



# THE NUCLEUS

November 2008

Vol. LXXXVII, No. 3



DAVID K. GOSSER, JR.



PRATIBHA VARMA-NELSON



JACK A. KAMPMEIER

## *2008 Norris Award Winners*

## Monthly Meeting

*Norris Award Meeting at Brandeis*

## Notable New England Chemists

*By Myron S. Simon*

## International Reach of the ACS

*By Daniel J. Eustace and Lisa M. Balbes*

## Northeast Regional Undergraduate Day

*November 1, 2008 at Simmons College*



# Northeastern

U N I V E R S I T Y

## EVENING GRADUATE PROGRAM IN CHEMISTRY

The Original Part-Time Evening Graduate Program  
in New England

Take courses to:

- keep up-to-date
- improve professional qualifications
- apply toward part-time Master's program

All courses meet for a two-and-a-half hour period one evening per week and carry three semester-hours of graduate credit toward the 30 semester-hour requirement for a coursework M.S. degree

Courses are taught by Full-time Faculty in their area of expertise

OFFERED SPRING SEMESTER (Classes begin January 5, 2009)

Introductory Level Graduate Courses:

*(Prerequisite: the equivalent of a Bachelor's Degree in Chemistry)*

Optical Methods of Analysis  
Spectroscopy of Organic Compounds  
Principles of Chemical Biology  
Advances in Nanomaterials  
Protein Chemistry  
Molecular Modeling

Advanced Level Graduate Courses:

Analytical Biochemistry *(Prerequisites: Analytical Sep.; Mass Spec.)*

**Students new to the program must have completed an application for admission. Please note that the application deadline for the Spring semester is December 1, 2008. For more information on graduate programs, see [www.chem.neu.edu](http://www.chem.neu.edu)**

For additional information contact: Jean Harris  
Department of Chemistry & Chemical Biology  
Northeastern University  
Boston, MA 02115  
Tel: (617) 373-2824  
[H.Harris@neu.edu](mailto:H.Harris@neu.edu)

**The Northeastern Section of the American Chemical Society, Inc.**

Office: Marilou Cashman, 23 Cottage St., Natick, MA 01360. 1-800-872-2054 (Voice or FAX) or 508-653-6329.

e-mail: mcash0953(at)aol.com

Any Section business may be conducted via the business office above.

NESACS Homepage:

http://www.NESACS.org

David Cunningham, Webmaster

ACS Hotline, Washington, D.C.:

1-800-227-5558

**Officers 2008**

*Chair:*

Marietta Schwartz

Chemistry Department, UMASS-Boston

Boston, MA 02125

617-287-6146; marietta.schwartz(at)umb.edu

*Chair-Elect:*

Dr. E. Joseph Billo

13 Shattuck Street

Natick, MA 01760

508-653-3074; joseph.billo(at)verizon.net

*Immediate Past Chair:*

Mukund Chorghade

14 Carlson Circle, Natick, MA 01360

508-651-7809 and 308-3891

Chorghade(at)comcast.net

*Secretary:*

Michael Singer

Sigma-Aldrich

3 Strathmore Rd., Natick, MA 01360

508-651-8151X291; msinger(at)sial.com

*Treasurer:*

James Piper

19 Mill Rd., Harvard, MA 01451

978-456-3155; piper28(at)attglobal.net

*Auditor:*

Anthony Rosner

*Archivist:*

Myron S. Simon

20 Somerset Rd.

Newton, MA 02465; 617-332-5273

Romysimon(at)mindspring.com

*Trustees:*

Joseph A. Lima, Esther A. H. Hopkins,

Michael E. Strem

**Councilors**

*Term Ends 12/31/2008*

Doris I. Lewis

Morton Z. Hoffman

Christine Jaworek-Lopes

Mary Burgess

Donald O. Rickter

*Term Ends 12/31/2009*

Catherine Costello

Patricia Mabrouk

Michaeline F. Chen

Dorothy J. Phillips

Amy Tapper

*Term Ends 12/31/2010*

Thomas R. Gilbert

Pamela Nagafuji

Robert Lichter

Michael Singer

**Alternate Councilors**

Patrick M. Gordon

Michael P. Filosa

Lawrence Scott

Liming Shao

S.B. Rajur

Julia H. Miwa

Alfred Viola

Jerry P. Jasinski

Eva B. Binnun

Barney Grubbs

Timothy B. Frigo

Mark Froimowitz

David Cunningham

Erik Rozners

All Chairs of standing Committees, the editor of THE NUCLEUS, and the Trustees of Section Funds are members of the Board of Directors. Any Councilor of the American Chemical Society residing within the section area is an ex officio member of the Board of Directors.



# Contents

<b>Historical Notes</b> _____	<b>4</b>
<i>William Tenney Lindsay, Jr., 1924-2007</i>	
<b>Notable New England Chemists</b> _____	<b>4</b>
<i>By Myron S. Simon</i>	
<b>Monthly Meeting</b> _____	<b>5</b>
<i>James Flack Norris Award Meeting at the Brandeis Faculty Club</i>	
<b>Announcements</b> _____	<b>6</b>
<i>NESACS Chemists to Receive ACS Awards, 8th Annual Sukant Tripathy Memorial Symposium</i>	
<b>Program</b> _____	<b>7</b>
<i>The 15th Annual ACS Northeast Regional Undergraduate Day</i>	
<b>Call for Abstracts</b> _____	<b>7</b>
<i>The 7th Annual Undergraduate Environmental Research Symposium</i>	
<b>Laboratory Health and Safety Short Course</b> _____	<b>8</b>
<i>Two Day Course at Eagan Center, Northeastern University</i>	
<b>International Reach of the American Chemical Society</b> _____	<b>9</b>
<i>By Daniel J. Eustace and Lisa M. Balbes</i>	
<b>ACS Hall of Fame Induction to John Neumeyer</b> _____	<b>11</b>
<b>Summary of Governance Actions/Reports</b> _____	<b>12</b>
<i>236th ACS National Meeting, Philadelphia, PA</i>	
<b>Business Directory</b> _____	<b>16</b>

**Cover:** *The 2008 James Flack Norris Awardees: David K. Gosser Jr (Photo courtesy of Bill Summers, City College of New York), Pratibha Varma-Nelson (Photo courtesy of Joe Davis, Northeastern Illinois University) and Jack A. Kampmeie (Photo courtesy of Matt Beyers).*

**Deadlines:** *January 2009 Issue: November 10, 2008  
February 2009 Issue: December 11, 2008*

## THE NUCLEUS

*The Nucleus is published monthly, except June and August by the Northeastern Section of the American Chemical Society, Inc. Forms close for advertising on the 1st of the month of the preceding issue. Text must be received by the editor six weeks before the date of issue.*

**Editor:** Michael P. Filosa, Ph.D., ZINK Imaging, Inc., 16 Crosby Drive, Building 4G, Bedford, MA 01730 Email: Michael.filosa(at)zink.com; Tel: 508-843-9070

**Associate Editors:** Myron S. Simon, 20 Somerset Rd., W. Newton, MA 02465, Tel: 617-332-5273  
Sheila E Rodman, Konarka Technologies Inc., 116 John St. Suite 12, Lowell, MA 01852 email: srodman(at)konarka.com tel 978-569-1414

**Board of Publications:** Mary Mahaney (Chair), David Cunningham, Vivian K. Walworth  
**Business Manager:** Karen Piper, 19 Mill Rd., Harvard, MA 01451, Tel: 978-456-8622

**Advertising Manager:** Vincent J. Gale, P.O. Box 1150, Marshfield, MA 02050, Tel: 781-837-0424; FAX: 781-837-1453

**Contributing Editors:** Morton Hoffman, Feature Editor; Dennis Sardella, Book Reviews

**Calendar Coordinator:** Sheila Rodman, email: srodman(at)konarka.com

**Photographers:** Morton Z. Hoffman and James Phillips

**Proofreaders:** Donald O. Rickter, Myron S. Simon, Vivian K. Walworth, E. Joseph Billo

**Webmaster:** David Cunningham, webmaster(at)nesacs.org

Copyright 2008, Northeastern Section of the American Chemical Society, Inc.

# Historical Notes

We present here short biographies of chemists and chemical engineers whose deaths have been reported to us during the past year. We thank members of the Northeastern Section who have sent us obituary notices appearing in newspapers we do not see.

## William Tenney Lindsay, Jr. 1924-2007

William Tenney Lindsay, Jr. was born on the fourth of April, 1924 in Scranton, PA, the son of William Tenney Lindsay and Gladys Axford Lindsay. He graduated Scranton Central High School in 1942 and served in the U.S. Army Signal Corps from 1943 to 1946, participating in the invasion of Okinawa and the occupation of South Korea.

He received his bachelor's degree in chemical engineering from Rensselaer Polytechnic Institute in 1948 and his Ph.D. in physical chemistry from M.I.T. in 1952.

His 30-year career at Westinghouse Electric Corporation was at the Bettis Atomic Power Division, 1953-1959, and the Research and Development Center, 1959 to 1983. He was involved at an early period in the nuclear generation of power as Supervisor for Advanced Development Chemistry during construction of the Shippingport, PA nuclear power plant. At the Westinghouse Research and Development Center he was Manager of the Physical and Inorganic Chemistry Department with wide-ranging responsibilities.

