

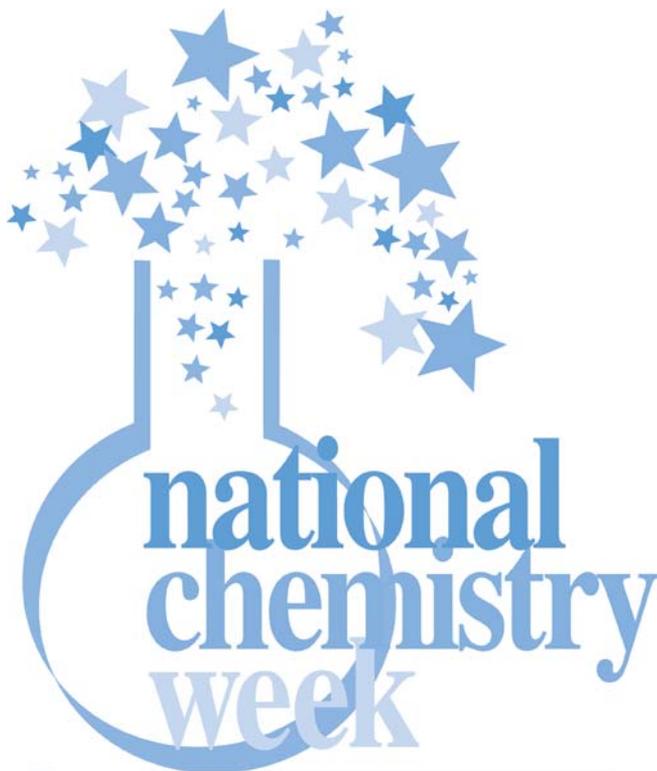
# THE Indicator

OCTOBER 2009

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ISSN0019-6924

**Sunday, October 18 to  
Saturday, October 24**



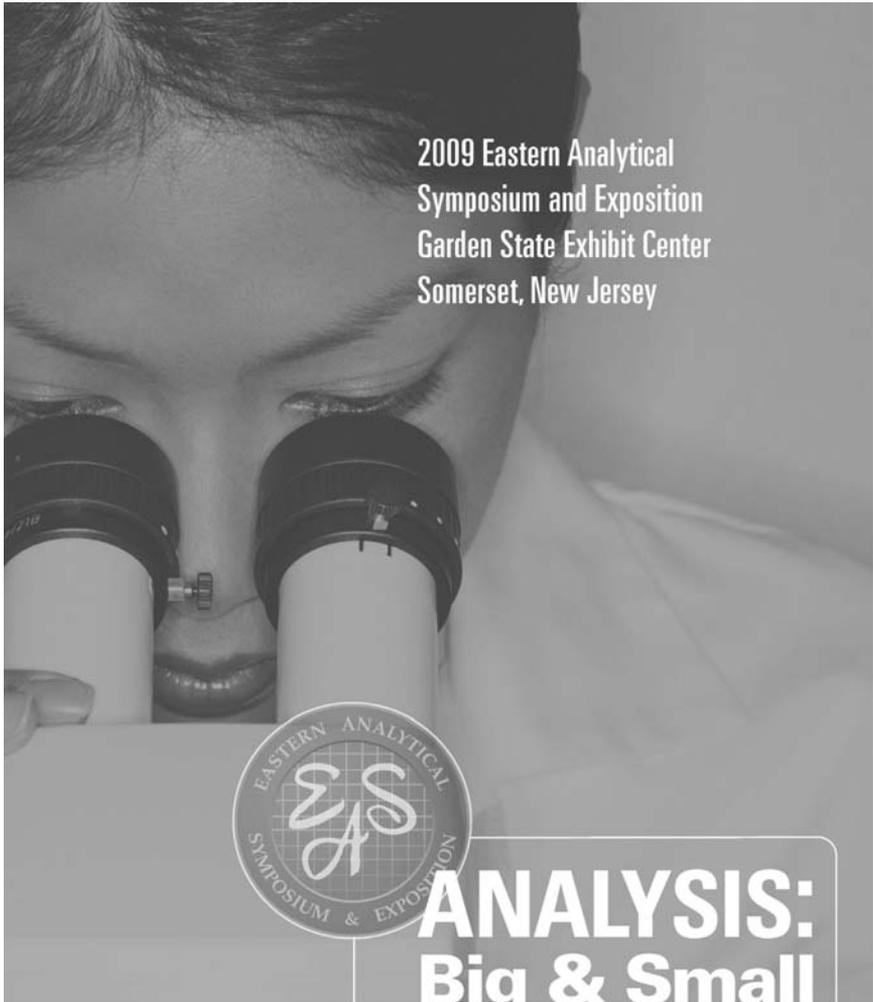
**See related stories on pages 18-19.**

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The monthly newsletter of the New York &amp; North Jersey Sections of the American Chemical Society. Published jointly by the two sections.

