Monthly Meeting
A Small Chemical Business Symposium,
The Henry Hill Award, 50- and 60-Year Members Honored, Madeleine Jacobs, ACS Executive Director and CEO, to speak

ACS Candidates for Election
Statements from the candidates for Director of District 1 and 2013 American Chemical Society President-Elect

Report from Rome
22nd ICCE/11th ECRICE by Morton Z. Hoffman

NSYCC Career Symposium
By Shanadeen Begay and Jackie O’Neil
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Cover: Photo was taken at the Poster Session immediately preceding the Chemluminary Awards at the Philadelphia ACS Meeting, August 21, 2012. Pictured in front of their poster describing their Chemluminary Award-winning event held at the Boston Museum of Science are David Sittenfeld of the Boston Museum of Science and Christine Jaworek-Lopes of Emmanuel College. (Photo by Morton Z. Hoffman)

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Ruth Tanner Receives 2012 NEACT Timm Award

The New England Association of Chemistry Teachers (NEACT) is pleased to announce that the 2012 John A. Timm Award recipient is Dr. Ruth Tanner, Professor Emeritus, Chemistry Department, University of Massachusetts-Lowell (UML).

This award was established by NEACT in 1971 to commemorate Professor John Arrend Timm of Yale University and Simmons College, a scientist, an educator, textbook author, and a former President of NEACT. Professor Timm died in 1969, and he was (posthumously) the first recipient of the award in 1972. It is presented by NEACT to a person who has made outstanding contributions to the education of young people in chemistry. One of Dr. Tanner’s significant contributions to education outside of the classroom at UML was the Women in Science and Engineering (WISE) program, which she established and directed for ten years, where each year saw the participation of 500 seventh and eighth grade girls.

Dr. Tanner has been very active in the Northeastern Section of the American Chemical Society, having been a member of the Board of Directors since 1996, Education Chair, and Chair of the “Connections to Chemistry” program from 2000 – 2012, which assists New England high school chemistry teachers to explore and use ACS education resources. This year, she served as Chair of the Northeastern Section of the American Chemical Society.

Ruth’s colleague and friend, Dr. Edwin Jahngen, Professor of Biochemistry and Chemistry at UMASS Lowell, shared this:

“Dr. Tanner’s effectiveness and motivation of students is evident in the comments I have heard from senior chemistry majors virtually in every year of my 30-year tenure at the University. She is tough and demanding, but when four years are drawing to a close, to a person, students would say that her courses were the best they had and her guidance was the most sound.

Working with Professor Ruth Tanner for over 30 years, I can assure you that she has influenced me and helped me grow in my role as an educator. She is certainly in the same rare company as those who have received this award in the past. continued on page 16
**Monthly Meeting**

_The 926th Meeting of the Northeastern Section of the American Chemical Society_

A Small Chemical Business Symposium

Henry A. Hill Award

Presentation and Recognition of 50- and 60-Year Members

**Thursday, October 11, 2012**

Nova Biomedical Corp,
200 Prospect Street, Waltham, MA

A Small Chemical Business Symposium

**Starting and Financing Small Chemical Businesses**

Sponsors: NESACS, Small Chemical Businesses Division of the ACS

Organized by Mukund Chorghade and Jack Driscoll

Starts at 12:00 with light lunch & Networking

Cost: $50.00 per person for workshop: for the Symposium & NESACS October evening meeting with dinner $75.00. Pay by Paypal- http://acssymposium.com/paypal.html

**Program 12:30-5:15 PM**

12:30 pm “Opening remarks about Entrepreneurship,” Mukund Chorghade, President of Chorghade Enterprises, Inc. and Chief Scientific and Technology Officer, THINQ Pharma

12:45 pm “Starting a Biomedical Company in the Nineteen Seventies: NOVA Biomedical,” Dr. Jack Driscoll, a founder and Director of Nova, President, PID Analyzers, LLC, PR Chair NESACS

1:15 pm “How to Prepare Your Small Business for Financing,” John Rainey, Regional Director, Mass Small Business Development Center, Worcester, MA

1:45 pm “Conventional & SBA Financing of Small Businesses,” Beth Chea, VP, TD Bank, Andover, MA,

2:15 pm Break

2:35 pm “Educational Resources for Tech Entrepreneurs,” Dr. Peter Hirst, Executive Director of Executive Education, MIT Sloan School of Management

2:50 pm “TiE Boston Provides Connections and Networking for Entrepreneurs,” Dr. Shankar Hegde, Founder and CEO, Yaana Consulting, The IndUS Entrepreneurs

3:05 pm “Non-Dilutive (SBIR) or Dilutive Equity Funding for Startups,” Vinit Nijhawan, Managing Director, Technology Development Office, Boston University

3:45 pm “Utilizing Social Media to Market Technology Companies,” Jennifer McLachlan, PID Analyzers, LLC, PR Chair Small Chemical Business Div. of the ACS & Joselin Mane, Founder, Boston Tweetup

4:15 pm “Short comments on ACS & Job Promotion,” Madeleine Jacobs, CEO, American Chemical Society, Washington, DC

4:20 pm True Stories of Chemical Entrepreneurs

a) “Science, Business and Gambling: Beating the Odds,” Pam Randhawa, CEO and Founder, Empiriko

b) “When is a good time to start and what is your business model?” Raj Rajur, Chairman & CEO, CreaGen Biosciences, Inc.

