

# THE Indicator

APRIL 2010

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**Professor David Sarno**  
**NY Outstanding Service Awardee**  
(See page 7.)

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**Tuesday, April 6, 2010**

Nanoscience Discussion Group  
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**Thursday, April 8, 2010**

Long Island Subsection  
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**Tuesday, April 13, 2010**

Westchester Chemical Society  
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**Friday, April 16, 2010**

New York Section Board Meeting  
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HSTTG  
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**Wednesday, April 21, 2010**

Brooklyn Subsection  
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**Friday, April 23, 2010**

Hudson-Bergen Chemical Society  
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**Friday, April 23, 2010**

Long Island Subsection Chem. Challenge  
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## NORTH JERSEY SECTION

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NoJ Executive Committee  
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**The Indicator is  
posted to the web  
on the 15th of the  
previous month at  
[www.TheIndicator.org](http://www.TheIndicator.org)**

**Deadline for items to be included in the  
June 2010 issue of *The Indicator*  
is April 15, 2010.**



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## **THIS MONTH IN CHEMICAL HISTORY**

By *Harold Goldwhite*, California State University, Los Angeles  
[hgoldwh@calstatela.edu](mailto:hgoldwh@calstatela.edu)

In my last column I described the beginning of the career of the chemist – and chemical historian – Edward Thorpe. In 1885 he was picked to succeed Sir Edward Frankland as Professor of Chemistry at what was then the Normal School of Science and Royal School of Mines in South Kensington, London – later known as Imperial College of Science and Technology of the University of London. He resumed work on inorganic chemistry discovering diphosphorus tetroxide in 1886; and later phosphorus (III) oxide, a volatile low-melting reactive crystalline solid. It was this oxide which was responsible for the horrible necrosis of the jaw observed among female workers in the early years of the match industry. His continuing interest in photochemical determinations of light intensity led to expeditions to solar eclipses in the West Indies in August 1886 and in French Senegal in Africa in April 1893. Meanwhile inorganic chemistry prospered with investigations on atomic weights of titanium and gold; the composition of the spa waters of Cheltenham; manganese trioxide; phosphoryl trifluoride; thiophosphoryl trifluoride; fluosulphonic acid; vapor density of HF at different temperatures; and the decomposition of carbon disulfide by shock. Thorpe also worked both at Leeds and in London on the causes of coal-dust explosions in mines.

Thorpe's penultimate position, which he held from 1894 to 1909, was as Director of the Government Laboratory. He helped design the laboratory's new buildings in central London. This laboratory was heavily involved in analytical chemistry related to industry and Thorpe published papers on the determination of ethanol content of medicinals; on lead content of ceramics; on the occurrence of paraffin hydrocarbons in plants; and on a more precise determination of the atomic weight of radium. He returned to Imperial College from 1909 to 1912 where he helped develop plans for its new buildings which were completed under his successor, William Tilden.

Edward Thorpe's great accomplishments led to many honors. After he retired from the Government Laboratory he received a knighthood and was an advisor to the Government during the first World War. He was Vice President of the Royal Society in 1894-95; President of the Society of Chemical Industry in 1895; President of the Chemical Society from 1899-1901; and President of the British Association for the Advancement of Science in 1921. His honorary degrees included doctorates from Dublin University, and the Universities of Manchester, Leeds, Glasgow, and Edinburgh. He had many European friends including Victor Meyer and Mendeleef who stayed with him when they came to England.

Thorpe was a prolific author of textbooks and reference works. His multi-volume "Dictionary of Applied Chemistry" was first published in 1890 and went through several subsequent editions. His texts on inorganic chemistry, quantitative analysis, and qualitative analysis were standard works in their time. (I have a number of Thorpe's works in my personal library). And in the area of history of chemistry, in addition to the "Essays" referred to in my first column on Thorpe he published a history of chemistry (1909) and biographies of Humphry Davy, Priestley, and Roscoe. Thorpe was also a keen yachtsman; he maintained yachts at Salcombe estuary and wrote two guides for sailors – to the Dutch waterways and to the River Seine. Sir Edward Thorpe died at Salcombe in Devon, England, in February 1925.

## **APRIL HISTORICAL EVENTS IN CHEMISTRY**

*By Leopold May, The Catholic University of America, Washington, DC*

### **April 1, 1860**

Two hundred years ago, Sergei N. Reformatsky was born on this date. He synthesized organozinc halides (Reformatsky reaction).

### **April 4, 1939**

Synthesis of Vitamin B6 was announced by Merck, Sharp & Dohme on this date.

### **April 9, 1930**

F. Albert Cotton, a researcher in inorganic and structural chemistry, was born on this date.

### **April 11, 1899**

Seventy-five years ago in 1935, Percy L. Julian synthesized physostigmine with Josef Píkl. In 1953, he founded Julian Laboratories in 1953, prepared intermediates for commercial production of steroid hormones and was the first black chemist member of National Academy of Sciences. He was born on this date.

### **April 13, 1760**

Two hundred and fifty years ago, Thomas Beddoes was born on this date. He studied medical treatment of disease by the therapeutic inhalation of different "factitious airs" or gases and vapors and established Pneumatic Institution for Inhalation Gas Therapy in 1798.

### **April 15, 1710**

Three hundred years ago on this date, William Cullen was born. He was the first to notice that heat is produced during compression of a gas, was born on this date.

### **April 16, 1921**

Marie M. Daly, the first black woman to earn a PhD in chemistry in 1948 at Columbia University, was born on this day

### **April 18, 1864**

Samuel C. Hooker was a sugar chemist, who was born on this day.

### **April 21, 1889**

Seventy-five years ago in 1935, Paul Karrer synthesized Vitamin B2 (riboflavin). He synthesized vitamins A in 1931 and E (tocopherol) in 1938. In 1937, he shared the Nobel Prize in Chemistry for his investigations on carotenoids, flavins and vitamins A and B2 with Walter N. Haworth for his investigations on carbohydrates and vitamin C.

### **April 21, 1960**

One hundred and fifty years ago, Aleksandr Oparin died. He did studies on the origin of life from chemical matter and extended the Darwinian theory of evolution backward in time to explain how simple organic and inorganic materials might have combined into complex organic compounds. He was born on February 18, 1894.

### **April 21, 1970**

The first Earth Day was founded by Sen. Gaylord Nelson, Father of Earth Day and organized by Denis Hayes on this date. It is celebrated by ACS on April 22.

### **April 24, 1817**

Jean C. de Marignac, who was born on this date, discovered gadolinium in 1880.

### **April 27, 1896**

Seventy-five years ago in 1935, Wallace H. Carothers developed Nylon. He was born on this date.

### **April 28, 1954**

Fifty years ago, Champion International was incorporated on this date.

### **April 29, 1870**

Atlantic Richfield Co., was incorporated on this day.

### **April 30, 1897**

Joseph J. Thomson announced the discovery of the electron as a body smaller than and a constituent of all atoms on this date.

Additional historical events can be found at Dr. May's website,  
<http://faculty.cua.edu/may/Chemistrycalendar.htm>

## **DAVID M. SARNO - 2009 OUTSTANDING SERVICE AWARD**

Professor David M. Sarno is the recipient of the ACS New York Section's Outstanding Service Award for 2009. Professor Sarno was presented with the award at the 2010 Sectionwide Conference held at St. John's University on January 16. The Outstanding Service Award is presented annually to recognize the efforts of members of the New York Section who provide their time, leadership skills and dedicated service in promoting quality programs that contribute to the excellence of the Section. It was first awarded in 1976.