In later years at Westinghouse, as a senior consultant, he became an internationally recognized expert on the chemical thermodynamics of aqueous solutions at the high temperatures of power plants. He was invited to lecture in Europe including the former Czechoslovakia, Japan, Australia, Canada and the United States. In retirement he continued as a consultant to the electric power industry, 1983 to 2007, working

*continued on page 14*

# Notable New England Chemists

by Myron S. Simon

A pleasant surprise came to me by email not very long ago. Laura Claggett, Manager of Knowledge and Library Services at UOP LLC, emailed me the following message: "I found your name on the web as the NESACS Archivist. While weeding our book collection, we found a slim 80 p. volume of the 'Seventy-Sixth meeting of the ACS under the auspices of the Northeastern Section, Swampscott, MA September 10-15, 1928. It is in pristine condition and it seems a shame to throw it away".

"Did we want it?" "Of course," I replied that we would very much like to have it and thanked her for her kindness.

The book arrived this morning, and it is a historical delight. It was meant as a souvenir of the meeting, and I am sure that there still must be copies on book shelves around Boston, since it is nicely bound and doesn't take up much room. I am equally certain that there are not any chemists still around who attended that meeting, but I hope that there may be some alive who have seen this little book already, and relished its contents.

The book includes the entertainment program of the meeting ... yes, the meeting did include a golf tournament..., boating and fishing, tennis, and even flying., "Boston by Air", a 20 minute trip over Boston and the neighborhood with the "Associate Aircraft of Boston", in a 10-passenger 3-motor plane, for what was at that time the high price of \$10. There was, however, no mention of scientific papers.

The real treats are the biographies of "Notable New England Chemists" by Lyman G. Newell, BU, and Tenney L. Davis, MIT. The biographies start with John Winthrop, Jr., and go up to Charles William Eliot, 1834-1926 and Theodore William

## Corporate Patrons (\$2000+)

Abbott Bioresearch  
Genzyme  
Lyophilization Service of New England  
Merck  
National ACS  
Novartis  
Pfizer  
Schering Corporation  
Sepracor  
Serono Reproductive Institute  
Vertex Pharmaceuticals  
Wyeth Pharmaceuticals

## Patrons (\$1000-\$1999)

Aptuit  
Astra-Zeneca R&D Boston  
Broad Institute  
Creagen Biosciences  
Estate of Wallace Gleekman  
Irix Pharmaceuticals  
Millennium Pharmaceuticals  
PCI Synthesis  
Shasun USA  
Sirtris Pharmaceuticals  
Strem Chemicals  
ZINK Imaging  
Ziopharm Oncology, Inc.

## Donors (\$300-\$999)

Cambridge-Major Laboratories  
Medicilon Inc  
Occidental  
Organix  
Peptech Corp  
Royal Society of Chemistry  
SAFC Pharma  
SAPA-NE

Richards, 1868-1928.

With the permission of our editor I plan to publish the biographies and other interesting bits in future issues of *The Nucleus*. (The latter publication was four years old at the time of the 1928 meeting.)

## John Winthrop, Jr. 1606-1676

"John Winthrop, Jr., 1606-1676, was the eldest son of John Winthrop, the second governor of the Massachusetts Bay Colony, and was himself the first governor of Connecticut. He came to New England in 1631, and in 1633 imported laboratory apparatus and

*continued on page 15*

# Monthly Meeting

*The 891<sup>st</sup> Meeting of the Northeastern Section of the American Chemical Society*

**Presentation of the James Flack Norris Award for Outstanding Achievement in Teaching Chemistry to David K. Gosser Jr., Jack A. Kampmeier, and Pratibha Varma-Nelson**

**Thursday, November 13, 2008**

**Brandeis Faculty Club**, 415 South Street, Waltham, MA.

**4:30 pm** Board Meeting

**5:30 pm** Social Hour

**6:15 pm** Dinner

**7:30 pm** Award Meeting, Dr Marietta Schwartz, NESACS Chair Presiding

*Presentation of the Arno Heyn Book Prize*

By Mary Mahaney, Chair, Board of Publications, NESACS

*James Flack Norris*

Myron S. Simon, NESACS

*Introduction of the Norris Award Winner*

George M. Bodner, Purdue University

*Presentation of the Norris Award*

Prof. Barry B. Snider, Chair, Norris Award Committee

*Norris Award Address*

David K. Gosser, Jr., City College of New York, Jack A. Kampmeier, University of Rochester, and Pratibha Varma-Nelson, Indiana University-Purdue University  
"Peer-led Team Learning"

Dinner reservations should be made no later than noon, Thursday, November 6, 2008. Please call or fax Marilou Cashman at (800) 872-2054 or e-mail at MCash0953(at)aoil.com. Reservations not cancelled at least 24 hours in advance must be paid. Members, \$30.00; Non-members, \$35; Retirees, \$20; Students, \$10.

THE PUBLIC IS INVITED.

**Directions to Brandeis:**

<http://www.brandeis.edu/about/visiting/directions.html>. Turn left on the loop road as you enter the campus. Park on the left just before the road becomes one way in the other direction. The faculty club is just across the loop road from the parking lot.. ◇

# Author Biographies

**David K. Gosser, Jr.**

David K. Gosser, Jr. is Professor of Chemistry at The City College of New York (CCNY), the flagship college of the City University of New York. He received a B.S. in Chemistry from St. Joseph's University (Philadelphia) in 1981 and a Ph.D. in Physical Inorganic Chemistry from Brown University in 1986. He is the author of the widely used monograph "Cyclic Voltammetry: Simulation and Analysis of Reaction Mechanisms," and has used electrochemical methods to formulate the widely accepted "inner-sphere electron transfer catalyzed decomposition" model for the mechanism of action of the anti-malarial drug artemisinin. Dr. Gosser founded the peer-led team learning (PLTL) model for General Chemistry at CCNY, and, with support from the NSF's Systemic Change in Chemistry and National Dissemination programs, has led the effort to develop the PLTL model and to disseminate PLTL to general chemistry and other chemistry sub-disciplines, as well as to other scientific disciplines. He is currently Project Director of a Howard Hughes Medical Institute Undergraduate Science Education grant at CCNY, and is the author of a new textbook, *General Chemistry for Peer-led Team Learning*, a "small footprint" book which fully integrates textual readings and active learning.

**Jack A. Kampmeier**

Jack A. Kampmeier completed his A.B. studies at Amherst College, and his Ph.D. at the University of Illinois. He joined the University of Rochester faculty in 1960 to establish a program

*continued on page 14*

their leadership roles. We will lead a panel discussion on the origins of the PLTL model; its impact on students, peer-leaders and faculty; and lessons learned about facilitating change in the way we teach and students learn; and potential for continued growth and development of the model. ◇

# ABSTRACT

## *Peer-led Team Learning*

We will discuss a model of learning chemistry and other sciences that encourages students to join an intellectual community, accommodates diverse approaches to learning, and harnesses the power of peer interaction to help students build conceptual understanding and succeed in their coursework. The Peer-Led Team Learning (PLTL)

model provides an active learning experience for students, creates new leadership roles for students, and organizes faculty/student partnerships to catalyze change in educational practice. A modest reduction in traditional lecture or recitation time makes room for a weekly peer-led workshop where students solve problems and debate and discuss scientific ideas. The workshops are guided by students (peer-leaders) who have done well in the course previously and are trained for

# NESACS Chemists to Receive ACS Awards

Chemists from Harvard University, M.I.T., and Boston University will be honored with 2009 ACS awards for outstanding achievements.

**Daniel G. Nocera**, M.I.T., *ACS Award in Inorganic Chemistry* sponsored by Aldrich Chemical.

**Mohammad Movassaghi**, M.I.T., *Arthur C. Cope Scholar Award* sponsored by Arthur C. Cope Fund.

**John A. Porco, Jr.**, Boston University, *Arthur C. Cope Scholar Award* sponsored by Arthur C. Cope Fund.

**Cynthia M. Friend**, Harvard University, *George A. Olah Award in Hydrocarbon or Petroleum Chemistry* sponsored by the George A. Olah Award Endowment.

In addition, the *James Flack Norris*

# 8<sup>th</sup> Sukant Tripathy Annual Memorial Symposium

The University of Massachusetts Lowell will hold its eighth anniversary symposium on **December 5, 2008**, to honor the memory of the late Prof. Sukant Tripathy, renowned researcher and former Director of the Center for

*Award in Physical Organic Chemistry*, sponsored by NESACS, will be presented to **Bernd Giese**, University of Basel, Switzerland, with some of the other awards on Tuesday, March 24, 2009, at the ACS national meeting in Salt Lake City. In particular, the *Arthur C. Cope Scholar Awards* will be presented at the Fall 2009 ACS national meeting in Washington, DC. ◇

Advanced Materials, University Provost and Vice Chancellor. The program includes talks by invited speakers and poster presentations.