5:15 pm Adjournment

**NESACS Monthly Meeting**

4:30 pm Board Meeting

5:30 pm Social Hour

6:30 pm Dinner

7:15 pm Welcome

Dr. Ruth Tanner, Chair, NESACS

Presentation of 50- and 60-Year Members

Dr. Dorothy J. Phillips, Chair of the NESACS Awards Committee

7:30 pm Henry A. Hill Award Presentation

Henry A. Hill Award for Outstanding Service to the Northeastern Section, presented by Dorothy J. Phillips to Michael P. Filosa


Mrs. Madeleine Jacobs, Executive Director and CEO of American Chemical Society

Dinner reservations should be made no later than noon, Friday, October 5th. Reservations are to be made using PayPal: http://acssymposium.com/paypal.html. Select pay with credit or debit card option and follow the additional instructions on the page. Members, $30; Non-members, $35; Retirees, $20; Students, $10. Reservations for new members and for additional information, contact the secretary Anna Singer at (781)272-1966 between 9am and 9pm or e-mail at secretary@nesacs.org. Reservations not can- continued on page 16
ACS Candidates for Election

Director for District 1:
Thomas R. Gilbert, Northeastern University
Neil D. Jespersen, St. John’s University

STATEMENT
Dr. Thomas R. Gilbert

Membership services: Most ACS members paid over $150 in dues this year. Was it worth it? To help make it so, I would work with other members of the Board in support of programs that expand members’ awareness of the benefits of membership and increase the frequency with which they connect to ACS. Both goals could be achieved through an enhanced ACS Network that uses members’ professional profiles to update them on recent papers of particular interest in ACS journals and upcoming meetings and on professional development opportunities including short courses and webinars.

Promoting the chemical enterprise: ACS doesn’t create jobs for chemists, but it needs to do even more to advocate for corporate and public funding of basic research and to help members turn their ideas for innovative products and processes into new businesses. The current entrepreneurial initiative could be even more effective through better coordination of national programs, including the Entrepreneurial Resources Center, with grassroots efforts by local sections to enhance entrepreneurship and to support the launch of small chemical businesses and to help sustain them.

Education and workforce development: I support developing educational guidelines for undergraduate and graduate programs that provide the knowledge base and develop the process skills members need to fill increasingly multidisciplinary jobs in the molecular sciences. These programs should include professional science master’s (PSM) degrees that prepare students for careers in key industries. I served as the academic director of three biotech PSMs with tracks in pharmaceutical science, analytical biotechnology, and process development, and helped launch a fourth in biopharmaceutical regulatory science. All include industrial internships and address critical workforce needs in a manufacturing sector that is expanding at a time when others are reducing the number of chemists they employ. For more information about my candidacy please go to https://sites.google.com/site/thomasgilbertacs/.

STATEMENT
Neil D. Jespersen

Last spring the Committee on Nominations and Elections and the Councilors of District I again selected me as a candidate for this fall’s ACS Board of Directors election. That honor has now turned into the privilege of addressing Local Section members, such as you, about my reasons for running for the Board. Let me summarize my thoughts about Board priorities and my initial term.

First, I strongly believe that the primary responsibility of the Board of Directors is to maintain the financial health of our Society. The second responsibility is to chart the future course of the ACS by means of our Strategic Plan.

Since finances are my primary importance I sought membership on the Committee on Budget and Finance, B&F, and served first as an associate and then as a full member. I serve on the B&F Communications subcommittee and I also represent the Board on the Fellows Oversight Committee and the Program Review Advisory Group, PRAG. The charge for PRAG is to assess the value, performance, cost effectiveness, and efficiency of all Society programs over a four-year period. This is one of many Board resources for effective fiscal management.

The Strategic Plan and its goals guide the current and future activities of the ACS. I worked with many others to frame the new goals from input that was elicited from all segments of the Society. The goals we developed can be summarized as “Information”, “Empowerment”, “Education” and “Advocacy”. These are four powerful words that encompass the essence of the ACS and its members; words that I strongly endorse.

Finally, I chair the Board Planning Committee and serve on the Professional Affairs and Professional Relations Committee, both of which relate well to our Strategic Goals.

With your support and vote, my work on the Board can continue and expand.
Chemistry faces a very difficult situation. Jobs are being outsourced, unemployment among chemists is at an all-time high, adequate funding for research is uncertain in the forthcoming days of budget cutting, and chemistry seems less appealing to our youth. The ACS has spent considerable effort in identifying proper goals for the society in addressing these problems. However, plans remain only words unless there is leadership who passionately believes in our mission, and has the background, talents, capabilities and time available to lead the effort to carry out these strategies.

To educate the general public that ours is an enabling science, and that the world depends upon our success far more than is commonly recognized, must also continue to be a focus. However, of greater concern is the continued decline of the quality of STEM education in America’s K-12 schools. ACS must be a major partner in a committed effort to reverse this trend. We can’t allow inadequate K-12 science education be a valid reason for moving more chemistry jobs overseas.