David earned his B.S., M.A.T. and Ph.D. in Chemistry at the State University of New York at Binghamton. His doctoral work was conducted with Wayne Jones on the surface chemistry and self-assembly of mono- and multilayer architectures by transition metal coordination chemistry. He then moved on to a post-doctoral fellowship with Alan MacDiarmid at the University of Pennsylvania to study conducting polymer nanomaterials. In 2004, eager to get into the classroom, he joined the Chemistry Department at Queensborough Community College of CUNY. He is now a tenured Associate Professor teaching various levels of General Chemistry lecture and lab, and he also runs a research group with 2-3 QCC undergraduates each semester.

David became an ACS member in 1997 while in graduate school. He has attended and presented at national meetings, and published in and reviewed articles for ACS journals. Since joining QCC he has become actively involved in the Long Island subsection of the New York section, serving as Chair in 2008 and currently as Publicity Chair. He also regularly contributes to the annual Chemistry Challenge and High School Awards events sponsored by the subsection. As of 2010, he is serving his first term as Director-at-Large for the New York Section.

David made a significant contribution to the New York Section through his role in the 40th Middle Atlantic Regional Meeting in 2008. He began his involvement in MARM as Secretary of the Executive Board, but, before long, he had become the all around "go-to-guy" and, eventually, found himself in the position of General Co-Chair. Meanwhile, and in addition to his duties to the NY section and LI subsection, he was heavily involved in the creation of the first QCC Chemistry Department laboratory dedicated to student-faculty research. But most exciting of all, he and his wife, Jenny, were expecting their first child in 2008. Their daughter Olive arrived in July 2008. The new parents were relieved that MARM was long over.

In 2009, MARM 2008 earned a ChemLuminary Award for Outstanding Regional Meeting. Though the actual award is at QCC, he is proud and happy to share it with everyone who made the meeting such a success.

David lives in Astoria, Queens with his family, including a leopard gecko named Moltar.

Congratulations David!



**In recognition of his leadership and long-standing involvement in the New York Section of the American Chemical Society (ACS), David M. Sarno, Associate Professor of Chemistry at Queensborough Community College, a college of The City University of New York (CUNY), received the New York Section 2009 Outstanding Service Award presented in January at the 2010 NY-ACS General Meeting and Section-Wide Conference at St. John's University, in Jamaica, New York.**

## New York Meetings

[www.newyorkacs.org](http://www.newyorkacs.org)

### ACS NEW YORK SECTION MEETINGS FOR 2010

The Board of Directors Meetings for 2010 are:

#### Friday, April 16

Friday, June 4

Friday, September 10

Friday, November 19

The regular Board Meetings will be held at St. John's University, 8000 Utopia Parkway, Jamaica, NY, in the Library's Writing Center. They are open meetings and all are welcome.

For more information, please visit the New York Section website at <http://www.NewYorkACS.org>.



### CHEMICAL MARKETING & ECONOMICS GROUP

#### Green Branding through Bioplastics Innovation

*Speaker:* Robert Dombrowski  
Principal at  
Nanoview Associates LLC

This talk will cover how a broad range of industries — including pharmaceuticals, personal care, consumer goods, biomedical devices, automotive — will benefit from eco-friendly packaging and structural materials.

- What are the best strategies for green branding?
- What are the challenges and opportunities in bioplastics?
- Are bioplastics a viable and reliable option?

This presentation will discuss brand positioning through the adoption of novel "green" technologies in bioplastics /biodegradable materials and will include an outlook for what we might expect in the future.

Robert Dombrowski has been involved in bioplastics use in pharma, biomedical, personal care and animal health. He played

central roles in technology at Warner-Lambert, Carter-Wallace, and Colgate-Palmolive.

**Date:** Thursday, April 1, 2010

Times: Cocktails 11:15 AM

Luncheon 12:00 noon

Presentation 1:00 PM

Place: Club Quarters

40 West 45th Street

New York, NY

Cost: \$45 for Members (including SCC Members) and \$55 for Guests who pay by credit card **by Monday, March 29, 2010, 4:00 PM.**

Members (\$55) and Guests (\$65) who pay at the door.

Reserve at: <http://tinyurl.com/CME-Apr10>

To Reserve: Please reserve early to be eligible for the discount price. We now accept all major credit cards via PayPal, or call Vista Marketing at (917) 684-1659, or via E-mail to [cmegroup@mac.com](mailto:cmegroup@mac.com)

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#### NEXT MEETINGS

"Nutraceuticals"

**Date:** Thursday, May 6, 2010

\*\*\*\*\*

"A New World -- A View of the Post-Recovery Global Chemical Industry"

*Speaker:* Robert Westervelt  
Editor-in-Chief  
*Chemical Week*

**Date:** Thursday, June 3, 2010



### NEW YORK NANOSCIENCE DISCUSSION GROUP

*Hosted by:* Department of Chemistry  
New York University

Mark your calendars for the Spring 2010 meeting, to be held on **Tuesday, April 6.**

## SURPRISE

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## LONG ISLAND SUBSECTION

### Seminar: "Design of Fluorometric High-Throughput Screening Assays for Cytochrome P450s"

*Speaker:* Dr. Melissa Van Alstine  
Adelphi University

The cytochrome P450s (CYPs) are a superfamily of heme-containing enzymes that mediate the metabolism of endogenous and exogenous molecules. Most studies on CYPs have been driven by drug-drug interactions and involve human isoforms. Recently, fluorometric high-throughput screens (HTS) have been developed for major human drug-metabolizing CYPs (CYP1-4) and used to screen drugs for CYP inhibition, but applications of these methods for rat P450s have been limited. We have developed a fluorometric HTS specifically for the cDNA-expressed rat CYP2B1, CYP2C6 and CYP2C11 using the substrate 7-ethoxy-4-trifluoromethylcoumarin (EFC) or dibenzylfluorescein (DBF). A series of inhibitors were then characterized on these rat P450s as well as some human P450s (CYP2C19 and CYP2B6). IC50 values were determined for some imidazole-containing analgesic antagonists (CC12 and MW-06-25), antifungal drugs (miconazole, sulconazole, clotrimazole, ketoconazole and flucanazole) and epoxygenase inhibitors (MS-PPOH and PPOH). MS-PPOH and PPOH displayed time- and NADPH-dependent inactivation, suggesting that these compounds are mechanism-based inhibitors. These presently described assays will be useful for studies of rat P450s.

**Date:** Thursday, April 8, 2010

**Time:** Seminar 6:00 PM

**Place:** Hofstra University  
Breslin Hall Room 209

**Cost:** Seminar is free and open to all.

**Time:** Dinner 7:30 PM

**Place:** A nearby restaurant

**Cost:** \$25.00 per person

Learn more about the  
New York Section at  
[www.NewYorkACS.org](http://www.NewYorkACS.org)

## WESTCHESTER CHEMICAL SOCIETY

### Science Café



Science cafes are gaining momentum across America – now New Rochelle will host its own, at the library and various local restaurants. Like events in other major cities, the New Rochelle Science Café will involve lively conversations with renowned and “accessible” scientists about current science topics.