## Date, Time, Location

**December 5, 2008**

**8:15 a.m. - 4:30 p.m.**

University of Massachusetts Lowell, MIL Conference Room, Wannalancit Mills, 600 Suffolk St., Lowell, MA 01854. Directions at [www.uml.edu/maps/directions](http://www.uml.edu/maps/directions)

## Speakers:

**Peggy Cebe**, Tufts University

**Paul Calvert**, University of Massachusetts Dartmouth

**Mrinal Thakur**, Auburn University  
**Thomas Jozefiak**, Genzyme Corporation

**Wen-Bin Lin**, University of North Carolina

**Venkat Raman**, University of Massachusetts Amherst

**Jeong Ok Lim**, Kyungpook National University School of Medicine, South Korea

**Russell Gaudiana**, Konarka Technologies

## Registration

Pre-registration (free) is required by November 24, 2008 to [Michele\\_Vercellin@uml.edu](mailto:Michele_Vercellin@uml.edu).

Lunch and refreshments will be provided.

## Accommodations

Double Tree Hotel, Warren St., Lowell, MA. For reservations, please call 978-452-1200 & request UMA Lowell rate.

## Details and Changes

All updates including speaker topics and program schedule will be posted on the website [www.uml.edu/tripathysymposium/](http://www.uml.edu/tripathysymposium/) or you may contact [Michele\\_Vercellin@uml.edu](mailto:Michele_Vercellin@uml.edu) or 978-934-3695. ◇



**MORE HORSEPOWER**  
under the hood to move your project  
faster to its finish line.

Cambrex has US & European cGMP facilities.  
We can help with DMFs, INDs, & NDAs.

Call us at 866-286-9133  
e-mail: [nesales@cambrex.com](mailto:nesales@cambrex.com)



Innovation. Experience. Performance.  
<http://www.cambrex.com>

## BOOST OUR SAVINGS

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.

# The Fifteenth Annual ACS Northeast Regional Undergraduate Day

Saturday, November 1, 2008

Hosted by the Department of Chemistry at Simmons College and the Chemistry/Physics Liaison at Simmons College

Sponsored by the Northeastern Section of the American Chemical Society

**9:00 Registration** (Park Science Center, Simmons College, 300 The Fenway, Boston, MA 02115)  
(Park Science Center is located between 2 Avenue Louis Pasteur and Boston Latin High School)

**9:30 Welcoming Remarks – Rich Gurney (Simmons College)**

**9:45 Keynote Address: Green Chemistry: Designing a sustainable future with beakers and flasks. John C. Warner** – President and Chief Technology Officer, Warner Babcock Institute for Green Chemistry.

**10:30 Coffee break**

**10:45 Research Talk(s) and Panel Discussion (choose one):**

**1. Nolan T. Flynn** – Wellesley College  
*An REU-based research group and metal nanoparticles: Controlling assembly at different length scales.*

**Panel Discussion to Follow: Applying to Research Experiences for Undergraduates (REU) Programs**

**2. Matthias Brewer** – University of Vermont  
*The discovery of a novel ring fragmentation reaction and its application in heterocycle synthesis.*

and

**Ryan Hayward**, UMass Polymer Science and Engineering

*Instabilities of polymers at interfaces: New routes to complex and responsive materials.*

**Panel Discussion to Follow: Applying to Graduate School Ph.D. Programs**

**12:00 Lunch**

**12:30 Résumé Review and Graduate School/Industry Fair**

## Call for Abstracts!

*The 7<sup>th</sup> Annual Undergraduate Environmental Research Symposium*

Saturday, November 15, 2008

9:00 AM – 3:00 PM

Bridgewater State College

Poster abstract submission is open to all undergraduate students at

<http://www.bridgew.edu/Environmental>.

**Abstract submission deadline is Monday, November 3. Please email questions to Ed Brush ([ebush@bridgew.edu](mailto:ebush@bridgew.edu)).**

**1:30 Afternoon Talk (choose one):**

**1. Margaret Kerr** – Worcester State College  
*An International Green Chemistry Experience: Insight into the Fulbright Scholarship Program for Students and Faculty.*

**2. Chris Larson** – University of Oregon  
*The Industrial Internship Masters Program at University of Oregon.*

**2:15 Student Affiliates Workshop**

**Amy Cannon** – Beyond Benign

**2:30 – 4:00**

**Workshop I – Green outreach demonstrations for ACS affiliates:**

1. *Hydrolysis of post-consumer polylactic acid*

2. *Extraction of D-limonene using liquid carbon dioxide*

3. *Construction of dye-sensitized solar cells using blackberry juice.*

**2:30 – 4:00**

**Workshop II – Ma Pearl's Soap: Soap making as a Green Chemistry Laboratory**

**5:00 Adjournment**

**There will be a \$10 registration fee to partially cover the cost of lunch, which will be provided, and workshop materials.**

If you would like more information, or if your school or company would like to send a representative to the Graduate School and Industry Fair, please contact Joanne Saro at 617-521-2720; 617-521-3086 (fax) ; e-mail: [joanne.saro@simmons.edu](mailto:joanne.saro@simmons.edu) ◇

## Two-Day Short Course: LABORATORY HEALTH AND SAFETY

Sponsored by the NESACS Committee on Continuing Education.

Designed to Improve the Skills and Marketability of Practicing B.S., M.S., and Ph.D. chemists,  
at a registration fee about half of that charged at National ACS Meetings.

**DATES and TIME:** **Thursday, Nov. 20, 2008; 8:00 a.m. – 5:00 p.m.**  
and **Friday, Nov. 21, 2008; 8:30 a.m. – 5:00 p.m.**

**PLACE:** Room 340, Eagan Center, Northeastern University, 360 Huntington Ave., Boston, MA

Laboratory Safety has become a concern of ever increasing importance, with many laboratory operations becoming substantially altered from traditional practices due to safety considerations. Yet few chemistry practitioners have had any formal training in this area. This Short Course, which has been offered successfully at numerous professional meetings since 1985, is being made available to the Northeastern Section at a tuition fee greatly reduced from that normally charged at National and Regional Meetings.

### PROGRAM AGENDA:

Scope of the Problem; Accidents; Legal Aspects; OSHA Lab Standard; Fire Control; Labeling; Biological and Animal Hazards; Handling Glassware; Eye and Face Protection; Planning for Emergencies; Handling Chemical Reagents; Ventilation; Electrical Safety; Storage of Chemicals; Disposal of Chemicals, Safety Equipment Display; Needs Assessment; Employee/Student Involvement; Safety Program Planning; Questions and Answers.

**INSTRUCTOR:** Christina Dillard has extensive experience as an EHS specialist with a broad background in laboratory safety, including chemical, biological and radiological safety, hazardous waste disposal and emergency response. In addition to serving as the Assistant Director of *The Laboratory Safety Institute*, headquartered in Natick, MA, she is a faculty instructor and EHS consultant providing safety training and services to laboratory professionals in industry and academia. She has received excellent reviews for her presentations of this program to numerous diverse groups. The Committee on Continuing Education feels fortunate to be able to present this training program by a pre-eminent authority from this Section.

### PRE-REGISTRATION REQUIRED – Registration Fees:

ACS Members if **received** before Nov. 6..... \$550.00; if **received** after Nov. 6 .....\$645.00

Non-ACS Members if **received** before Nov. 6..... \$650.00; if **received** after Nov. 6 .....\$745.00

There will be a limited number of scholarships for unemployed ACS Members on a space-available basis.

Full-time Students will be admitted on a space-available basis at the following reduced fees:

Graduate students registering before Nov. 6 ..... \$225.00; after Nov. 6.....\$325.00

Undergraduate Students registering before Nov. 6 ...\$125.00; after Nov. 6.....\$225.00

Parking Fee: about \$15.00/day

University cafeterias will be available for lunches.

For further information contact: Marilou Cashman, NESACS Office,

e-mail: mcash0953@aol.com phone: (508) 653-6329; or toll free: (800) 872-2054

---

### Short Course Registration form: *Laboratory Health and Safety*, Nov. 20-21, 2008

Name: \_\_\_\_\_ Business Affiliation: \_\_\_\_\_

Mailing \_\_\_\_\_ Telephone: \_\_\_\_\_  
Address

(Circle: Home or Work) \_\_\_\_\_ E-mail: \_\_\_\_\_

Mail with remittance to: Prof. Alfred Viola, Chair  
Committee on Continuing Education  
NESACS  
23 Cottage Street  
Natick, MA 01760

Please make checks payable to **NESACS**  
(Sorry, we cannot accept credit cards or  
purchase orders.)



# International Reach of the American Chemical Society

Daniel J. Eustace, Ph.D. and Lisa M. Balbes, Ph.D.

## Introduction

The history of chemistry in Argentina, both education and industry, was described in "Chemistry in Argentina" by Prof. Maximo Baron (Chemistry International, Volume 22, No. 4, July 2000, pages 97 - 101.) This article was our introduction to chemistry in Argentina, and to the Asociacion Quimica Argentina. (AQA). Contact with the author led to a mutual exchange of information, ideas, and enthusiasm for chemistry.

In October, 2006, one of us (DJE) visited AQA headquarters to begin an in-depth exchange with many outstanding ambassadors of chemistry in Argentina. One of the outcomes of that meeting was a request by members of the AQA for information from members of the American Chemical Society (ACS) about the programs and services it provides to its members. It is our intention to share our professional organization's approach to serving chemists and the chemical profession in the hopes of encouraging cross-fertilization of approaches between chemical communities.