I have 45 years as a professor of chemistry, 18 years as director of a DOE national research lab, 10 years as director of a federation of campus-based research centers collaborating strongly with American industry and one year as interim director of a state energy center focused on renewable energy. I have considerable experience in assisting entrepreneurship in technological enterprises and would focus on this as our best hope for reducing the continuing loss of chemist jobs. I also have years of experience advocating for scientific endeavors to legislative groups and public service organizations and am eager to be a passionate spokesman for chemistry. If you find this to be a set of experiences and skills appropriate for president, then I ask that you consider casting your vote for me. Visit my website: www.barton-foracspresident.com

It is an honor to have been selected as candidate for president of ACS. If elected, I intend to use my academic, industrial, governmental and international experience to set specific and realistic plans to convince other scientists, government, and the public of the centrality and importance of chemistry. I would

Promote Inter- and Multidisciplinary Education and Research with a Global Vision to the Future. With the Committee on Professional Training and relevant divisions, I will evaluate curricular alternatives that better reflect the ways in which chemistry is conducted in industry and academic institutions around the world.

Promote Closer Ties Between Industry and Academic Institutions. I will foster communication between several ACS divisions and committees to help catalyze a positive and synergistic interaction between these two sectors.

Advocate Strongly for Increases in Research Funding. I plan to work closely with the ACS Office of Public Affairs (OPA) to educate and convince Congress that investing in basic chemical research is essential for the health of the U.S. innovation engine and the long range competitiveness and prosperity of the country.

Increase International Partnerships. I will encourage partnerships through the expansion of existing programs at ACS, the creation of new programs, the formation of more ACS international chapters, and the establishment of new partnerships with other professional societies around the world.

I look forward to taking these challenges for the benefit of our community and to convince others of the importance and centrality of our discipline. Please feel free to contact me to share your ideas and concerns, so that I may better represent your interests and improve the Society’s ability to help you and our profession. Please visit my website at www.luis-echegoyen.org to find out more about my background, accomplishments and my plans for ACS.
Five NESACS Members Named as 2013 ACS Awardees

The following from the Northeastern Section have been designated as recipients of awards administered by the American Chemical Society for 2013. Vignettes of all the award recipients will appear in C&EN in early 2013. Recipients will be honored at the Awards Ceremony on Tuesday, April 9, 2013, in conjunction with the 245th ACS national meeting in New Orleans.

ACS Award for Creative Invention sponsored by ACS Corporation Associates, Timothy M. Swager, Massachusetts Institute of Technology.


Arthur C. Cope Award sponsored by the Arthur C. Cope Fund, Stephen L. Buchwald, Massachusetts Institute of Technology.

Nobel Laureate Signature Award for Graduate Education in Chemistry sponsored by Avantor Performance Materials, Bryan Dickinson, a student at Harvard University.

National Fresenius Award sponsored by the Phi Lambda Upsilon, The National Chemistry Honor Society, Theodore A. Betley, Harvard University.

Grants-in-Aid to Undergraduates to Attend the 245th ACS National Meeting in New Orleans, Louisiana April 7-11, 2013

The Northeastern Section of the American Chemical Society (NESACS) will provide Grants-in-Aid of $350 to each of four undergraduates to attend the 242nd ACS National Meeting in San Diego, California and to present a paper at the Undergraduate Research Poster Session in the Division of Chemical Education. The institutions of the successful applicants are expected to match the award.

Eligibility: Applications will be accepted from students at colleges and universities within the Northeastern Section of the ACS. The undergraduate student must be a chemistry, biochemistry, chemical engineering, or molecular biology major in good standing with at least junior status, and must be currently engaged in undergraduate research.

Application: Application forms may be obtained from the NESACS website at http://www.nesacs.org. The deadline for receipt of completed applications by Professor Marietta Schwartz, the Chair of the Education Committee, is October 5, 2012. Completed applications are to be sent to:

Professor Marietta Schwartz
Department of Chemistry
University of Massachusetts Boston
100 Morrissey Boulevard
Boston, MA 02125-3393
Phone: 617.287.6146
Fax: 617.287.6030
E-mail: marietta.schwartz@umb.edu

Notification: Applicants will be notified of the results by e-mail on October 10, 2012.

The deadline for electronic submission of abstracts to the American Chemical Society in Washington, D.C. is October 15, 2012 (11:59 pm EST).

Call for Papers

Undergraduate Research Poster Session
245th National Meeting
American Chemical Society
New Orleans, LA
April 7-11, 2013

The ACS invites undergraduate students to submit abstracts of their research papers for presentation at the Undergraduate Research Poster Session (URPS), which will be part of the extensive programming for undergraduates at this national meeting. Submit your abstract electronically by October 15, 2012 (11:59 pm EST) to <www.acs.org/meetings>. Click on the CHED division and then select the URPS site that is appropriate to the subject of your paper. Please follow the directions carefully.

For further information, contact:
Nancy Bakowski
ACS Student Affiliates Program
1155 Sixteenth Street, NW
Washington, DC 20036
Tel: (800) 227-5558, ext. 6166
e-mail: SApGRAM@acs.org

THE COMMITTEE ON CHEMICAL ABSTRACTS (CCAS) WANTS YOUR FEEDBACK

Visit our page on ACS Network:
https://communities.acs.org/groups/chemical-abstracts-service-committee

or contact Michael Filosa with any suggestions at filosam@verizon.net

Join NESACS on facebook
www.facebook.com/nesacs
National Chemistry Week Events  
Celebrating  
Nanotechnology – The Smallest BIG Idea in Science!

October 27, 2012 – Boston Children’s Museum
From 11 am – 4 pm, NCW volunteers will be on hand throughout the museum to perform demonstrations and assist in hands-on activities related to the yearly theme.