Open to everyone, the events are designed to be informal, welcoming gatherings with inclusive discussions in plain language. No experience is necessary! Scientists and non-scientists are encouraged to participate in the monthly sessions, made possible through a partnership between the library, Dr. Jerome Levkov at Iona College ([jeromelevkov1@gmail.com](mailto:jeromelevkov1@gmail.com)), and the New Rochelle Downtown BID.

Join us for an evening that will generate stimulating conversation, cutting edge information, and insightful questions for further personal exploration.

### Forensic Science: Past, Present and Future

*Speaker:* Robert A. Adamo M.S. D-ABC Director, Division of Forensic Sciences Westchester County Department of Laboratories and Research.

**Date:** Tuesday, April 13, 2010

**Time:** 7:00 PM

\*\*\*\*\*

### Why the U.S. is not Prepared for Major Disasters - and What We Need to Do Now

*Speaker:* Irwin Redlener. M.D., Professor of Clinical Population and Family Health Director, National Center for Disaster Preparedness Columbia University Mailman School of Public Health & President, Children's Health Fund.

**Date:** Tuesday, May 11, 2010

**Time:** 7:00 PM

## HIGH SCHOOL TEACHERS TOPICAL GROUP

### “Demo Derby”

An evening of non-stop demonstrations by the attendees (5-8 minutes max.) If you want to participate, just bring your demo along with clean-up equipment and your safety apparel, and write your name on the board. Remember, it's quick, quick, quick. You're not teaching, just showing what can be demonstrated in the classroom.

If you demonstrate, a write up of procedure, required materials, scientific principles and expected conclusions to be distributed to the audience of 50 would be appreciated but not required.

#### **Date: Friday, April 16, 2010**

Time: Social and Dinner — 5:45 PM

Place: M&G Pub (Murphy and Gonzales)  
21 Waverly Place (at Green Street,  
North-east corner)  
New York, NY  
No reservations required

Time: Meeting 7:15 PM

Place: New York University  
Silver Center Room 207  
32 Waverly Place (South-east  
corner Washington Sq. East)  
New York, NY

Security at NYU requires that you show a picture ID to enter the building. In case of unexpected severe weather, call John Roeder, 212-497-6500, between 9 AM and 2 PM to verify that meeting is still on; 914-961-8882 for other info.

Note: Street parking is free after 6:00 PM. For those who prefer indoor attended parking, it is available at the Melro/Romar Garages. The entrance is on the west side of Broadway just south of 8th Street, directly across from Astor Place. It is a short, easy walk from the garage to the restaurant or meeting room.



## **BROOKLYN SUBSECTION — JOINT MEETING WITH THE POLYTECHNIC INSTITUTE OF NEW YORK**

**The Brooklyn Frontiers in Science Public  
Lecture: Architecture in NanoSpace**

*Speaker:* Sir Harold W. Kroto  
The Florida State University  
Tallahassee, FL

As the borderlines between Chemistry and key areas of Physics and Biology vanish, so multidisciplinary research is leading to the fascinating “new” overarching field of Nanoscience and Nanotechnology (N&N). Ingenious strategies for the creation of molecules with complex, exactly-specified, structures and as well as function are being developed — basically molecules that “do things” are now being created. Although N&N is not new at all it is the “Frontier Chemistry of the 21st Century”. When the molecule C<sub>60</sub> Buckminsterfullerene and its elongated cousins the carbon nanotubes or Buckytubes were discovered, it suddenly became clear that our understanding of the factors governing the bottom-up assembly of atomic and molecular structures involving carbon and other atoms was quite naïve — especially with regard to the factors that govern dynamic construction at nanometer scale.

#### **Date: Wednesday, April 21, 2010**

Times: Reception 5:30 PM

Lecture 6:00 PM

Place: Pfizer Auditorium  
Polytechnic Institute of NYU  
5 Metrotech Center  
Brooklyn, NY

Cost: Free and open to the public

Please register at [http://www.newyorkacs.org/sub\\_brooklyn.php](http://www.newyorkacs.org/sub_brooklyn.php)



## **HUDSON-BERGEN CHEMICAL SOCIETY — JOINT MEETING WITH THE SCHOOL OF NATURAL SCIENCES OF FAIRLEIGH DICKINSON UNIVERSITY**

**The 12th Annual Undergraduate  
Research Symposium**

The chemistry programs of the following colleges are members of the Hudson-Bergen Chemical Society

- Essex County College
- Fairleigh Dickinson University (Teaneck, NJ)
- New Jersey City University
- Ramapo College of New Jersey
- St. Peter's College
- Stevens Institute of Technology

This is a forum for undergraduate students and their faculty mentors from colleges and universities that participate in the subsection's activities to present the results of their

research. Outstanding graduating students are also being recognized (they receive the Hudson-Bergen Chemical Society Award consisting of a certificate and a book, courtesy of John Wiley and Sons). All the presenters will receive certificates and a book, courtesy of Bedford-Freeman-Worth Publishers.

Students who wish to present posters must send an abstract via e-mail to [mleonida@fdu.edu](mailto:mleonida@fdu.edu) by **April 5, 2010**. The abstract should be in MS Word format and must include the names and addresses of the student(s) and their faculty adviser(s) in addition to the title of the abstract. The abstract should not exceed 200 words. The name of the student presenting the poster should be underlined. There is no registration fee.

### **Chemical Development of Pharmaceuticals**

*Speaker:* Dr. Richard Thompson  
Novartis Pharmaceuticals

There are three major components to the chemical development of an active pharmaceutical ingredient: the development of the chemical process, the manufacturing activity utilizing the process, and control of the manufacture in accordance with regulatory requirements of health authorities. This presentation will cover these aspects of development from the perspective of chemists.

Dr. Richard Thompson is currently a Senior Project Leader in Chemical and Analytical Development at Novartis Pharmaceuticals with 19 years experience in the industry and expertise in chromatographic analysis. He has authored or co-authored 41 peer reviewed scientific publications including two book chapters. Richard is also an adjunct professor of Analytical Chemistry at Fairleigh Dickinson University.

**Date:** Friday, April 23, 2010  
**Times:** Social/Poster Session 5:00 PM  
Dinner 6:00 PM  
Awards/Lecture 7:00PM  
**Place:** Dickinson Hall Café  
Fairleigh Dickinson University  
Teaneck, NJ  
**Cost:** \$10.00 for dinner. The lecture is free. (Dinner cost for student presenters and awardees is waived.)

**Reservations:**  
Dr. Mihaela Leonida 201-692-2338, email: [mleonida@fdu.edu](mailto:mleonida@fdu.edu) by **April 19, 2010**.

## **BIOCHEMICAL TOPICAL GROUP — JOINT MEETING WITH THE NYAS BIOCHEMICAL PHARMA- COLOGY DISCUSSION GROUP**

### **Unmet Needs in Pain Therapeutics: Neuropathic Pain and Fibromyalgia**

*Organizers:* Chad E. Beyer  
University of Colorado  
School of Medicine  
Mark R. Bowlby  
Merck Research Laboratories  
Ildiko Antal  
Bristol-Myers Squibb  
Beth A. Winkelstein  
University of Pennsylvania  
Jennifer Henry  
The New York Academy  
of Sciences

*Speakers:* Mark Bowlby  
Merck Research Laboratories  
Daniel J. Clauw  
The University of Michigan  
Sulayman D. Dib-Hajj  
Yale University  
School of Medicine  
Amy MacDermott  
Columbia University  
Michael W. Salter  
Hospital for Sick Children  
University of Toronto  
Beth A. Winkelstein  
University of Pennsylvania

This symposium addresses clinical applications and new pain mechanisms for the treatment of chronic pain syndromes, and provides an update on the progress and barriers to developing effective preclinical models of pain, in particular fibromyalgia.