This interaction comes at a fortuitous time. As improved communication and transportation technologies shrink our world, national organizations are expanding their horizons to include international relationships. ACS is no exception, and is broadening its international activities.

The Publications Division and Chemical Abstracts Service (both divisions of ACS) are fully international, and derive more than half of their revenue from outside the United States. Other parts of the organization, especially the Committee on International Activities, are actively working to create international partnerships, protect the rights of scientists and engineers, and address the needs and interests of scientists in developing countries (Chemical and Engineering News, January 15, 2007, page 54).

The American Chemical Society (ACS) has long recognized the importance of Latin America, and in fact offers many resources for chemists in this area of the world (see [www.science.oas.org/RLQ/](http://www.science.oas.org/RLQ/)). Química ([quimica.wikispaces.com](http://quimica.wikispaces.com)), a freely available web site, was recently created in cooperation with national chemical societies throughout Latin America to build community among those interested in chemistry in this region.

One reason for this interest is the continued growth of the chemical industry in this region, caused by ample resources and strong demand for chemicals. With a chemical enterprise valued at more than US\$100 billion annually, and with more than 20% of U.S. chemical and related product exports being shipped to the region, Latin America is an important contributor to the world's chemical enterprise. In fact, recent studies show that more projects are in the works, or at least under study, in Latin America than in Asia. (Chemical and Engineering News, January 8, 2007, pages 19-20.)

## American Chemical Society: Founding and Financing

The American Chemical Society (ACS, [chemistry.org](http://chemistry.org)) was formally founded in 1876 to "bring chemists together in scientific and social intercourse, to establish a reference library and a chemical museum, and to secure rooms for these purposes." Thirty-five chemists attended the initial meeting in New York on April 6, 1876, at which the constitution and bylaws were adopted.

Over more than 125 years, the ACS has grown to include almost 160,000 individual members, and to have annual operating revenues of over US \$400 million. ACS has evolved to include many different facets, and serve the needs of a wide constituency with a large staff. The ACS headquarters in Washington, D.C. is home to about 700 staff members (the majority of whom are in the publications division). More than 1,000 additional employees work at Chemical Abstracts Service (CAS, [cas.org](http://cas.org)), located in Columbus, Ohio.

Very early in its history, ACS began publishing, not only the scientific papers presented at its meetings, but also abstracts of other papers and structural databases. The publications division of ACS ([pubs.acs.org](http://pubs.acs.org)) currently publishes almost 70 journals that cover more than 20 scientific areas. The first of these, the Journal of the American Chemical Society, began publication in 1879, and in 2006 published over 1500 articles. All ACS journals now offer online submission for authors, online peer review, and web-based subscription services.

Since 1907, CAS has indexed and summarized chemistry-related articles from more than 40,000 scientific journals, in addition to patents, conference proceedings and other information sources. CAS provides pathways to published research in the world's scientific literature, including virtually everything related to chemistry, as well as a wide variety of data in the life sciences and other disciplines. In total, abstracts for more than 25 million documents are now accessible online through CAS. The annotated databases that result from this work are available to the chemical community on a subscription basis.

This early start and comprehensive coverage gave ACS a large database of information, and provided a solid financial foundation. One of the things that differentiates ACS from most professional societies is its funding model. Almost 90% of the society's income comes from information services (CAS and Publications). Membership dues make up a small percentage of the organization's operating revenue. In return for their annual dues (currently US\$136), members receive discounts on ACS publications and information services, can develop their skills and careers through services and networking opportunities, and can grow professionally by attending professional events.

*continued on page 10*

# International Reach

*Continued from page 9*

The information technology landscape is changing, and ACS is adapting. With both CAS and the Publications division, a delicate balance must be maintained between allowing the broadest possible distribution of scientific information, and protecting the quality of that information. For example, current practice for most ACS journals is to allow authors, upon publication, to distribute up to 50 free e-prints of their published articles to interested colleagues. After 12 months the access restriction is lifted, allowing unlimited, free access to such articles via those same author-directed links. A new program, Authors Choice, which was announced in December, 2006 allows the author of an accepted article to sponsor immediate open access, or free distribution, for their article. Time will tell if authors and institutions are willing to pay to allow immediate open access to their articles.

Chemical Biology, an ACS journal, is experimenting with new electronic features, including Ask the Expert, a collaboration wiki, and a glossary of chemical and biological terms.

## Local Sections and Regions Develop Geographic Communities

During the very early years of the ACS, communication and travel across the country (the United States is about 3.5 times the area of Argentina) were slow and difficult. Because of this, local chemists in New York, where the meetings were held, tended to dominate the society even though it had a national charter. Frustration with this led to the formation of the Chemical Society of Washington in 1884, by chemists in that area. Eventually, the national society reorganized to form the best of both worlds - a single, national, organization with many local sections.

Local sections are a great way for groups of chemists who are geographically close together to organize, network, and advance professionally. Each member of the ACS is automatically assigned membership in one of the 189 local sections. Each local section covers a small geographic area, ranging from one major city to parts of several states, depending on the population density of chemists. Local sections range in size from small (having fewer than 200 members) to very large (which have 3,200 members or more). Local sections receive some funding from the national organization - a basic allotment plus a small additional amount for each registered member. Most local sections also charge dues, ranging from US\$2 to US\$15 per year. The national organization provides leadership training for local section officers, ideas for programs and outreach activities, tour speakers, web site hosting, and more.

Local sections elect their own officers, publish newsletters, hold regular (usually monthly) meetings, organize outreach activities that expand the public's understanding of chemistry, and much more. Local sections allow chemists and chemical professionals to connect with others in their geographic area, enhance their own professional development, and organize and attend technical meetings on topics

of interest to the local community. Some local sections have joint meetings with other professional societies, which helps to create connections between disciplines, and between scientists.

In addition to local sections, the ACS also divides the country geographically into 10 regions, each of which includes several states. In each region, a regional organizing committee is responsible for hosting an annual or biannual meeting. Regional meetings generally attract between a few hundred and a few thousand chemists, depending on the region, and last 3 to 4 days. Regional meetings consist of a technical program (oral presentations of research projects, grouped by topic into symposia), workshops on special topics, poster sessions, and often award banquets and other special and social events. These regional meetings can be an economical way for members to expand their professional horizons.

## Technical Divisions Promote Publication, Peer Review, and Professional Discussion

In addition to the geographic organization of local sections and regions, ACS members also participate in divisions by areas of professional interest. Each ACS member chooses to which of the 33 professional divisions they will belong. On average, each member belongs to about one division, with the Organic, Analytical Chemistry and Medicinal Chemistry divisions having the most members. Divisions charge dues ranging from US\$8 to US\$55 per year, elect their own officers, and are responsible for fostering face-to-face exchange of information between chemical professionals with similar interests.

The majority of this takes place via topical programming at national meetings (see below). Newsletters and web sites keep members informed of current events, conferences, publications, and more between meetings. For example, the Chemical Health and Safety division coordinates electronic bulletin boards, listservs, and publishes a journal (Chemical Health and Safety), which is sent to all division members. CHAS covers issues ranging from safety (OSHA) and environmental (EPA) regulations to safe handling of hazardous waste, from the latest innovations in effective chemical hygiene practices to rulings on safety-related lawsuits. For example, the newsletter of the Chemical Health and Safety Division recently published an article entitled "Global Harmonization System and Chemical Hazard Communication", which described significant changes on the horizon for all Material Safety Data Sheet (MSDS) users and preparers. The Division of Chemical Education sponsors the US National Chemistry Olympiad, and provides standardized tests for the field of chemistry.

A small number of divisions are organized around other topics, such as Chemical Technicians, Business Development & Management, and Small Chemical Businesses. Each allows a group of chemists with similar interests to share information with their professional peers, both formally (oral and poster presentations at national and regional meetings) and informally, through newsletters, web sites, and personal contacts.

## National Meetings

National meetings, open to all chemists, provide an opportunity for members to present research results either orally or on a poster, talk to other scientists in related or different disciplines, and network with colleagues from all over the world (about 10% of the attendees at a national meeting are from outside the United States).

The ACS holds two national meetings each year, one in the spring and one in the fall.

The main attraction at every national meeting is the technical program - lectures and poster sessions presenting the latest in scientific research on every conceivable topic. Each division organizes sessions on topics that fall into their areas of expertise. Oral sessions can last from one half-day session to 5 full days, depending on the amount of interest and number of speakers. Poster sessions are generally held at night, in conjunction with social hours and networking opportunities.

Another major part of the national meeting is the Exposition, where vendors run booths showing off their latest products and services. Many vendors also host educational lectures and social events, or provide sponsorships of technical sessions or social events.

One drawback of national meetings is that no matter how big they are, the majority of ACS members are unable to attend. However, new methods of electronic communication are enabling the society to provide some of the benefits of these meetings even to those who are unable to physically attend. Some divisions are recording important sessions and posting audio or video on their web sites, others are having popular papers re-presented to online audiences. While pioneering efforts are being made in this area, many questions remain to be addressed, such as who should have access to these presentations (anyone, only ACS members, only division members...), how long presentations should remain online, whether or not will they be considered prior publication by journal editors, and who will decide which and how many symposia should be made available.

