers Velley	www.cfdv.org
Monday 16 - Wednesday,	Chromatography Forum of the Delaware Valley:	West Chester University
May 18	Modern Practice of Gas Chromatography short	West Chester, PA www.cfdv.org
771 1 N/ 10	Course	
Thursday, May 19	Section Teaching Awards	TBA
Monday, June 13 -	Chromatography Forum of the Delaware Valley:	Ursinus college
Wednesday, June 15	Advanced HPLC & Lab with Hands-on LC/MS	Collegeville, PA
	Short Course	<u>www.cfdv.org</u>
Thursday, June 16	Honoring our 50-Year Members	The Irish Pub, 1123 Walnut Street
		Philadelphia, PA

Middle Atlantic Regional Meeting (MARM), May 21-24, University of Maryland, College Park, MD Spring National Meeting, March 27-31, Anaheim, CA Fall National Meeting, August 28-September 1, Denver, CO