Please note this is a full-day symposium.

**Date:** Tuesday, April 27, 2010  
**Time:** 9:00 AM – 5:00 PM  
**Place:** New York Academy of Sciences  
7 World Trade Center – 40th floor  
250 Greenwich St. (at Barclay St.)  
New York, NY  
**Cost:** NYAS Members, BPDG Affiliates,  
and NY-ACS Members— FREE.  
Non-members — \$20 per event;  
Student Non-members — \$10.

Reserve a seat on-line at:  
[www.nyas.org/events](http://www.nyas.org/events)

To become a Member of the Academy, visit  
[www.nyas.org/benefits](http://www.nyas.org/benefits)

## LONG ISLAND SUBSECTION

### The 10th Annual Chemistry Challenge

The Long Island subsection of the NY-ACS invites you to participate in the 10th Annual Chemistry Challenge. This is a chemistry knowledge competition between student teams from area two- and four-year institutions. Thirty multiple choice questions (approximately 75% General and 25% Organic Chemistry) are asked in a friendly and exciting atmosphere that brings colleges and their students and faculty together. Each team is made of three members and all are welcome. A trophy will be awarded to the winning team and medals will be given to first, second and third place winners. All student participants will also receive a copy of the Merck Index! In celebration of the 10th anniversary of this event, there will be a complimentary outdoor barbecue. Come join us!

**Date:** Friday, April 23, 2010

**Time:** Barbecue 5:00PM  
Chemistry Challenge 6:30 PM

**Place:** Queensborough Community College  
Science Bldg S-111

Contact: Paris Svoronos at  
[psvoronos@qcc.cuny.edu](mailto:psvoronos@qcc.cuny.edu) or 718-631-6280 for directions and parking information or visit the LI-ACS website at  
[http://www.newyorkacs.org/sub\\_island.html](http://www.newyorkacs.org/sub_island.html)



## 58TH ANNUAL UNDERGRADUATE RESEARCH SYMPOSIUM

*Sponsored by: The New York Chemistry Students' Association of the American Chemical Society's New York Section.*

The symposium provides an excellent opportunity for undergraduate chemistry students in the NY metropolitan area to present the results of their research. The program includes a keynote address, oral and poster presentations of student papers, followed by a luncheon and an award ceremony.

The keynote speaker will be Dr. Jack Kaye, Earth Science Division Associate Director at NASA, an alumnus of Adelphi University speaking on "Chemistry, Climate, and Satellites: How Chemistry Helps us Observe and Understand Earth's Changing Climate."

For more information go to:  
[http://newyorkacs.org/grp\\_students.html](http://newyorkacs.org/grp_students.html)

**Date:** Saturday, May 8, 2010

**Place:** Adelphi University

If you have any questions please contact: Alison Hyslop, Co-chair, Student Activities Committee, [hyslopa@stjohns.edu](mailto:hyslopa@stjohns.edu)

Sharon Lall-Ramnarine, Co-chair, Student Activities Committee  
[slallramnarine@qcc.cuny.edu](mailto:slallramnarine@qcc.cuny.edu)

JaimeLee Rizzo, Co-chair, Student Activities Committee, [jrizzo@pace.edu](mailto:jrizzo@pace.edu)

## LONG ISLAND SUBSECTION

### Thirteenth Annual Frances S. Sterrett Environmental Chemistry Symposium to be Held at Hofstra University – "Sustaining the Green Revolution"

**Speaker:** Kate Murray  
Supervisor, Town of Hempstead

### "Green Chemistry at Worcester State College: Lab Curriculum Development and Development of an Undergraduate Green Chemistry Research Course"

**Speaker:** Dr. Margaret E. Kerr  
Associate Professor  
Worcester State College

### "Meeting the Challenge of Reducing Green House Gas Emissions in New York State"

**Speaker:** Dr. Patrick Looney  
Assistant Laboratory Director for Policy and Strategic Planning  
Brookhaven National Laboratory

The annual Frances S. Sterrett Symposium is dedicated to presenting the public with up-to-date, factual scientific information on environmental topics.

Ms. Murray will present information on the status and progress of the recycling and e-cycling programs in the Town of Hempstead.

This symposium is sponsored by the American Chemical Society, the American Institute of Chemical Engineers, the Ideas Institute of Hofstra University and Hofstra University.

Efforts are underway to determine eligibility of the symposium for professional development credits for engineers and educators. For further information, please contact Dr. Margaret Hunter, 516-463-5556 or [margaret.a.hunter@hofstra.edu](mailto:margaret.a.hunter@hofstra.edu).

**Date:** Thursday, May 20, 2010

**Times:** 8:30 AM – 2:00 PM

**Place:** Hofstra University

**Cost:** Registration Fee (includes lunch):  
\$25 for members of ACS or AICE  
\$35 for nonmembers  
\$17 for students

Watch for updates at the New York Section website: [www.newyorkacs.org](http://www.newyorkacs.org).

## **2010 SECTIONWIDE CONFERENCE HELD AT ST. JOHN'S UNIVERSITY**

The annual Sectionwide Conference of the New York Section was held on January 16 at St. John's University and was enjoyed by over 80 members. Mr. Frank Romano, 2010 Section Chair, hosted the event. Highlights of the conference included a slide show review of the 2009 activities, presentation of awards, keynote address by Dr. David Harwell of the ACS, poster presentations by Project SEED students, breakout planning sessions for year 2010 and lunch at Fame Diner. Chair Frank Romano displayed photos of a number of the past year's activities including the Nichols Medal Events, the Undergraduate Research Symposium, NCW at the Hall of Science, College Chem Challenge and more.

At the award ceremony, Dr. David Sarno of Queensborough Community College and General Co-Chair of MARM 2008, received the New York Section's Outstanding Service Award for 2009 (*see page 7*) and Mr. Steven Borneman of Byram Hills High School was awarded the Nichols Foundation High School Chemistry Teacher Award for 2009 (*see page 15*). Dr. Sarno and Mr. Borneman were cheered on by their colleagues and families. Awards were given, also, to two students to recognize their achievements in chemistry. They received personalized certificates, Merck Indexes and ACS souvenirs. The two awardees were: Anna Chithelen who qualified for the prestigious summer camp for the Chemistry Olympiad competition – two years in a row, and Courtney Bissonette of Division Avenue High School who won second place in the high school category of the National ACS' poster contest for National Chemistry Week. It was a pleasure having them at the conference to accept their awards. The Section recognized the contributions of Dr. Anne O'Brien and Office Secretary Marilyn Jespersen with beautiful bouquets of flowers. Dr. O'Brien had recently completed nine successful years as District One Director for the ACS. Dr. Hiroko Karan, 2010 Chair Elect, next presented the names of the candidates for the upcoming 2010 elections and introduced those who were present.