## Leadership and Professional Development

The president of the ACS, elected annually by the membership, is its main spokesperson and representative. The main governing body is the Council, comprised of councilors elected by each local section and division. The number of councilors varies by size of the local section or division. Councilors serve on the committees that oversee the operations of the national organization. Serving on these committees offers not only a way to give back to the profession, but builds relationships between chemists who would never have met otherwise. Current standing committees include Nominations and Elections, Economic and Professional Affairs, Ethics, Chemical Safety, International Activities, Professional Training, Women Chemists, and Younger Chemists.

The Women Chemists Committee leads the society in attracting, developing and promoting women in the chemical sciences. It sponsors both a breakfast and a lunch at each national meeting, where chemical professionals of both genders listen to speakers and discuss topics such as work-life

# John Neumeyer Inducted Into American Chemical Society Hall of Fame



John L. Neumeyer Ph.D., Director of the Medicinal Chemistry Program, McLean Hospital/ Harvard Medical School, and Distinguished Professor Emeritus, Northeastern University was inducted into the Hall of Fame at the American Chemical Society's Medicinal Chemistry Division at its National Meeting in Philadelphia on August 20, 2008.

Inductees are recognized for their overall outstanding contributions to medicinal chemistry through a combination of research, teaching and service. ◇

---

balance, the art of negotiation, and making career transitions. It also provides support to increase the number of women faculty and women chemists in industry.

The Younger Chemists Committee exists to encourage participation in ACS by younger chemists (by definition, under 35 years old, or just starting out in their career). YCC members, both nationally and in Local Sections support each other as they navigate the critical first years of their careers. Younger chemists bring fresh new ideas to the organization and are mentored by current ACS leaders.

Student affiliate chapters also exist at many college campuses, exposing students to the organization, the profession, and professional chemists, while continuing their education. Student affiliate groups are usually led by a professor, and may take tours of chemical plants, put on chemistry demonstrations for the public, and organize career fairs.

## Career Management and Development

Over the years, ACS has developed a number of services to aid chemists as employed professionals, and to help them advance their careers. Workshops are presented at both national and local section meetings on writing resumés, interviewing, and many other aspects of managing a professional career. A Career Consultant Program was established in 1990, through which trained volunteer chemists offer advice and career guidance on an individual basis to any member who requests it. An integrated job and resumé data-

*continued on page 15*

# SUMMARY OF GOVERNANCE ACTIONS/REPORTS

AMERICAN CHEMICAL SOCIETY  
236th ACS NATIONAL MEETING  
PHILADELPHIA, PA  
AUGUST 17-21, 2008

## ACTIONS OF THE COUNCIL

### Election Results

- The Committee on Nominations and Elections presented to the Council a slate of nominees for membership on the Committee on Committees beginning in 2009. By written ballot, the Council elected Cherylavaughn Bradley, Rigoberto Hernandez, James Landis, Howard Peters, and Sara Risch for the 2009-11 term.
- The Committee on Nominations and Elections presented to the Council a slate of nominees for membership on the Council Policy Committee beginning in 2009. By written ballot, the Council elected Ray Dickie, Bonnie Lawlor, Mamie Moy, and

Eleanor Siebert for the 2009-11 term.

- The Council Policy Committee presented to the Council a slate of nominees for membership on the Committee on Nominations and Elections. By written ballot, the Council elected Jack Breazeale, Peter Dorhout, Catherine Fenselau, Peter Jurs, and Andrea Twiss-Brooks for the 2009-11 term; Angela Wilson for the 2009-10 term; and Dwight Charas for the remainder of a 2007-09 term.

### Candidates for President-Elect and Board of Directors

- The candidates for the Fall 2008 ACS national election were announced as follows:

### President-Elect 2009

Joseph Francisco, Purdue University, West Lafayette, IN

Josef Michl, University of Colorado-Boulder, Boulder, CO

### Directors-at-Large – 2009-11

William Carroll, Occidental Chemical Corporation, Dallas, TX  
Richard Deming, California State University- Fullerton, Fullerton, CA

Thomas Gilbert, Northeastern University, Boston, MA

Marinda Li Wu, Science is Fun! Orinda, CA

### Director, District III 2009-11

Pat Confalone, DuPont, Wilmington, DE

Alan Cooper, Schering-Plough Research Institute, Kenilworth, NJ

### Director, District VI 2009-11

Bonnie Charpentier, Metabolex, Inc., Hayward, CA

Gary Christian, University of Washington, Seattle, WA

### Petition

- The Council VOTED to accept the Petition on Society Affiliate Dues. The petition raises Society Affiliate dues to be equal to the (full) membership dues, while specifying that Society Affiliates are not subject to any of the discounts otherwise applicable to membership dues. To be valid, the petition next must be confirmed by the Board of Directors within 90 days, and will become effective five months following confirmation.

### Committee Review

- As part of a regular review, the Council VOTED to continue the Committee on Chemistry and Public Affairs, and the Committee on



## Eastern Scientific

301 Winter Street  
Hanover MA 02339

781-826-3456

## Vacuum Pump Problems?

Eastern Scientific specializes in the repair and precision rebuilding of all makes of mechanical vacuum pumps.

*Free pick-up & delivery  
Restrictions apply*



Patents and Related Matters. The Committee on Chemistry and Public Affairs is responsible for advice and recommendations for ACS action on public policy matters involving the chemical sciences and technologies. The Committee on Patents and Related Matters considers patents and other related items insofar as such consideration and possible action are appropriate under the Society's Charter.

### Registration Report and 2009

#### National Meeting Registration Fee

- As of August 20, 2008, the ACS fall national meeting had attracted 13,800 registrants. Totals in select categories are as follows: Regular attendees 8,196; Students 3,087; Guests 481; Exhibit Only 546; and Exhibitors 1,490. In keeping with the objective of the National Meeting Long Range Financial Plan, previously approved by the Board of Directors and Council, the Meetings and Expositions Committee voted to support an increase of \$10 for the 2009 national meetings advance registration fee.

#### Membership Activity

- In 2007, the number of paid new members nominated by current ACS members was 1,559. Currently, there are 988 paid new member applications. The Society's Member-Get-a-Member program is on track to have its best year ever.

#### Professional Employment Guidelines

- The Committee on Economic and Professional Affairs submitted its latest version of the Professional Employment Guidelines for consideration. These guidelines offer a broad spectrum of recommended practices in employment for professional scientists and their employers. The Council will vote on the Professional Employment Guidelines at the 2009 spring meeting in Salt Lake City.

#### Revision of the Division Funding Formula and Formation of a New Division

- After a motion to recommit failed, the Council VOTED, as recom-

mended by the Divisional Activities Committee (DAC), to accept a revised division funding (allocation) formula. DAC reported that the formula improves clarity, offers simplicity, and rewards collaborative programming between divisions. The change will take effect in 2009 for 2008 activities.

- The Council also VOTED to approve the formation of the Probationary Division of Catalysis Science and Technology. The primary objective of this probationary division is to provide a "home" for the chemical science of catalysis within the ACS in a way that will also insure a continual connection between this science and the essential chemical technology of catalysis.

#### Special Discussion Item

- A special discussion item was put on the Council agenda by President Bruce Bursten. The discussion focused on Achieving Sustainability (e.g., Energy, Water, Food): What can/should ACS do to address this key global scientific challenge? To kick off the discussion, ACS Board Chair Judy Benham invited Council to participate in identifying the challenges and developing solutions. She highlighted new and ongoing activities, such as the Global Challenges/Chemistry Solutions podcasts and related information, available online at [www.acs.org/globalchallenges](http://www.acs.org/globalchallenges). She also sought Council input on member involvement and ACS programming in support of Goal #3 of the Strategic Plan: "ACS will be a global leader in enlisting the world's scientific professionals to address, through chemistry, the challenges facing our world." Councilors engaged in a robust exchange, offering several useful comments and suggestions to address how the Society might develop initiatives to address sustainability of the world's resources, including energy, water, and food. Thirty-five councilors offered a wide variety of suggestions, which will be studied. Councilors and others who have ideas should send them to [strategic-plan@acs.org](mailto:strategic-plan@acs.org).

## ACTIONS OF THE BOARD OF DIRECTORS

### The Board's Standing and Special Committees

- The Board of Directors received reports from its Executive Committee, and the Committees on Grants and Awards, Public Affairs and Public Relations, Professional and Member Relations, and Budget and Finance. On the recommendation of the Committee on Grants and Awards, the Board VOTED to approve nominees for the 2009 Perkin Medal and the 2009 Othmer Gold Medal. On the recommendation of the Committee on Professional and Member Relations, the Board VOTED to approve in principle a proposed alliance between the ACS and the Royal Society of Chemistry (RSC) entitled, *Research in Chemistry for Society/Sustainability* (RICHES). On the recommendation of the Committee on Budget and Finance, the Board VOTED to include funding requests for the ACS Leadership Development System and ACS Green Chemistry Institute® in the 2009 budget, and to accept the 2008 report from Program Review Advisory Group, as amended. The Board also accepted the recommendations from the 2008 Financial Planning Conference with one modification.
- The Board received a status report from its International Strategy Implementation Task Force and an update on plans for a Board-Presidential Task Force on Education. The International Strategy Implementation Task Force is charged with implementing the recently approved Society international strategy, and the Board-Presidential Task Force on Education will attempt to answer the question: "What can a Society with 160,000 members uniquely do that can have a transformative effect on education in the United States?"