October 28, 2012 – Museum of Science Boston

* **Phyllis A. Brauner Memorial Lecture by Dr. Bassam Shakhashiri**
  Dr. Bassam Shakhashiri is a Professor of Chemistry at the University of Wisconsin-Madison and is the William T. Evjue Distinguished Chair for the Wisconsin Idea. Professor Shakhashiri is the 2012 President of the American Chemical Society. Professor Shakhashiri has captivated audiences with his scientific demonstrations at a variety of locations including Boston’s Museum of Science, the National Academy of Sciences and the Smithsonian’s National Air and Space Museum in Washington.
  Taking place in Cahners Theatre (2nd floor, Blue Wing) at 1:00 pm and 4:00 pm.

* **Admission to the museum is required.** Free tickets to Dr. Shakhashiri’s show will be available on a first come, first serve basis. Tickets are available via advance reservation. To reserve tickets, please contact the NESACS secretary either via email secretary@nesacs.org (preferred) or by phone 1-781-272-1966 before October 20, 2011. Tickets will be available for pick-up in the lobby of the museum at the ACS table.

* **Hands-on Activities related to nanotechnology**
  Taking place from 1:00 pm - 5:00 pm on October 28, 2012 throughout the Museum.

September 1 – October 5, 2012
K-12 students participate in the **NCW poetry contest**. Visit [www.nesacs.org](http://www.nesacs.org) and [http://portal.acs.org/portal/acs/corg/content?_nfpb=true&_pageLabel=PP_MULTICOLUMN_T2_50&node_id=1033&use_sec=false&sec_url_var=region1&_uuid=5b376657-e102-4ad6-88cb-4fe54b492b5d](http://portal.acs.org/portal/acs/corg/content?_nfpb=true&_pageLabel=PP_MULTICOLUMN_T2_50&node_id=1033&use_sec=false&sec_url_var=region1&_uuid=5b376657-e102-4ad6-88cb-4fe54b492b5d) for more information (after July 15, 2012).

July 1 – September 20, 2012
K-12 students participate in the **Local Section design a t-shirt competition**. Visit [www.nesacs.org](http://www.nesacs.org) for more information.
Kathryn Nicholson began the afternoon with a step-by-step presentation on proven tactics and skills to utilize during the job search process. She gave a detailed analysis of how to write a resume that will be noticed and expertly answered questions that students had. She mentioned the need for students to brag about themselves during an interview, the need for a polished look, a timely and confident presence, a follow-up thank you and inquiry after the initial round of interviews. Her advice demonstrated the appropriate, respectful, and directed approach a job seeker should follow concerning their references was relevant to a majority of the attendees, as evidenced by the many questions she received during her talk.

Doris Lewis, Professor at Suffolk University

Doris Lewis continued our symposium with an overview of the ACS Policy work. She compared the ACS Policy Fellowship to the AAAS Policy Fellowship, gave some applicant advice for both processes, and highlighted individual stories and testimonials. The audience focused their attention on the incredible opportunity of working with chemistry legislation and learned how their skills can be applied to a non-traditional career path.

A Long, Strange, Rewarding Journey: The Trajectory of a Chemistry Career
Stewart G. Levy, SGL Chemistry Consulting, LLC

As an employed member of the pharmaceutical industry for the last 15-20 years, Stewart Levy gave a realistic overview of the need to manage one’s career and seek a balanced strategy. He advised students to learn actively, embrace opportunities, network, and keep an eye on trends, all into long-term work goals. His own life and career trajectory was given as an example; he told us of how he honed his synthetic bench skills, developed business acumen, maintained his travel responsibilities, and recently developed high-level administrative and managerial duties. Eventually, after a handful of positions of increasing responsibility he worked with an IPO and began to consult. He stressed the importance of positioning oneself to take advantage of fortunate circumstances and remained true to his commitment to networking by attending the mixer after the event was complete. Not surprisingly, many students chose to ask questions, and other speakers commented on his great insight and accurate description of the startup business process.

It’s Not What You Know That Matters: Perspectives from an Industrial Chemist in Biotech
Michael Hurrey at Vertex Pharmaceuticals

With a mixture of humor, personal anecdotes, and presence, Mick gave an interactive talk on his experiences of being managed and business best practices for newly minted Ph.D.’s entering the workforce. Office etiquette, the importance and usefulness of various written and oral mediums for communication, and how to give winning presentations were discussed. The unspoken word, building relationships and managing to improve other’s perceptions of you is where you can gain an edge in office politics. Understanding, deference and hard work will prove that you can manage your image. Being concise will get you points in all communication styles, as well as knowing your message, can help keep you focused. These points stirred much Q&A from the audience and proved to be valuable to most attendees.

Research Careers in Industry versus Academia: The Great Divide?
Adrian Whitty, Associate Professor at Boston University

Having the benefit of seeing if “the grass is really greener on the other side” in drug discovery explorations, Adrian Whitty used his careers in both industry and academia to compare and contrast various aspects of the drug discovery process. He gave valuable pointers on the similarities as to the nature of the science problems (defined, well-thought-out, sound, creative, balanced), as well as differences (career ladder uniqueness, pay, project structure, delegation and responsibility of authority/duties/research). In the end, his advice will lead the industry seeker to work with people from whom one can learn in a team environment that is focused on delivering tangible results in a changing and challenging setting. Accordingly, the academically minded career trajectory should make distinct contributions to important problems with quantity and quality no matter the managerial structure, with an eye on student success.

continued on page 11
Career Management and Essentials: Job search methods, tips for your resumes, CVs, cover letters and interviewing exercises.
Patrick Gordon, Framingham State University
Dan Eustace, University of Connecticut

This in-depth session spanned the full spectrum of career development and management, from the review of cover letters, resumes/CVs, mock phone and in-person interviews, as well as tips for establishing and maintaining a trajectory for the newly-settled chemist. Dr. Gordon and Dr. Eustace engaged the workshop attendees with on-the-spot questioning, interviews, and encouraged everyone to ask the most important questions that they wanted answered, giving all the attendees valuable feedback, with input from their peers as well. They covered the basics of resume building, cover letter writing, as well as defining what types of application materials are expected for different job applications. They also discussed the importance of a well-maintained network and showed one attendee’s LinkedIn page, giving feedback on ways that could improve its aim and reach, to become a very useful networking tool.