Dr. David Harwell, Assistant Director of Career Management and Diversity Programs at ACS, gave a timely and interesting keynote presentation titled "ACS Careers: The Best Secret That You Never Knew." Dr. Harwell presented an excellent overview of the career services that can be accessed as a member of the ACS, with emphasis on the considerable number of benefits specifically for unemployed members. Attendees acquired a wealth of useful information on ACS career services and especially enjoyed the virtual interview.

Project SEED students, along with Project SEED coordinator Nadia Makar, traveled far to attend the conference and to present their research results. Their posters were excellent and their appreciation of the support from the section was evident. Project SEED student Elaine Gomez spoke on behalf of the students to thank the Section for its Project SEED funding and for the opportunity of doing research with chemists throughout the Section. Break out planning sessions followed. The conference concluded with the traditional luncheon with colleagues — this year at Fame Diner.

*(continued on next two pages)*



**2010 Chair, Frank Romano, welcoming attendees to the January Sectionwide Conference held in Bent Hall at St. John's University.**



**Dr. David Harwell, Assistant Director of Career Management and Diversity Programs at ACS, giving an excellent presentation on ACS Career Services.**



Chair Frank Romano presenting the 2009 New York Section Outstanding Service Award to Dr. David Sarno of Queensborough Community College – CUNY.

*(All photos from the Sectionwide Conference are courtesy of Marilyn Jespersen)*



Anna Chithelen receiving a New York Section achievement award from Chair Frank Romano and Dr. Stephen Goldberg, Chair of the Olympiad Committee. Anna received high honors on the Olympiad Exam in 2008 and 2009 and was invited to attend the Olympiad Study Camp in Colorado.



Courtney Bissonette, (recipient of a New York Section achievement award for her 2nd place standing in the National Chemistry Week Poster Contest – high school level) with Chair Frank Romano, Renee Locker - her teacher at Division Avenue High School, Levittown, NY, and Joan Laredo-Liddell, 2009 Chair of NY ACS National Chemistry Week Committee.



Dr. Anne O'Brien was presented with a bouquet of flowers in appreciation of her nine years of dedication as District One Director for the ACS.



Project SEED students, here with Mrs. Nadia Makar, organizer of the NY ACS Project SEED program, displayed their research for the ACS members at the conference.

## **MR. STEVEN BORNEMAN – NICHOLS FOUNDATION HIGH SCHOOL CHEMISTRY TEACHER AWARD**



Mr. Steven Borneman of Byram Hills High School is the recipient of the 2009 Nichols Foundation High School Chemistry Teacher Award. He was presented the award by Mr. Stephen Radice, Co-Chair of the Nichols Foundation Teacher Award Committee, at the New York Section's General Meeting and Sectionwide Conference held on January 16, 2010 at St. John's University, Jamaica, NY. The award is presented annually to recognize highly effective teaching and inspirational leadership to students in chemistry. The award was established in 1958 and consists of a plaque and \$1000, funded by the Nichols Foundation. Steven Borneman exemplifies the qualities of an outstanding, highly effective and inspirational teacher.

Steven received his B.S. in chemistry, a M.A.T in chemistry and a M.S. in chemistry from Binghamton University. Steven also has a New York State Permanent Certification in Chemistry.

Presently, Steven is teaching at Byram Hills High School in Armonk, New York. Prior to this, he taught in the Chenango Forks School District as a high school chemistry teacher and 8th grade physical science teacher. While he was at Binghamton University he worked as an adjunct instructor, a teacher assistant for the department of chemistry and a research assistant. His research involved "Green Synthesis: Using Room Temperature Ionic Liquids for Electroorganic Synthesis."

Courses taught by Steven include AP Chemistry, Regents chemistry, SAT II Level chemistry and Science Research Program.

Steven uses effective techniques to capture the interest of his students. He believes that all chemistry lessons should be real, fun, exciting and challenging. He uses shock factors or discrepant events such as putting a test tube filled with hot melted paraffin wax into a beaker of ice water and seeing a flame shoot out to the ceiling. He demonstrates bonding principles by bending a trickle of water with a balloon and by asking the students to explain the difference in rate of evaporation when acetone, ethanol and water are rubbed on the board.

Steven challenges and inspires students by involving them in various projects. One such project is the "Ghosts of Chemistry Past". Each student selects an influential chemist of the past, creates a tombstone that includes a detailed epitaph and delivers a presentation (dressed as the chemist they researched) that emphasizes scientific contributions. The tombstones created by the students are presented to the entire school in a hallway called the "graveyard of chemistry past." To really get into the spirit of this ghostly idea, this project is always done in the vicinity of Halloween Day.

Steven successfully started a Chemistry Lab and Teaching Assistant program in his school. This course gives high level students the responsibility of developing lesson plans, giving in-class support to struggling students and developing labs. This serves the purpose of allowing students to achieve a deeper understanding of chemistry concepts.

Although Steven received the award for high school chemistry, one of his biggest contributions is to inspire elementary aged students into the world of science. Steven developed a 4th grade presentation to students that includes exciting chemistry demonstrations such as pouring a colorless liquid into an apparently empty beaker and seeing the liquid turn pink. He also developed 5th grade science night in which students are invited to the high school to perform hands on science experiments that include electricity, alchemy, bottle rockets and fingerprints. In Stevens own words "it is never too early to initiate a student's curiosity in chemistry."

At the same time, Steven keeps up to date with his own education. He recently has taken courses that include: Teaching the gifted and talented, Encouraging student responsibility and Successful teaching for the acceptance of responsibility.

Debra Cayea, Science Department Chairperson at Byram Hills High School writes " Mr. Borneman models how science is fun and he extends himself and expertise well beyond his high school classroom. He is sure to share his contagious excitement and knowledge of chemistry with all his students and offers his expertise and guidance to other staff members including mentoring less experienced teachers."

One of Steven's students writes: "There is only one reason that I have chosen to pursue chemistry: Mr. Borneman. He has an uncanny way to make chemistry not only intelligible but also fun and exciting. Mr. Borneman instills an insatiable thirst for knowledge in chemistry that keeps me continually digging deeper."

Congratulations, Steven!

## North Jersey Meetings

<http://www.njacs.org>

### NORTH JERSEY EXECUTIVE COMMITTEE MEETING

Section officers, councilors, committee chairs, topical group chairs, and section event organizers meet regularly at the Executive Committee Meeting to discuss topics of importance to running the section and representing the membership. All ACS members are welcome to attend this meeting and to become more involved in section activities.

**Date:** Monday, April 26, 2010

**Time:** 6:00 PM

**Place:** Rutgers University  
Wright-Rieman Labs, Room 260  
Busch Campus, 610 Taylor Road  
Piscataway, NJ 08854

**Cost:** \$5.00 - pizza dinner

Directions can be found using mapquest and the address above. A map of the campus can be found at <http://maps.rutgers.edu/maps/default.aspx?campus=4>.

Reservations: call (732) 463-7271 or email [njacsoffice@aol.com](mailto:njacsoffice@aol.com) prior to **Wednesday, April 21, 2010**.