### Strategic Issue

- The Board of Directors continued its deliberations of the global scientific challenge Sustainability (e.g., energy, food, and water) and considered a proposed set of principles from the

*continued on page 15*

## Biographies

*Continued from page 5*

of teaching and research in organic chemistry with an emphasis on reaction mechanisms and free radical chemistry. Except for sabbatical years as a NSF Faculty Fellow at the University of California, Berkeley (1971-1972) and as Fulbright Senior Research Scholar at the Albert Ludwigs Universität, Freiburg, Germany (1979-80), he has been actively engaged in teaching organic chemistry from freshman to postdoctoral fellows. His leadership role in revising the undergraduate curriculum in Chemistry was recognized by the University of Rochester's Award for Excellence in Undergraduate Teaching in 1974. From 1975-79, he chaired the Chemistry Department and subsequently served as Associate Dean for Graduate Studies from 1982 to 1985 and Dean of the College of Arts and Science from 1988 to 1991.

In 1995, Jack Kampmeier and Vicki Roth introduced the Peer-led Team Learning Workshop in his course in organic chemistry. Since then, Jack has been involved in all phases of the research, development and dissemination work of the national Peer-Led Team Learning project supported by NSF from 1995-2005 and led by David K. Gosser. He continues to vigorously support the implementation of the PLTL Workshop model in other courses, disciplines and institutions as a superior way to help students learn. In 1999, Jack Kampmeier received the College of Arts, Sciences and Engineering Goergen Award for Distinguished Achievement and Artistry in Undergraduate Teaching and the Chemical Manufacturers' Association Catalyst Award for Excellence in College Chemistry. Since 2005, he has been Professor of Chemistry, "Emeritus, but not Retired."

### **Pratibha Varma-Nelson**

Pratibha Varma-Nelson received her B.Sc. in Chemistry with first class from the University of Pune, India, in 1970 and a Ph.D. in 1978 from the University of Illinois in Chicago in

Organic Chemistry. The title of her thesis was "Protein Ancestors: Heteropolypeptides from Hydrogen Cyanide and Water". From 1977-1979 she studied the effects of essential catalytic residue modifications on conformation and binding affinity in anhydro-chymotrypsin while she completed a postdoctoral fellowship in enzymology at the Stritch School of Medicine, Loyola University, Maywood, Illinois. She joined the faculty of Saint Xavier University, Chicago in 1979 as an Assistant Professor. In 1992 she was promoted to Full Professor and was elected co-chair of the science department for a three-year term. At SXU she taught courses in Organic Chemistry, Biochemistry, and Environmental Science. In 2002 she received the SXU Teacher-Scholar Award. She moved to Northeastern Illinois University in July of 2002 as Chair of the Department of Chemistry, Earth Science and Physics. At NEIU she developed and taught a Capstone Seminar course and Biochemistry.

Since 1995 her scholarly activities have been focused on exploring alternative ways of teaching chemistry. Since 1995 she has been involved in the development, implementation and dissemination of the Peer-Led Team Learning (PLTL) model of teaching. She was an active partner of the Workshop Chemistry Project, one of the five NSF-supported Systemic Reform Projects in Chemistry. She has been a Co-PI of two NSF-funded National Dissemination Grants awarded to the PLTL project and part of the management team of the Multi-Initiative National Dissemination (MID) Project. She has co-authored a book, several papers, and manuals about the PLTL model. Pratibha was the director of the Workshop Project Associate (WPA) Program, which provided small grants to facilitate implementation of PLTL, and was the director of the Chautauqua course on PLTL offered annually from 1998-2005. In addition she was a founding Co-PI of the NSF-funded Undergraduate Research Center, Center for Authentic Science Practice in Education, (CASPiE). Pratibha has served on the advisory boards of the

## Historical Notes

*Continued from page 4*

from his home in Hopkinton, MA.

His memberships were many: American Chemical Society, American Institute of Chemical Engineers, American Physical Society, American Association for the Advancement of Science, Tau Beta Pi, Sigma Xi, Phi Lambda Upsilon. He was President of the Pittsburgh Chemists Club, Chairman of the Physical Chemistry Group of the Pittsburgh ACS, as well as, among many others, memberships as Westinghouse Corporate Representative: ACS Corporation Associates, IUPAC, International Committee on Thermodynamics and Kinetics, International Society for Electrochemistry, Belgian Center for Corrosion. He was US Coordinator for Corrosion in High Temperature Water and Steam in the US/USSR Joint Working Group on Corrosion.

During his retirement in Hopkinton he served in many local activities: Board of Health, Chamber of Commerce, Historical Society, Republican Town Committee, Couples Club and Framingham LLL and Silver Grays.

Lindsay died on November 11, 2007. He is survived by his wife, Alice French Lindsay, and two sons, Douglas and Andrew. His sister Eleanor had died earlier.

MSS ◇

---

Molecular Science Project at UCLA and the Process Oriented Guided Inquiry Learning (POGIL) project. She is currently a member of the advisory board of Chemical and Engineering News (C&EN), a weekly news magazine for professionals in the chemical sciences, and on the editorial board of the Journal of Science Education and Technology.

In August 2008 Pratibha completed a two-year term as a Program Director (rotator) at the National Science Foundation in the Division of Undergraduate Education before joining Indiana University-Purdue University Indianapolis, where she is a Professor of Chemistry and the Executive Director of the Center for Teaching and Learning. ◇

## Governance

*Continued from page 13*

Committee on Environmental Improvement in this area. Addressing global scientific challenges is fundamental to strategic goal #3: ACS will be a global leader in enlisting the world's scientific professionals to address, through chemistry, the challenges facing our world.

### The Executive Director/CEO Report

• The Executive Director/CEO, along with several of her direct reports, updated the Board on the following items: the ACS Green Chemistry Institute® Strategic Plan; the Web Presence Initiative; emerging issues affecting the Society; recommendations resulting from the new IRS Form 990 filing requirements; and the activities of Chemical Abstracts Service, the Publications Division, and the Society's General Counsel. The emerging issues discussion was particularly vibrant as the ACS Board considered many of the key factors and trends that affect Society membership. As a follow-up to these reports the Board took several actions. The Board VOTED to amend its Regulations to conform with the new IRS Form 990 filing requirements; and on the recommendation of the Joint Board-Council Committee on Publications, the Board VOTED to approve the reappointment of several Society journal editors.

### Other Society Issues

• The Board received an update on its substantial progress toward achieving its 2008 goals, and discussed a draft of proposed 2009 goals. The Board concluded its session with introductions and briefings from several international dignitaries representing the Royal Society of Chemistry, the German Chemical Society, the European Association for Chemical and Molecular Sciences, the Canadian Chemical Society, the Mexican Chemical Society, and IUPAC. ◇

## International Reach

*Continued from page 11*

bank allows employers to advertise openings, and members to post resumés. These services are free to all members. Fee-based continuing education courses are offered on a variety of technical and business topics, including Pharmacology Primer for Chemists, Fourier Transform Infrared Spectroscopy, and Effective Technical Writing (see [chemistry.org/shortcourses](http://chemistry.org/shortcourses)).

### Summary

Hopefully, this perspective has provided some idea of the products and services the American Chemical Society offers its members. By offering members several different ways to group themselves (local sections, professional divisions, regions), and then letting those groups govern themselves, a tremendous amount of flexibility is obtained within the overall structure. Guidelines, best practices, and multiple channels of communication allow groups to share what has worked with each other, and build on each other's successes.

But even with all this flexibility, changing times require changes in policies, procedures, and sometimes structures. ACS overall is constantly re-evaluating and adjusting to changes in the chemical industry, workplace, and world. We hope this article has provided a good background on how the American Chemical Society fulfills its mission statement.

### Author Bios:

#### Daniel J. Eustace, Ph.D.

Dan is employed in a small, high technology chemical manufacturing company as a health, safety, and environmental protection manager. He has more than 30 years experience in applied research, process and product development and compliance. Dan earned his Ph. D. in chemistry from Brandeis University, and has continued his education throughout his career, including six sigma masters certification. He is a member of ACS and has volunteered as a career consultant for more than a decade. [dan.eustace@gmail.com](mailto:dan.eustace@gmail.com)

## Notable NE Chemists

*Continued from page 4*

chemicals. He promoted many chemical industries. In 1643 he began the manufacture of iron in Lynn and at Braintree. In 1648 he was granted a commission by the General Court of Massachusetts to manufacture salt. In 1650 he planned a chemical stock company, the first in America, for the manufacture of saltpeter, and in the next year was granted the first monopoly by Connecticut for the working of lead, copper, tin, antimony, vitriol, alum, etc. In 1662, during a trip to England, he read before the Royal Society a paper on the manufacture of tar in New England, and in the following year carried out for the Royal Society experiments on the brewing of beer from maize. He was a famous practitioner of medicine and made use of chemical remedies which he prepared himself. He was a member of the Royal Society and a friend and correspondent of Robert Boyle, of Kenelm Digby, and of George Starkey. In his large library there were many books devoted to chemistry and medicine, and also a number of alchemical books which had formerly belonged to Dr. John Dee. Many of his books, manuscripts, and letters are still preserved in the library of the Massachusetts Historical Society, Boston, Mass. He died at Boston, and is buried in the same tomb with his father in the churchyard of King's Chapel." ◇

---

#### Lisa M. Balbes, Ph.D.

Lisa is the founder of Balbes Consultants, which provides scientific documentation services to medical and scientific organizations. She is the author of "Nontraditional Careers for Chemists", published by Oxford University Press in 2006. Dr. Balbes obtained a Ph.D. in chemistry from the University of North Carolina at Chapel Hill. She is a councilor for the St. Louis section, WebMaven for the Computers in Chemistry Division, and has been a volunteer career consultant for ACS for over 12 years. [lisa@balbes.com](mailto:lisa@balbes.com). ◇

# BUSINESS DIRECTORY

## SERVICES

### COST-EFFECTIVE ANALYTICAL SERVICES

Our analytical laboratories offer same day or next day turn-around service. Our analytical department features a Waters Micromass Quattro Ultima Mass Spectrometer coupled with a Shimadzu LC-10AD VP liquid chromatography instrument for performing LC/MS analyses, and a Varian Inova 300 MHz NMR instrument.