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Address advertising correspondence to Advertising Manager. Other correspondence to the Editor.

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### NEW YORK SECTION

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Thursday, October 1, 2009

Long Island Subsection  
See page 10.

Friday, October 23, 2009

HSTTG  
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Tuesday, October 27, 2009

Biochemical Topical Group  
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**Deadline for items to be included in the December 2009 issue of *The Indicator* is October 15, 2009.**

### NORTH JERSEY SECTION

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Careers in Transition  
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Thursday, October 1, 2009

Teacher Affiliates Executive Committee  
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Tues.-Weds., October 13-14, 2009

ChemTAG - NJ Science Convention  
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Saturday, October 24, 2009

National Chemistry Week  
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Monday, October 26, 2009

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Polymer Topical Group  
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## **OCTOBER HISTORICAL EVENTS IN CHEMISTRY**

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

### **October 1, 1940**

Air Products and Chemicals, Inc. was incorporated on this day.

### **October 3, 1904**

Charles J. Pedersen, who was born on this date, found that alkali metal ions could be bound by crown ethers in a rigid layered structure. In 1987, he shared the Nobel Prize in Chemistry with Jean-Marie Lehn and Donald J. Cram for their development and use of molecules with structure-specific interactions of high selectivity.

### **October 4, 1918**

Kenichi Fukui, who developed the frontier orbital theory of reactivity, was born on this day. He shared the Nobel Prize with Roald Hoffmann in 1981 for their theories, developed independently, concerning the course of chemical reactions.

### **October 6, 1897**

Florence B. Seibert studied the biochemistry of tuberculosis and was awarded Garvin Medal in 1942. She was born on this date.

### **October 8, 1918**

Jens C. Skou, discovered the enzyme that promotes directed (vectored) transport of substances through cell membrane, Na<sup>+</sup>, K<sup>+</sup>-ATPase; Nobel Prize (1997) for the first discovery of an ion-transporting enzyme, Na<sup>+</sup>, K<sup>+</sup> -ATPase" with P. D. Boyer & J. Walker for elucidation of the enzymatic mechanism underlying the synthesis of adenosine triphosphate (ATP).

### **October 11, 1884**

One hundred and twenty-five years ago on this date, Frederich Bergius was born. He researched chemical reactions at high pressure, conversion of coal into oil, hydrolysis of wood to sugar and cattle feed. He shared the Nobel Prize in Chemistry in 1931 with Carl Bosch in recognition of their contributions to the invention and development of chemical high-pressure methods.

### **October 14, 1886**

Jacobus H. Van't Hoff presented law showing that osmotic pressure of a dilute solution obeys Boyle's, Charles's & Avogadro's Laws, & that  $pV = RT$  before Swedish Academy of Sciences.

### **October 17, 1890**

Unocal was incorporated as Union Oil Co. of California on this date.

### **October 19, 1909**

One hundred years ago on this date, Maguerite Perey was born. She discovered francium in 1939.

### **October 25, 1934**

Seventy-five years ago, Otto Folin died. He was a pioneer in clinical chemistry and did research in the systematic development of "micromethods, use of colorimetry in biochemistry using the Dubosq colorimeter, and the use of an enzyme for analytical purposes, urease to measure urea. Vintila Ciocalteu and he developed the "Phenol Reagent" for use in protein determinations. He was born on April 4, 1867

### **October 30, 1895**

Dickinson W. Richards, Jr., who was born on this date, made the first clinical use of cardiac catheterization. He shared the Nobel Prize in Physiology or Medicine in 1956 with André Frédéric Cournand and Werner Forssmann for their discoveries concerning heart catheterization and pathological changes in the circulatory system.

For more historical facts on chemistry, visit Dr. May's website at <http://faculty.cua.edu/may/ChemistryCalendar.html> and "This Week on Chemical History" on the ACS web (<http://www.acs.org/whatischemistry>).