**Dinner at the Section Meeting is payable at the door. However, if you are not able to attend and did not cancel your reservation, you are responsible for the price of your dinner.**

**Next Meeting:**

Monday, May 17, 2010

Learn more about the  
North Jersey Section at  
[www.NJACS.org](http://www.NJACS.org)

### CAREERS IN TRANSITION GROUP

#### Job Hunting??

Are you aware that the North Jersey Section holds monthly meetings at Fairleigh Dickinson University in Madison to help ACS members? Topics covered at these cost-free workshops are:

- The latest techniques in resume preparation
- Ways for improving a resume
- Answers to frequently asked interview question and
- Conducting an effective job search

The next meeting for the Careers In Transition Group will be held **Thursday, April 1, 2010**, in the Rice Lounge on the first floor of the New Academic Building. The meeting will start at 5:30 PM and end at 9:00. There will be a Dutch-treat dinner. To get the most from the meeting, be sure to bring transparencies of your resume.

Please contact [vjkuck@yahoo.com](mailto:vjkuck@yahoo.com), if you plan on attending this meeting.



### METRO WOMEN CHEMISTS COMMITTEE — JOINT MEETING WITH THE ASSOCIATION FOR WOMEN IN SCIENCE — CENTRAL JERSEY CHAPTER

#### The Gift of Mentoring

**Part 1: Keynote Speaker:** Dr. Sherrie Pietranico-Cole will share how mentors helped her career and how she has given the gift of mentoring to others.

**Part 2:** A panel of women from ACS MWCC and AWIS-CJC will share mentoring tips and stories in a Q&A session

**Part 3:** ACS MWCC will present the first annual MWCC Mentoring Award!!

**Date:** Thursday, April 8, 2010

**Time:** 6:00 PM

**Place:** Fairleigh Dickinson University  
Lenfell Hall, 285 Madison Ave.  
Madison, NJ

**Cost:** ~\$30.00; Students \$15.00  
Includes appetizers, a buffet style dinner and dessert.

Feel free to bring a bottle of wine .

Register on line at

<http://www.njacs.org/metrowomen.html>.



**NJACS TEACHER AFFILIATES****Executive Committee Meeting**

**Date:** Thursday, April 15, 2010  
(note change)

**Time:** 4:30 PM - 6:30 PM

**Place:** Franklin Township High School  
500 Elizabeth Avenue  
Somerset, NJ

**Contact:** Eve A. Krupka  
[eakrupka@optimum.net](mailto:eakrupka@optimum.net)

**ChemTAG****Chemists Celebrate Earth Day**

**Date:** Thursday, April 22, 2010

**Time:** 4:00 – 6:00 PM

**Place:** Governor Livingston High School  
175 Watchung Boulevard  
Berkeley Heights, NJ

**Hostess:** Meredith Morgan  
[mmorgan@bhpsnj.org](mailto:mmorgan@bhpsnj.org) • 908-464-3100

**DIRECTIONS:**

[http://www.bhpsnj.org/~glweb/?  
OpenItemURL=S0013E42E](http://www.bhpsnj.org/~glweb/?OpenItemURL=S0013E42E)

**POLYMER TOPICAL GROUP****Symposium: "Polymers in Drug Delivery"**

**Co-chairs:** Kathryn Uhrich and  
Ron DeMartino

**Date:** Thursday, May 20, 2010

**Times:** 1:00 to 6:00 PM

**Place:** Rutgers University  
Busch Campus Student Center  
Piscataway, NJ

Speakers and titles will appear very soon at  
[http://njacs.org/ptg.html#\\_top](http://njacs.org/ptg.html#_top).

**NJACS TEACHER AFFILIATES****Mole Day Poster Contest**

The NJACS-TA group will be receiving posters for the Annual Mole Day Poster Contest. "Moles of the Caribbean" is the theme for 2010 so start your students thinking about designs. Details will appear at [njacs.org](http://njacs.org) and via chementhusiasts Yahoo group. To be a winner the design must relate the theme to the value of a (chemistry) mole or Kelly George [kelly.george@roche.com](mailto:kelly.george@roche.com)

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## Obituaries

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### JOSEPH L. ZUCKERMAN

Joseph L. Zuckerman died November 5, 2009 at age 77. He resided in Livingston, NJ. During his 55 year career as an industrial Polymer Chemist. Joe received 13 patents and published 12 professional papers.

He specialized in adhesives, coatings, textiles and elastomers. In the 1960s and 70s, Joe was employed as a technical director for polymer product development by Allied Chemical in Morristown NJ and later by JP Stevens in Garfield NJ. During the 1980s and 90s he was employed by Stanbee and then Elektromek, both in Carlstadt NJ. Joe published his first paper when he was 13 years old. He graduated from the Bronx High School of Science and Brooklyn College with a BS in Chemistry. Joe is survived by his wife, Elaine, his son, Dan, and two grandchildren.

[www.njacs.org/obituaries/Joseph\\_Zuckerman.html](http://www.njacs.org/obituaries/Joseph_Zuckerman.html)



### EUGENE BROWN

Eugene Brown passed away on January 21, 2010, at his home in the Village of Hempstead, New York, at the age of 78. He received his bachelor's and master's degrees from New York University and then went on to serve his country in the Korean War. Gene worked in industry for a short time as an organic chemist and he successfully completed a number of patents. He then joined the faculty of the Chemistry Department at Nassau Community College where he worked for some 40 years and served as Chairman from 1969 to 1973. Gene was very active in the Long Island subsection of the New York section of the ACS, serving as Chair in 2007 and later as Director-at-Large. Eugene was also a successful entrepreneur and co-owner of Betar Pharmacy and House of Herbs. He is survived by his beloved daughter, Kathy; his son-in-law, Roberto; his three grandchildren, Elise, Jenele, and Eugene; their grandmother Sylvia Lovell; and a host of nieces, nephews, relatives, and friends.

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## Call for Nominations

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### THE WILLIAM H. NICHOLS MEDAL AWARD FOR 2011

The New York Section is accepting nominations for the William H. Nichols Medal Award for the year 2011. This distinguished award, established in 1902 by Dr. William H. Nichols, for the purpose of encouraging original research in chemistry, is the first award authorized by the American Chemical Society. It is presented annually in recognition of an outstanding contribution in the field of chemistry, and consists of a gold medal, a bronze replica and \$5000. The medals are presented at the William H. Nichols Meeting that consists of a Distinguished Symposium related to the medalist's field of expertise and a Medal Award Dinner.

Investigators who have published a significant and original contribution in any field of chemistry during the five calendar years preceding the presentation meeting are eligible for consideration by the Nichols Medal Jury.

Each nomination requires a completed Nomination Form, biographical and professional data, and seconding letters. Since the nomination procedure now will utilize the New York Section website, please access the forms and instructions at <http://www.NewYorkACS.org>

Nominations must be received by **May 31, 2010**. The Nichols Medal Award Jury will meet in June 2010 to select the Nichols Medalist for 2011.

Questions regarding the nomination procedure should be directed to Marilyn Jespersen, New York Section Office, at [njesper1@optonline.net](mailto:njesper1@optonline.net).



### ACS NEW YORK SECTION'S OUTSTANDING SERVICE AWARD FOR 2010

Each year the New York Section presents the Outstanding Service Award to a most deserving member of the section. Many members of the New York Section provide their time, leadership talent, and educational skills to the New York Section. The tradition of excellence of the New York Section is

attributable directly to the cumulative effect of these individuals. Please help the New York Section to recognize the efforts of our colleagues by nominating them for this award. Nominations will be reviewed by a committee consisting of the previous five winners of the award. The Outstanding Service Award for 2010 will be presented at the New York Section's Section-wide Conference in January 2011.