**YOUR FIRST SAMPLE IS FREE**

Call 781-938-1122 or email [raja@creagenbio.com](mailto:raja@creagenbio.com) to explore CreaGen's capabilities and expertise.



[www.creagenbio.com](http://www.creagenbio.com)

## SERVICES



### PolyOrg, Inc.

Chemical Solutions for the Life Science Industry

- Custom Organic Synthesis
- Process Development
- Contract R & D
- Pharmaceutical Intermediates
- Medicinal Chemistry Support
- Biotechnology Specialty Reagents
- Solid Support Reactions
- Process Validation
- Gram to Multi-Kilogram Synthesis



### PolyOrg Inc.

10 Powers Street, Leominster, MA 01453  
 Phone: 978-466-7978 1-866-Poly-902  
 Fax: 978-466-8084 [info@polyorginc.com](mailto:info@polyorginc.com)  
[www.polyorginc.com](http://www.polyorginc.com)

## SERVICES

### Front Run OrganX, Inc.

Custom Synthesis & Process Chemistry

### WHEN QUALITY MATTERS

High Purity, Scalable Solutions to Challenging Organic Synthesis

Starting Materials to Pre-clinical  
 Single to Multi-Step mg to Kg

**98% min. purity**

Phone 978-356-7133 Fax 978-356-7449

Email [Frontrun@Sprynel.com](mailto:Frontrun@Sprynel.com)  
[www.FrontRunOrg.com](http://www.FrontRunOrg.com)

### NMR - IR/FTIR - UV/VIS/FL Sampling supplies & accessories

See our full catalogs / current pricing at [www.newera-spectro.com](http://www.newera-spectro.com)

CAGE Code: 44ME9  
 DUNS: 558785657



New Era Enterprises, Inc.  
 1-800-821-4667  
[cs@newera-spectro.com](mailto:cs@newera-spectro.com)

[www.caslab.com](http://www.caslab.com)



Trusted technical expertise.

3860 S. Palo Verde Road, Suite 302  
 Tucson, AZ 85714  
 520.573.1061  
[tucsonlab@caslab.com](mailto:tucsonlab@caslab.com)

Our Tucson Laboratory provides professional Micro-Elemental and Fuel Testing Services

- CHNOS
- Carbon & Sulfur
- Halogens & Anions
- Metals - ICP-OES, ICP/MS, AAS
- Fuel Analysis
- Air Sensitive & Hygroscopic Samples
- Contact Columbia Analytical for a full list of capabilities.

Same day to 4-6 day rush services available.

**Columbia Analytical Services**

An Employee-Owned Company

THE FUTURE OF LIQUID CHROMATOGRAPHY IS ACQUITY UPLC



Waters ACQUITY UltraPerformance LC® (UPLC®) provides more information, increases laboratory throughput, and can enhance your lab's existing MS technologies.

Learn more about the UPLC advantage at: [www.waters.com/uplc](http://www.waters.com/uplc)

©2007 Waters Corporation. Waters, ACQUITY, the ACQUITY logo, and UPLC are trademarks of Waters Corporation.

Waters

THE SCIENCE OF WHAT'S POSSIBLE.™

## SCHWARZKOPF Microanalytical Laboratory

Elemental & Trace Analysis  
 Organics, Inorganics  
 Organometallics  
 Metals by AA & Graphic Furnace  
 Functional Grps. - Mol. Wt.  
 Calorimetry  
 Total S. F. Halogens TOX  
 Coneg Testing Custom Analysis  
 56-19 37th Ave. Woodside, N.Y. 11377  
 (718) 429-6248  
[schwarzkopfmicro@aol.com](mailto:schwarzkopfmicro@aol.com)



Scientific glassblowers serving New England for over 40 years

Solving your Pyrex or Quartz glassware needs from custom fabrication to repairs

[www.finkenbeiner.com](http://www.finkenbeiner.com)



# BUSINESS DIRECTORY

## SERVICES

### Elemental Analysis

CHNOS ash  
ICP · AA · ICP/MS  
TOC · TOX · BTU  
Problem Solving

### HUFFMAN

LABORATORIES, INC.  
Quality Analytical Services Since 1936  
Phone (303) 278-4455  
FAX (303) 278-7012  
chemistry@huffmanlabs.com  
www.huffmanlabs.com



## SERVICES

Arendt & Assoc. IP Group  
*Registered Patent Attorneys*  
• Global Patent Protection • Licensing  
• Controlling Patent Costs

(978) 987-8400 or (978) 907-5270  
Suite 111 at Interstate 495, Danvers, MA  
jarendt@arendtpatentlaw.com

## SERVICES

**NMR** Service **500MHz**

\*Mass

\*Elemental Analysis

**NuMega Resonance Labs**

Tel: (858) 793-6057

## Preclinic DMPK

LCMS, MSn, Mass analysis with  
ESI/APCI/Maldi-TOF/NanoSpray

[www.HT-LABS.com](http://www.HT-LABS.com)

[info@HT-Labs.com](mailto:info@HT-Labs.com) (858) 677-9432

## Chemical Analysis Services



CHEMIR

Analytical Services

- Materials Identification
- Deformulation
- Polymer Analysis & Testing
- Failure Analysis
- Consulting Services



800.659.7659

[www.chemir.com](http://www.chemir.com)



## Achieve Your Goals in Organic Chemistry

We deliver *On time, On cost,*  
and *On target.*

For Excellence in Organic Chemistry

Come to Organix Inc. for:

- Contract research and development
- Custom synthesis (milligram to kilogram) in all areas of organic and medicinal chemistry
- <sup>1</sup>H NMR and <sup>13</sup>C NMR Spectra
- Structural Interpretation
- LC/MS Services

ORGANIX  
Inc.

Phone: (781) 932.4142

Fax: (781) 933.6695

Email: [organix@organixinc.com](mailto:organix@organixinc.com)

[www.organixinc.com](http://www.organixinc.com)



## 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](mailto:micronanalytical@compuserve.com)

Voice 302-998-1184, Fax 302-998-1836

Web Page: [www.micronanalytical.com](http://www.micronanalytical.com)



## 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, melting point

KF Aquameiry, Titrimetry

P.O. Box 927 - 29 Samson Ave. - Madison, NJ 07940 - 973.966.6668 - F 973.966.0136

[www.robertson-microlit.com](http://www.robertson-microlit.com) • email: [results@robertson-microlit.com](mailto:results@robertson-microlit.com)

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



## DuPont Analytical Solutions

From rapid, routine testing to complex problem-solving. One of the world's largest, and most diverse analytical laboratories, with the experience to solve your analytical challenges in :

Electronic Materials • Personal Care • Catalysis • Coatings, Pigments, and Adhesives  
Specialty Chemicals • Films and Packaging • Pharmaceuticals • Plastics • Fibers • Textiles

DuPont Analytical Solutions  
P.O. Box 80302  
Wilmington, DE 19880-0302  
Phone: (302) 695-1018

e-mail: [DASolutions@usa.dupont.com](mailto:DASolutions@usa.dupont.com)  
web: <http://analyticalsolutions.dupont.com>  
FAX: (302) 695-1717

Contact us for all your analytical needs.



# BUSINESS DIRECTORY

## SERVICES



PCI Synthesis Inc. is a custom chemical manufacturer of new chemical entities (NCE's), and other specialty chemical products.

- Process Research
- Process Development
- Analytical Development
- Process Validation
- Regulatory Support
- FDA filing



**PCI Synthesis**

9 Opportunity Way, Newburyport, MA 01950

**978.462.5555**  
**www.pcisynthesis.com**

## SERVICES

### LABORATORY EQUIPMENT

Bought • Sold • Exchanged

#### NOVEMBER SPECIAL

Quantachrome Nova 3000 Series N30-12 high performance surface area and pore size analyzer with Edwards vacuum pump.

Call for Details

American Instrument Exchange, Inc.  
1023 Western Ave., Haverhill, MA 01832  
TEL: 978-521-2221 FAX: 978-521-8822  
www.americaninstrument.com  
E-Mail: info@americaninstrument.com

### TELL OUR ADVERTISERS

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.