Effective Communication and Entrepreneurship Skills
Mukund Chorghade, THINQ Pharma

In showing some of the pitfalls and successes of communication, Dr. Chorghade provided us with a powerful picture of how communication is essential to a successful career. His humorous slides showed that sometimes science can get bogged down with inefficient communication between scientists and non-scientists, as well as within the scientific community. He also highlighted the different roles that exist in scientific jobs, as well as pointing out tips such as that knowing your company/employer is a very important step in the process. While many may be focused on merely finding a job, deciding if the job is truly right for you could be the most important decision of your career. The attendees also were shown some useful resume tips as well as tips for preparing a seminar as part of an interview. He wrapped up the workshop with insights from various fields in the chemical industry, reminding everyone that different fields have different ways of exploring and performing chemistry, but not to let that hold back visions for the future.

Should I start my own business? What are the barriers?
Jack Driscoll, PID Analyzers, LCC

In his workshop, Dr. Driscoll gave the audience all the details and stories about his entrepreneurial endeavor, creating PID Analyzers, from the ground up. The group discussed what it took for the company to get off the ground, and all the initial technical, business and legal barriers he encountered. Dr. Driscoll covered different types of funding for the potential entrepreneurs in the crowd and explained the differences associated with each. As he explained the process and the time that it took to find a niche in the market, to build an initial prototype and secure funding for the company, the audience got a taste of the skills required to venture off yourself, while learning the different types of insights you need (not just the scientist’s) to get a new product to market and be truly successful.
Report From Rome:
22nd ICCE/11th ECRICE

By Morton Z. Hoffman, Boston University [hoffman@bu.edu]
U.S. National Representative to the IUPAC Committee on Chemistry Education (CCE), CCE Conference Coordinator, CHED Representative to IUPAC

The joint International Conference on Chemistry Education (ICCE)/European Conference on Research in Chemical Education (ECRICE) meeting (Stimulating Reflection and Catalyzing Change in Chemistry Education) was held at the University of Rome “La Sapienza” on July 15-20, 2012. The meeting, which attracted almost 600 participants from 71 countries (including 80 from North America), featured plenary and keynote lectures, more than 600 abstracts (of which 356 were oral presentations), workshops, and a social program (a welcoming reception, an excursion to Hadrian’s Villa and a banquet dinner in Tivoli, and a participants’ night of singing and dancing). A discussion of the writings of Primo Levi was also scheduled. The IUPAC Awards for Outstanding Achievement in Chemistry Education were presented to Peter Mahaffy (Canada) and Robert Bucat (Australia).

The five days of sessions had the following themes, respectively: Communicating chemistry, Didactics of third-level chemistry, ICT and multimedia in teaching chemistry, Didactics of second-level chemistry, and Laboratory work in teaching chemistry. Plenary lectures were given by Vincenzo Balzani (Italy), Harry Kroto (U.K./U.S.A.), Brian Coppola (U.S.A.), Mansoor Niaz (Venezuela), Alexander Renkl (Germany), Norman Reid (U.K.), Bassam Shakhashiri (U.S.A.), Avi Hofstein (Israel), Peter Mahaffy (Canada), Ilka Parchmann (Germany). Keynote lectures were presented by Mei-Hung Chiu (Taiwan), Melanie Cooper (U.S.A.), Hans-Dieter Barke (Germany), Odilla Finlayson (Ireland), Maria Sheehan (Ireland), Silvija Markic (Germany), Marcelo Conti (Italy). At the end of the meeting, a panel discussion of the plenary and keynote speakers examined the challenges for putting the results of chemistry education research into practice, the understanding of the learning of chemistry by students, and the directions for the renewal of chemistry education. This reporter made an oral presentation on peer-led team learning in the session on best pedagogical practices, and chaired a session on college/university general chemistry education.

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Presentation of the IUPAC Awards: (l-r) Mei-Hung Chiu (Taiwan), Chair of CCE; Robert Bucat (Australia), 2012 Award recipient; Peter Atkins (U.K.), 2010 Award recipient; Peter Mahaffy (Canada), 2012 Award recipient; Lida Schoen (Netherlands), 2010 Award recipient; Ting-Kueh Soon (Malaysia), member of the Award Selection Committee.
The full papers from the conference will be published in the Italian Chemical Society journal *Chimica nella Scuola*. ICCE/ECRICE was organized by IUPAC-CCE and the Division of Chemical Education of the European Association for Chemical and Molecular Sciences (EuCheMS), and was under the High Patronage of the President of the Italian Republic. Among its co-sponsors were the ACS, the Organization for the Prohibition of Chemical Weapons (OPCW), the City and Province of Rome, and Cengage Learning.