Nominations with supporting data should be mailed to the OSA Committee Chair, Dr. David N. Rahni, Department of Chemistry, Pace University, 861 Bedford Road, Pleasantville, NY 10570-2799 or emailed to [nrahn@pace.edu](mailto:nrahn@pace.edu).

For more information about the award along with a list of former award recipients, please visit the ACS New York Section's website at [http://www.newyorkacs.org/awards\\_nyacs.html](http://www.newyorkacs.org/awards_nyacs.html).

Nominations should be forwarded to Dr. Rahni by **May 31, 2010**.



### ***DISTINGUISHED SCIENTIST AWARD***

The **Westchester Chemical Society**, New York subsection, is seeking nominations for the its Distinguished Scientist Award. The nominee must either work or reside in Westchester County, New York. The award is presented in May, 2010. Send nominee resume to: Dr. Joseph Sencen, 5 Summit Circle, Somers, New York, 10589 or [jsencen@optonline.net](mailto:jsencen@optonline.net)

### ***EDWARD J. MERRILL AWARD FOR OUTSTANDING HIGH SCHOOL CHEMISTRY TEACHER FOR 2011***

Now is the time to begin thinking about nominations for the Edward J. Merrill Award, North Jersey Section, for Outstanding High School Chemistry Teacher for the year 2011.

Go to the web site, [njacs.org](http://njacs.org) under education and obtain your preliminary nomination form and guidelines. The full packet takes time to do a good job!

We all know an outstanding high school chemistry teacher. Perhaps one from your town, your son's or daughter's teacher or just one that you have heard about or worked with at some point. The award carries \$500 for the teacher, \$500 in supplies for the teacher's classroom and a plaque to display at home or in the classroom.

Any questions or help needed contact George Gross, [njmoxie1@verizon.net](mailto:njmoxie1@verizon.net).

**Submit photos (remember  
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photo credits) for use in  
*The Indicator* by e-mailing  
[Photos@TheIndicator.org](mailto:Photos@TheIndicator.org)**



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## Others

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### **ASSOCIATION OF CONSULTING CHEMISTS & CHEMICAL ENGINEERS, INC.**

#### **The World's First 1,000 MW Solar-Hydrogen Demonstration Power Plant**

*Speaker:* Béla Lipták, PE  
Lipták Associates

Three topics will be covered:

- 1) The design of a 1,000 MW solar power plant generating liquid hydrogen to be stored and transported the same way as LNG is today.
- 2) Lipták's invention, the reversible fuel cell (RFC), which makes solar energy continuously available, by making hydrogen when the sun is out and using it to make electricity when it is not.
- 3) The energy-free home with roof covered with solar shingles, using solar sidings and windows and provided with grid-connected two directional electric meters.

Mr. Lipták arrived from Hungary in the United States in 1956. In 1960, he became the Chief Instrument Engineer at C&R (later John Brown). In 1987, he was an adjunct professor at Yale University and he is currently working as a consultant with some help (Lipták Associates PC) on industrial optimization. He has published two dozen technical books including: "Post-Oil Energy Technology", "Optimization of Unit Operations" and "Environmental Engineers' Handbook".

#### **Date: Thursday, April 1, 2010**

*Times:* Networking/Cash Bar 6:00 PM  
Dinner 6:30 PM  
Presentation 7:30 PM

*Place:* Snuffy's Restaurant  
Park & Mountain Ave.  
(Route 22 East), Scotch Plains, NJ

*Cost:* Registration: \$35 ACC&CE Members, \$45 Non-members

To Reserve: Call Linda B. Townsend at 1-973-729-6671 or e-mail:

[acce@chemconsult.org](mailto:acce@chemconsult.org)

### **NJIT — OTTO H. YORK DEPARTMENT OF CHEMICAL, BIOLOGICAL AND PHARMACEUTICAL ENGINEERING**

#### **Graduate Seminar Series – Spring 2010**

*Sponsors:* Infineum USA L.P. and Conoco Phillips Bayway Refinery

**Monday, April 12, 2010**  
TBD

**Monday, April 26, 2010**

"Multifunctional Nanomaterials: From Novel Synthetic Methods to their Applications in Catalysis, Medicine and Energy"

*Professor Teddy Asefa*

Department of Chemical and Biochemical Engineering  
Rutgers University  
New Brunswick, NJ

*Times:* Refreshments 2:30 PM  
Seminars 2:45 PM

*Place:* NJIT  
Room 373, Tiernan Hall

*Cost:* Free and open to the public

Seminar Coordinator: Professor Marino Xanthos, 973-642-4762,

[Xanthos@njit.edu](mailto:Xanthos@njit.edu)



### **CROWLEY STORY SALUTED AS MODEL OF PHARMA INNOVATION**

Debbie Hart, President, BioNJ introduced the Crowley family at a benefit screening of "Extraordinary Measures" and the introduction Crowley's new book *Chasing Miracles* February 9, 2010.

The following are some of her abstracted comments after recognizing government officials attending for "they are a critical part of the innovation process. I am so glad you are taking the time to see this important movie.

...What we are about to see is the recounting of a remarkable story about a remarkable Family: The Crowleys. John and Aileen Crowley took extraordinary measures on behalf of their children, Megan and Patrick, who John and Aileen would tell you are the true stars of this show.

Megan is here with us tonight. Megs thank you for coming. Your Dad said you wouldn't miss a party and we are thrilled that you are here despite the snow. Ladies and Gentlemen Megan Crowley...

By now you probably all know the story of the indefatigable John Crowley — a leading executive in a major pharmaceutical company, entrepreneur, who now serves as CEO of one of New Jersey's most promising biotechnology companies. And let's not forget, Naval Intelligence offi-

cer, husband and Dad.

And Aileen, an equally remarkable partner and mother who John readily credits as the true hero here.

Having the great honor and pleasure of knowing John and their incredible story, I can tell you that extraordinary is an understatement. When I first met John and without knowing his story, I recognized a certain star quality, a presence, a glow, a gleam in his eye. If you have met him, you know what I mean. Little did I know that he would soon be putting that star quality to work in a way that would make us all better for it.

And have no doubt. The movie you are about to see will confirm that.

One of the reasons we at BioNJ and at HINJ wanted to do this premier event is not to give the Crowley's any more fans (how many fans can one have?)

Not to give the story any more exposure and not to help John sell books.

What we want to accomplish here this evening is to make sure we do not miss the critically important message of innovation that this story depicts.

What we hope you and the rest of the world will not miss is the time, the struggle, the cost with and more importantly, the cost without these innovations.

It takes 10-12 years of round the clock research, hundreds of patients taking on the risk of clinical trials, scores of meetings with venture capitalists much like you will see in the movie, tedious sometimes heartbreaking communications with the FDA and a BILLION, yes a BILLION DOLLARS to bring a drug to market.

That is why this movie is so important.

It tells the story of the struggle to innovation that researchers across the country and around the world and proudly throughout NJ live every day.

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It is this drive to not accept the unacceptable — to find new therapies and cures — that fuels a quest for innovation which I believe sets our industries apart from all others. And that innovation will mean the difference between therapies and cures, pain and promise, and life and death.