## CAREER SERVICES

### SEARCHING FOR THAT SPECIAL JOB?

There are many companies and organizations searching for chemical and biochemical personnel to fill important jobs in their organizations.

- Companies for laboratory and management positions
- Universities & Colleges for teaching positions and laboratory personnel
- Hospitals for technical and research personnel

There are several web sites that may help you search for these open positions.

- [www.mboservices.net/recr\\_disp.php](http://www.mboservices.net/recr_disp.php)
- <http://www.nesacs.org/Careers/job-postings.html>

## Index of Advertisers

Am. Instrument Exchange.....	18
Arendt & Associates IP Group.....	17
Cambrex Corporation.....	6
Chemir Analytical Services.....	17
Columbia Analytical Services.....	16
CreaGen Biosciences.....	16
DuPont Analytical Solutions.....	17
Eastern Scientific Co.....	12
Front Run OrganX, Inc.....	16
G. Finkenbeiner, Inc.....	16
HT Laboratories, Inc.....	17
Huffman Laboratories, Inc.....	17
IQSynthesis.....	18
Mass-Vac, Inc.....	20
Micron Inc.....	17
New Era Enterprises, Inc.....	16
Northeastern University.....	2
NuMega Resonance Labs.....	17
Organix, Inc.....	17
PCI Synthesis.....	18
Pitcon.....	19
PolyOrg Inc.....	16
Robertson Microlit Labs.....	17
Schwarzkopf Microanalytical.....	16
Waters Corporation.....	16

**iQsynthesis**  
CUSTOM SYNTHESIS, INC.

### Custom Synthesis Services

iQsynthesis Technology provides customized Chemical synthesis at milligram to kilogram quantities.

- Custom Synthesis
- cGMP Synthesis of API and Intermediates
- Process Development
- Cytotoxic and Highly Potent Compounds
- Hot and Cold Isotopic Labeling
- Analytical Support



iQsynthesis  
11610 Borman Drive  
St. Louis, MO 63146  
314-991-1857  
1-800-506-9892  
www.iqsynthesis.com  
info@iqsynthesis.com

**INNOVATION | QUALITY**

### WOULD YOU BELIEVE?

- Our Section (NESACS) is the largest in the ACS.
- We have more volunteers than any other Section.
- We have more activities than any other Section.
- The Nucleus has been voted at several ACS National meetings to be the best Section newsletter.
- We are expanding Nucleus and NESACS web site coverage of activities.

*The Following positions are open*

1. Photo Journalists
2. Book Reviewers
3. Corporate and Local news reporters
4. Copy Editors
5. Volunteer Coordinator

If you would like to be active in this vibrant organization, please contact Board of Publications member Vivian Walworth [vwalworth@comcast.net](mailto:vwalworth@comcast.net)

*No experience needed  
Just a willingness to participate  
and a sense of humor*

# You'll find the whole laboratory science community here.

## ACS/DAC Co-Programming at Pittcon 2009

### INVITED SYMPOSIA

- Biological Applications of Capillary Electrophoresis
- Evolution of Modern Chromatography: Celebration of 25 years of the Subdivision on Chromatography and Separation Chemistry
- The Future of HPLC-Method Development: Quality by Design—Evaluating the Control Space of Robust HPLC Methods
- New Dimensions in Multidimensional Separations
- Young Investigator Award from Subdivision on Chromatography and Separation Chemistry
- Pressurized Fluids in Separations Technology

### ORGANIZED CONTRIBUTED SESSIONS

- Validation of Bioanalytical Methods: Addressing matrix effects, ion suppression and ISR (incurred sample reanalysis)
- New Concepts and Instruments for Electrochemical Sensors
- Multi-residue Pesticide Analysis for Food Testing
- Understanding Chromatography with Sub-2  $\mu\text{m}$  Particles
- Quality Assurance of Measurements and Proficiency Testing

Visit [www.pittcon.org](http://www.pittcon.org) for the complete technical program.

Welcome to Pittcon—your once-a-year opportunity to get together with just about everyone in the laboratory science community. There's no better place to network with colleagues from all over the world, or to meet one-on-one with experts in every discipline.



**PITTCON**  
CONFERENCE & EXPO **2009**

**MCCORMICK PLACE • CHICAGO • MARCH 8–13, 2009**

©2008. All rights reserved.

THE  
**NUCLEUS**

19 Mill Road  
Harvard, MA 01451

NONPROFIT ORG.  
U.S. POSTAGE PAID  
NORTHEASTERN  
SECTION  
AMERICAN CHEMICAL  
SOCIETY

## 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.**



**PRODUCTS**

A Division of Mass-Vac, Inc.

247 Rangeway Road • PO Box 359 • North Billerica, MA 01862  
978 657 2393 Fax 978 671 0014 sales@massvac.com www.massvac.com

## Calendar

Check the **NESACS** Homepage  
for late additions:  
<http://www.NESACS.org>

Note also the Chemistry Department web  
pages for travel directions and updates.

These include:

<http://chemserv.bc.edu/seminar.html>  
<http://www.bu.edu/chemistry/events/>  
<http://www.chem.brandeis.edu/colloquium.shtml>  
<http://www-chem.harvard.edu/events/>  
<http://web.mit.edu/chemistry/>  
[www.chem.neu.edu/web/calendar/index.html](http://www.chem.neu.edu/web/calendar/index.html)  
<http://chem.tufts.edu/seminars.html> [CHEM.]  
<http://ase.tufts.edu/chemical/seminar.htm>  
[CHEM. ENGG.]  
<http://www.chem.umb.edu/>  
[www.umassd.edu/cas/chemistry/seminars.cfm](http://www.umassd.edu/cas/chemistry/seminars.cfm)  
[www.uml.edu/Dept/Chemistry/speakers.html](http://www.uml.edu/Dept/Chemistry/speakers.html)  
<http://www.unh.edu/chemistry/seminars.html>

### Nov 4

Prof. John Porco (Boston Univ.)  
Organic Chemistry Seminar  
Boston College, Merkert 130  
4:00 pm

Prof. Joel Schneider (U. Delaware)  
"Designed Peptide Materials for Biomedical  
Applications"  
Tufts, Univ. Pearson Chemistry Building, Room  
P-106  
4:30 pm

Dr. Drew Athans (Nano-C)  
"Regioselective Synthesis of C60 Derivatives as  
Potential Single-Molecule Transistors for  
Molecular Electronics Applications"  
Univ. New Hampshire, Iddles, L103  
11:10 am

### Nov 5

Dr. Sarah Delaney (Brown University)  
U. Mass Dartmouth, Building Group II,  
Room 118 4:00 pm

Dr. John Porco (Boston University)  
"New Synthetic Methods Inspired by Complex  
Natural Products"  
Northeastern, 129 Hurtig Hall  
12:00 pm

### Nov 6

Prof. Mounji Bawendi (MIT)  
Harvard, Pfizer Lecture Hall  
4:00 pm

Prof. Peter Lu (Bowling Green State Univ.,  
Ohio)  
Boston College, Merkert 130  
4:00 pm

Prof. David Freeman (Univ. Rhode Island)  
TBA  
Univ. New Hampshire, Idles L103  
11:10 am

### Nov 10

Prof. Frances H. Arnold (California Institute of  
Technology)  
"Innovation by Evolution"  
Harvard, Pfizer Lecture Hall 4:00 pm

### Nov 11

Prof. Catherine Drennan (MIT)  
Boston College, Merkert 130 4:00 pm

### Nov 12

Dr. Jonas Peters (MIT)  
U. Mass Dartmouth, Building Group II,  
Room 118 4:00 pm

Prof. Ronald Naaman (Weizmann Institute of  
Science)  
"Surprising electronic and magnetic properties  
of self-assembled monolayers"  
Harvard, Pfizer Lecture Hall 4:00 pm

### Nov 18

Prof. Mei Hong  
TBD  
Boston College, Merkert 130 4:00 pm

Dr. Leroy Hood (Institute for Systems Biology,  
Seattle, WA.)  
Tishler Lecture "TBA"  
Tufts, Univ., Pearson Chemistry Building,  
Room P-106 4:30 pm

### Nov 19

Prof. Paul Chirik (Cornell Univ.)  
"Catalysis with Iron: The Consequences of  
Electronic Structure"  
Harvard, Pfizer Lecture Hall 4:00 pm  
Dr. Anne Gershenson (Brandeis University)  
"Watching Protein-Lipid Interactions Using  
Single Molecule Fluorescence"  
Northeastern, 129 Hurtig Hall 12:00 PM

### Nov 20

Prof. Songi Han (UC, Santa Barbara)  
"Probing Local Water Dynamics in  
Biomolecular Assemblies by Hyperpolarized  
NMR"  
Harvard, Pfizer Lecture Hall  
4:00 pm

Jim Roberts (NOAA, Boulder, CO)  
TBA  
UNH Idles L103 11:10 am

### Nov 24

Prof. Tania Baker (MIT)  
Harvard, Pfizer Lecture Hall 4:00 pm

### Notices for The Nucleus Calendar of Seminars should be sent to:

Sheila E Rodman  
250 Kennedy Drive  
Unit #403, Malden, MA 02148.  
E-MAIL: serodman(at)hotmail.com ◇