At its meeting, CCE reviewed its activities, its relationship with other organizations, and its completed, current, considered, and future projects. The co-chairs of the 23rd ICCE from the University of Toronto offered a preview of the meeting (*Developing Learning Communities in the Chemical Sciences*), which will be held in Toronto, Ontario, Canada, on July 13-18, 2014; [www.icce2014.org](http://www.icce2014.org). Expressions of interest to host the 24th ICCE in 2016 were made by representatives from Malaysia and Australia.

The next meeting of CCE will be at the IUPAC Congress and General Assembly in Istanbul, Turkey (August 11-16, 2013), at which time the formal bids for the 24th ICCE will be considered and the site chosen for the meeting in 2016.

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**In Appreciation of Leopold May**

(1924 – 2012)

With regret, we must report the passing of the estimable Leopold May, professor emeritus of chemistry at the Catholic University of America, and collector of chemical anniversaries, many, many of which have been published in this space. For years, Prof. May gathered and generously contributed chemistry- and science-related trivia for the benefit of many programs of the ACS, and we are grateful for his curiosity about the science he obviously loved, and for his steadfast support of the Society. Prof. May was a long-time ACS member and active in his local section, the Chemical Society of Washington.

Image credit: Catholic University
Announcement

Connections to Chemistry 2012

The Northeastern Section of the American Chemical Society (NESACS) and the Education Committee of the Northeastern Section invite high school chemistry teachers to a program at Burlington High School (Burlington, MA) on Wednesday, October 18th, 3:30-8:00 PM. This program will help connect high school teachers with the numerous education resources that are available from the American Chemical Society. Four simultaneous hands-on workshops will illustrate these resources:

• Using a Smartpen in Your Classroom: Inexpensive Technology with Positive Impact on Student Learning, Alan Crosby, Newton South High School
• There’s Plenty of Room at the Bottom: Nanotechnology, Chia-Kuang (Frank) Tsung, Assistant Professor, Chemistry Department, Boston College
• Chemagination! Dr. Randy Weintraub and Dr. Barbara Ameer
• Nano in the Museum: Opportunities and Resources for Chemistry Educators, David Sittenfeld and Karine Thate, Museum of Science

The deadline for registration is Friday, October 12, 2012. The registration fee is $20 and is non-refundable after October 5th. Workshop and program-related materials, dinner, a one-year subscription to ChemMatters, and a certificate for three hours of Professional Development will be provided to all workshop participants.

The detailed program and registration form can be obtained on the NESACS website.

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2012 Henry A. Hill Award to Michael P. Filosa

Dr. Michael P. Filosa, Senior Manager at ZINK Imaging, Inc. of Bedford, MA is the recipient of the 2012 Henry A. Hill Award. The award will be presented to Dr. Filosa at the October 13, 2012 meeting of the Northeastern Section of the American Chemical Society (NESACS). The Hill Award is presented annually to a member of NESACS for meritorious service to the Section and to the profession of chemistry. Dr. Filosa was appointed editor of the Nucleus in 2004 by the NESACS Board of Publications with the mission of continuing the legacy of excellence established by long-time Nucleus Editor, Arno H. A. Heyn. Dr. Filosa has served as Nucleus editor from January 2005 to the present and has been responsible for producing over 70 issues of the NESACS newsletter.

After graduating as valedictorian of his high school class, Dr. Filosa attended the Massachusetts Institute of Technology receiving his B.S. in chemistry in 1974. He received his Ph.D. in organic chemistry in 1979 from Harvard University under the direction of Professor Paul A. Wender. Upon completion of his Ph.D. he joined Polaroid in their Cambridge, Massachusetts labs where he worked for 26 years. His research involved developing and supporting silver halide and non-silver halide imaging products. Since 2005 Dr. Filosa has worked at ZINK Imaging, Inc. which is a spinoff of Polaroid. He is a co-inventor on multiple Polaroid and ZINK patents related to thermal imaging materials and formulations.

Dr. Filosa has been a member of the American Chemical Society since 1976 and began his service to NESACS in 1997 with his election as an alternate councilor. He was elected to a second term as alternate councilor in 2005 and has been a councilor since 2009. He is currently serving a three - year term on the ACS joint Board-Council Committee on Chemical Abstracts (CCAS). As Nucleus editor he regularly attends the Board of Publications meetings and serves on the Arno Heyn Award Committee. He has also been a member of NESACS Nominating Committee for several terms. As Nucleus editor and a councilor, Dr. Filosa is an active and influential member of the Northeastern Section Board of Directors.

Past recipients of the Hill award are listed below.

Henry A. Hill .......................1980
Edward R. Atkinson .............1981
Robert D. Eddy ....................1982
Arnet L. Powell .................1983
G. Richard Handrick ...........1984
Janet S. Perkins .................1984
Phyllis A. Brauner ..............1985
Arno H. A. Heyn .................1986
Sr. Magdalen Julie Wallace ....1987
Esther A. H. Hopkins ............1988
Wallace J. Gleekman ............1989
James U. Piper ...................1990
Valerie Wilcox ...................1991
Ernest I. Becker .................1992
Arlene W. Light ..................1993
Turman S. Light ..................1993
William O. Foye ..................1994
Michael E. Strem ................1995
Alfred Viola ......................1996
Mary T. Burgess ..................1997
Michaeline F. Chen ..............1997
David M. Howell .................1997
John L. Neumeyer ...............1998
Morton Z. Hoffman ..............1999
Catherine E. Costello ..........2000
Myron S. Simon ..................2001
Michael J. Hearn ...............2002
Doris I. Lewis ...................2003
Donald O. Rickter ..............2004
Charles E. Kolb ..................2005
Dorothy J. Phillips ..............2006
Ruth Tanner ......................2007
Michael Singer ..................2008
E. Joseph Billo ...................2009
Thomas R. Gilbert ..............2010
Stephan A. Lantos ...............2011

The Nucleus October 2012 15
Ruth Tanner
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I think she is well deserving of the John A. Timm Award for her lifetime of service to chemistry and education.”