John and Aileen, your remarkable story stands as a beacon on the path that others in the biotechnology, pharmaceutical and medical device industries can follow. Thank you for all you have done and what you continue to do for your Family and for all of our Families."


Bill Suits  
[www.njacs.org](http://www.njacs.org)

## NORTHEAST REGIONAL MEETING, NERM 2010

The 2010 American Chemical Society Northeast Regional Meeting, NERM2010, will be held June 2-5, at the SUNY Potsdam campus, New York. The theme of our event is "Chemistry for a Sustainable World". Our keynote speakers, including Dr. Catherine T. Hunt (2007 ACS president) from Dow Chemical, Prof. Paul T. Anastas from Yale University and Prof. Vicki L. Colvin from Rice University, will elaborate on this theme, headlining our technical sessions on green and environmental chemistry. The meeting features 25 special symposia with particularly strong programming in physical chemistry and nanotechnology; biomedical and biochemistry; analytical chemistry; organic/medicinal chemistry; and chemical education. There will be a strong program for K-12 educators on Saturday June 5. ACS regional meetings provide a high level of scientific discourse, excellent networking opportunities, and are great value for money. We invite you to visit our website: [www.nerm2010.org](http://www.nerm2010.org), to learn more about our special symposia, our many distinguished invited speakers, and about the wonderful social and networking events planned for this meeting. We also invite you to present your research: the meeting is open for abstract submission **until April 20**.

Conference chair: Martin Walker, Dept. of Chemistry, SUNY Potsdam

Program chair: Maria Hapel, Dept. of Chemistry, SUNY Potsdam.



The advertisement is enclosed in a black rectangular border. At the top right, the EMD logo is displayed, consisting of the letters 'EMD' in a bold, sans-serif font, with a vertical line to its left and a horizontal line below it. Below the logo, a large, light gray puzzle piece is shown, partially overlapping another piece. To the left of the puzzle pieces, the words 'Solvents', 'Salts', 'Acids', and 'Solutions' are listed vertically in a clean, sans-serif font. Below this list, the phrase 'We have all the pieces...' is written in a smaller, italicized font. At the bottom of the advertisement, the website address [www.emdchemicals.com/analytcs](http://www.emdchemicals.com/analytcs) is provided in a small, sans-serif font.

## ChemTAG Corner

### Solution Conductivity and pH

Submitted by: Stu Chapman  
Harford Technical HS  
Bel Air, MD

Edited by: George R. Gross  
Union High School  
Union, NJ (retired)

**Objective:** Students use probe ware to determine the pH and conductivity of several common aqueous solutions.

**Pre-Lab:** Students should be familiar with the basic differences between ionic and covalent compounds as they relate to the differences in solubility and conductivity in aqueous solution, the fundamental differences in properties between ions and molecules how to name ionic compounds given formulae and a chart of common ions with oxidation numbers and the pH scale and its range of values. They should be familiar with the use of probe ware with a pc or a Mac to collect real time data in the lab.

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Contact Dr. E. Joseph Billo\*  
(508) 653-3074 or joseph.billo@bc.edu

(\*author of Excel for Scientists and Engineers,  
John Wiley & Sons, 2007)

#### Materials:

pc or Mac  
probe interface with two channels  
pH probe  
conductivity probe  
50 to 75 mL of the following solutions in beakers or plastic cups:  
HCl 0.1M  
vinegar  
dilute citric acid  
carbonated water  
distilled water  
soapy water adjusted to pH 8  
clear window cleaner  
limewater  
NaOH 0.1M

**Procedure:** Each team or group will test the eight solutions for both pH and conductivity, simultaneously. Program the software to collect data in the "Events with Entry" mode. Have a display of two bar graphs in real time. On the x axes one unit is needed for each solution to be tested. The y axis should range from 0 to 14 for the pH graph and from 0 to 5000 mS/cm for conductivity data. After data collection is complete use the software to sort the data by pH from 1 to 14 before they save their copy or print. See sample.

**Data Analysis:** The active ingredient of each solution is given to the students. Students are required to produce correct formulae. Limit students to the Arrhenius definition.

The bar graphs display highest conductivity corresponds with the extremes in pH.

Students plot another graph of pH vs conductivity. See sample. This graph shows an inverse bell curve which describes the relationship between conductivity and pH. If high values are obtained for the carbonated water, students may conclude this is due to dissolved minerals depending upon water chosen.

**Conclusion:** At the end of this experiment students should be able to distinguish between acids and bases, the ions they contain, the relative numbers of ions present and the value of the pH.

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## Press Release

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### **\$2.9 MILLION NATIONAL SCIENCE FOUNDATION GRANT ATTRACTS MINORITIES TO STEM FIELDS**

The University of Texas at El Paso has received a five-year grant from the National Science Foundation (NSF) for nearly \$2.9 million.

The "Science for a Sustainable Future: Developing the Next Generation of Diverse Scientists" award will provide fellowships to minority graduate students in NSF-supported disciplines such as science, technology, engineering, and mathematics (STEM). The doctoral students will build their science and teaching portfolios and bring their leading research findings into K-12 learning settings in an effort to inspire the next generation of scientists.

The fellows will serve as a STEM resource for El Paso's Early College High School (ECHS) science teachers and as mentors for the students, helping them build practical understandings of science.

"This success in securing federal funding from the National Science Foundation is a good example of the quality of competitive proposals UTEP faculty generate, integrating education and research benefiting our students and consistent with UTEP's mission," said Roberto Osegueda, vice president of research and sponsored projects.

A recruitment effort for beginning doctoral students is under way for the program, called NSF Graduate STEM Fellows in K-12 Education. Aaron Velasco, Ph.D., chair of geological sciences; Vanessa Lougheed, Ph.D., assistant professor in biological sciences; and William Robertson, Ph.D., associate dean of the College of Education are the faculty leaders who are recruiting incoming doctoral students for the program.

The fellows will help develop ECHS's science curriculum around the theme "Science for a Sustainable Future," with a particular focus on the arid Southwest. Specific challenges facing our border desert populations will be addressed:

- Limited water resources in a changing climate
- The potential for alternative energy resources
- A rapidly growing, diverse population and environmental health issues in a multi-

national community

- Geological hazards facing the region

"The idea is to give these students real exposure to the scientific challenges of the region and hopefully inspire them to go into STEM fields," Velasco said.

The ECHS, recently established in El Paso, brings an innovative approach to high school education by reaching out to young people currently underrepresented in higher education, enabling them to earn up to two years of college credit in addition to their high school diploma, and providing them with the skills to increase their success in college.

One of the goals of this new grant is to complement the current partnership between UTEP and the ECHS and to help facilitate the transition to a four-year university.

The NSF grant complements other training efforts at UTEP and serves to enhance the role of one of the top three Hispanic degree-granting universities in the U.S. as an emerging hub of research and training activities involving the next generation of Hispanic scientists and engineers.

With its growing Ph.D. programs, top faculty, and current demographic, UTEP is poised to lead the way for training minority Ph.D. future scientists and leaders.

For more information, contact [gk12@utep.edu](mailto:gk12@utep.edu).



### **CHLOR\*RID SALT AND CORROSION TESTING/REDUCING PRODUCTS**

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