In her Timm Award Address to NEACT in August, Dr. Tanner shared what she learned about the life of John Arrend Timm while preparing her lecture. In doing so she brought an interesting historical perspective to the evolution of chemical education—following Timm’s journey, comparing her own experiences and wondering how the future of chemical education would evolve:

“It would be interesting to talk with his students to get a gauge of the other aspect of teaching—the chemistry he had with his students. My view of education is that it is part sharing our knowledge and chemical expertise with the students, but that it is also sharing our own humanity with them. The students come to high school and for the next four years we work with them and help them as they mature through this difficult period in their lives.

The next four years as undergraduates, we work with them in their courses, but we also work with them as they mature into the beginning of their professional careers. A very important aspect of this is getting to know the students individually and allowing them to become comfortable with us. Students want to know who we are and what motivates us. They also want us to know who they are and they want to know if they can trust us with knowing who they are. In my courses, I like to work with the students individually as much as possible to get to somewhat know them and to know what motivates them. How do we know if they feel they can trust us? It’s the little things.”

“Let’s look at our current classrooms. Is anyone looking, watching, or listening to us? In front of them we see laptops, ipads, iPhones, and other technology toys. Do we ask them to unplug or do we plug in? If we plug in, are we, then, in a sense, shut out? Not yet. However, the next step is on-line courses. There is no

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website (http://www.nesacs.org) under Connections to Chemistry 2012.
For additional information, contact Dr. Marietta Schwartz, Chair, Education Committee, NESACS: 617-287-6146 or marietta.schwartz@umb.edu. ◊

| Classrooms, but there is technology making education immediately available, cheaper and two dimensional – talking heads, power point slides, internet references, and periodic chat rooms for help sessions.
| The business of education must change and adapt. Hopefully there’s a middle ground and there should be ways to find it.”

Dr. Ruth Tanner is a true example of a thoughtful and passionate educator. Her insights challenge us to meet the future head-on, so we can influence and help shape it, rather than just ‘let it happen’. Thank you, Dr. Tanner for your leadership and support in the important work of chemical education. ◊

Career Development

Being an active participant in NESACS activities will enable you to network with major institutions and corporations in our area and can open up new career opportunities.

The NESACS Board of Publications, which is responsible for both the Nucleus newsletter and the NESACS website, is looking to increase its activities in this area.

We would like to expand our capabilities for keeping our membership informed on what is happening in our field and how to adapt to changing times and new technologies.

You can help us do that. All we ask of you is a few hours a month and a smile.

Call or email to see what opportunities are available.

Contact — Vivian Walworth
NESACS Board of Publications Phone - 978-369-3735
Email vwalworth@comcast.net

Month Meeting
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celled at least 24 hours in advance must be paid.
THE PUBLIC IS INVITED.

Directions:
1. Off 128/95 take exit 26 (Rt. 20) toward Waltham for 1.2 miles
2. Turn right onto Prospect St. (0.5m) and Nova will be on the left
3. Directions for parking and entrance will be displayed.

Abstract

“Innovation, Chemistry, and Jobs: Is Entrepreneurship in Your Future?”

The chemistry enterprise in the United States is huge: More than 96 percent of all manufactured goods are touched by the business of chemistry, and the U.S. employs more than 800,000 people in industry alone. Furthermore, the chemical industry accounts for more than 10 percent of the U.S.’s total merchandise exports: $145 billion. Recently, however, thousands of research and development jobs have been lost in the U.S., raising questions among students and seasoned professionals alike about their future careers.

Last year, the American Chemical Society released a report titled Innovation, Chemistry, and Jobs (www.acs.org/CreatingJobs), the result of a year-long ACS Presidential task force headed by noted serial entrepreneur and Harvard University Professor George Whitesides. The Task Force was charged with documenting job losses in the United States, charting major innovations in chemistry that have opened up new industries and created jobs, and developing specific recommendations for ACS to help overcome barriers to innovation. The report focuses on entrepreneurship as a pathway to major job creation. In this talk, Madeleine Jacobs, Executive Director and Chief Executive Officer of the American Chemical Society, will describe what it means to be an entrepreneur and what ACS is doing specifically to spur a wave of entrepreneurial activity in the chemical enterprise. ◊
NSYCC Symposium

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Networking
Amy Kallmerten, Perkin-Elmer

We’ve all heard the top networking tips to succeed; however, Dr. Kallmerten’s take on the modern rules of networking for young professionals seemed to hit a little closer to home than other workshops. By defining professional networking as the computer science idea of sharing resources by linking nodes, she explained in great detail dos- and don’ts in very real and likely scenarios scientists are likely to find themselves in. With her unique style, she shared personal anecdotes and reinforced that you need to be ready to network anytime and anywhere, because you never know what connection could be the most important. Dr. Kallmerten gave the attendees a refresher course in table manners, social etiquette and her favorite tip to create a goal for yourself for making new connections, including “homework” for attendees to network at the social hour following her closing remarks.

Calendar

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**Oct 18**
Prof. Christopher W. Bielawski (Univ. Texas, Austin)
MIT, 6-120 4:00 pm
Dr. James Flood (Mass. General Hospital / Harvard Medical School)
U. New Hampshire, N104 (L103) 11:10 am

**Oct 22**
Dr. Chunsheng Wang (Univ. Maryland, College Park)
Tufts University, SciTech Center Room 136 12:00 pm
Prof. Erik Alexanian (Univ. North Carolina Chapel Hill)
“New synthetic transformations using alkenes: From transition metal catalysis to metal-free radical reactions”
Brandeis, Gerstenzang 122 4:00 pm

**Oct 23**
Prof. Isaac Krauss (Brandeis University)
“Combining Organic Synthesis and Directed Evolution to Design HIV Vaccines”
Tufts University, Pearson P106 4:30 pm
Prof. Erik Alexanian (Univ. North Carolina, Chapel Hill)
Boston College, Merkert 130 4:00 pm

Dr. Steve Malcolmson (Harvard Medical School)
U. New Hampshire, N104 (L103) 11:10 am

**Oct 24**
Dr. Andrew Chadeayne (President of SwimSpray, LLC)
UMass Dartmouth, Dion Building, Room 115, 4:00 pm
O’Malley Lecturer
Prof. Wilma K. Olson (Rutgers Univ.)
“Insights into Gene Expression”
Boston College, Merkert 130 4:00 pm
Prof. Richard Silverman (Northwestern University)
“CPP-115: A GABA Aminotrans-ferase Inactivator and New Treatment for Addiction and Epilepsy”
Northeastern Univ., Hurtig Hall 129 12:00 pm

**Oct 25**
O’Malley Lecturer
Prof. Wilma K. Olson (Rutgers Univ.)
“Packaging from Computer Simulation Long-range Communication on Chromatin”
Boston College, Merkert 130 4:00 PM
Merck-Banyu Lecture in Organic Chemistry
Prof. Ryo Shintani (Kyoto University)
“Selective Synthesis of Cyclic Compounds under Transition Metal Catalysis”
MIT, 6-120, 4:00 pm

**Oct 26**
Merck-Banyu Lecture
Prof. Ryo Shintani (Graduate School of Science, Kyoto University)
“Selective Synthesis of Cyclic Compounds under Transition Metal Catalysis”
Harvard, Pfizer Lecture Hall 4:15 pm

**Oct 29**
R.B. Woodward Lectures in the Chemical Sciences
Prof. Hung-wen Liu (Univ. Texas)
Harvard, Pfizer Lecture Hall 4:15 pm

**Oct 30**
Prof. Michael Haley (Univ. Oregon)
Boston College, Merkert 130 4:00 pm
Prof. Mingdi Yan (Portland State University/UMass Lowell)
UMass Dartmouth, Dion Building, Room 115 4:00 pm

**Oct 31**
Prof. Kenneth D. Karlin (Johns Hopkins)
MIT 6-120 4:15 pm

Notices for The Nucleus Calendar of Seminars should be sent to:
Sheila E. Rodman
email: serodman(at)hotmail.com

The NESACS website
Updated frequently  •  Late-breaking news  •  position postings
Back issues of the Nucleus archived  •  Career-related Links  •  Awards and Scholarships
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- 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

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

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Call for Abstracts!

11th Annual Undergraduate Symposium on Sustainability and the Environment

Saturday, December 1, 2012
9:00 AM – 3:00 PM
Bridgewater State University
Conant Science and Math Center

Please join us as at the only symposium dedicated to undergraduate environmental research, and projects that address sustainability issues from a campus, regional, national, or global perspective. Undergraduate research posters (including completed, in progress, and proposed research) in all environmental disciplines are welcome. Abstract submission is open to all undergraduate students at [http://www.bridgew.edu/Environmental](http://www.bridgew.edu/Environmental).

Abstract submission deadline is Monday, November 19.

Please email questions to Ed Brush (ebrush@bridgew.edu).

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Oct 15
Dr. Ahmed F. Ghoniem (MIT)
Tufts University, SciTech Center Room 136
12:00 pm
Bristol-Meyers Squibb Symposium
Professor Corey Stephenson (Boston Univ.)
Speaker #2, TBD (Bristol-Meyers Squibb)
Harvard, Pfizer Lecture Hall
4:15 pm
Prof. Mingdi Yan (U Mass, Lowell)
“Glycanonamaterials and Glycan Microarrays: Synthesis and Applications”
Brandeis, Gerstenzang 122 4:00 pm

Oct 16
Prof. Dustin Maly (Univ. Washington)
Boston College, Merkert 130
4:00 pm
Prof. Samuel Gellman (Univ. Wisconsin, Madison)
“Mimicry of protein surfaces with peptidic foldamers”
Tufts University, Pearson P106
4:30 pm

Oct 17
Prof. Robert Waymouth (Stanford Univ.)
Boston College, Merkert 130
4:00 pm
Dr. Ed Jahngen, (UMass, Lowell)
UMass Dartmouth, Dion Building, Room 115
4:00 pm
Prof. Christopher W. Bielawski (Univ. Texas, Austin)
MIT, 6-120
4:00 pm