## **MAKING THE WORLD SAFE FOR DEMOCRACY, BUT PUTTING THE NEIGHBORS AT RISK**

*By Kevin Olsen*

Instrumentation Specialist, Chemistry and Biochemistry Support Staff  
Montclair State University, Montclair, NJ, 07043 • 973-655-4076

August of 2009 marked the 95th anniversary of the outbreak of the First World War, an event that more than any other shaped the world of the twentieth century. In previous essays we explored some of the effects of the war on the chemical industry the most immediate of which was the interruption of chemical imports from Germany. Another important impact was the many contracts for explosives and other war materials for European governments. Just one example from northern New Jersey was DuPont's explosives manufacturing facilities in Pompton Lakes being vastly expanded after the company signed a contract in October of 1914 to deliver eight million pounds of smokeless powder to the French Government.

The causes of the war can be traced to the tensions between the European powers that had been building over a number of years. These tensions centered around the scramble for overseas empires, Germany's decision to build a navy that would match Britain's, political instability in the Balkans, and a power vacuum created by the decline of the Ottoman Empire. While endlessly fascinating to the professional historian, most members of the general public only know that the war's proximate trigger was the assassination of Austrian Archduke Franz Ferdinand, heir to the Austro-Hungarian throne, in Sarajevo.

A member of a Bosnian nationalist group, the Black Hand fired the shots that killed Franz Ferdinand and his wife Sophie. Because Serbia provided shelter for Bosnian nationalists Austria Hungary retaliated by invading Serbia. Russia, an ally of Serbia, mobilized for war against the Austro-Hungary Empire. Russian mobilization directly threatened Germany, which promptly invaded France. Germany's action was in accord with long-standing war plans that called for France, an ally of Russia, to be defeated quickly so that Germany could use all of its resources against an anticipated "Russian Steamroller." Great Britain, Turkey, Italy, and the smaller Balkan states were soon drawn into the widening conflict. Readers who wish to know more about this period should consult *The Guns of August* (2001) by Barbara Tuchman, unquestionably the best history of the war's outbreak.

It was far from clear if the United States would enter the war and if it did, on which side. Not only did the United States have a long tradition of isolationism but had eschewed any involvement the nineteenth century scramble for overseas empires in Africa and the far east. (The Philippines, Hawaii, and parts of Latin America were of course exceptions to these general rules.) Persons of German descent were the country's second largest ethnic group after the English. It appeared to many that the best policy for the United States was to remain neutral and grow rich.

But growing rich requires industry and industry requires chemistry. The interruption of chemical shipments from Europe posed an immediate problem. In 1914 Germany was the world's leading supplier of chemicals and laboratory supplies. Shortages were felt almost immediately in the United States. As the British naval blockade of Germany tightened, the shortages would only get worse.

Within a week of the outbreak of hostilities, the State Department was sending urgent telegrams to the American Consuls in Frankfurt, Mannheim, and Cologne requesting that they obtain assurances from German manufacturers that their dyestuffs would continue to be available in the United States. American textile manufacturers had no other source of supply. Meanwhile the English government was already asking the Americans for a supply of chemicals required for pharmaceutical manufacture. The day after the British request was made public, newspapers reported that drug prices in the United States had already risen by more than 200% for certain medicines.

In September of 1914 Dr. Thomas Freas of Columbia University stated that some 596 col-

leges and university chemistry departments in the United States relied on imported German chemicals and laboratory supplies. Of the materials on order, a mere 10% had arrived. Chemical supply companies were already restricting orders of such common supplies as the filter paper that had been manufactured in Prussia. In normal times it usually required eight to ten weeks for an order to arrive from Germany but Dr. Freas feared widespread shortages. He stated that "We shall all teach chemistry this year, but the Youth who has been in the habit of smashing everything breakable will not be over-welcome in any college chemistry laboratory this year."

American manufacturers received a much welcome shipment of dyestuffs in November of 1914 when the SS Matanzas arrived from Rotterdam with 3,000 tons of dyestuffs. The ship had been specifically chartered by the German company Farbwerke-Hoechst to bring dyes to 17 of their American distributors. Less than two years later the British blockade made such voyages impossible. The Germans resorted to the use of a cargo-carrying U-Boat the Deutschland. Built and operated by the North German Lloyd Line, the boat could carry a meager 700 tons of high value cargo. On her first trip the Deutschland carried \$1.5 million worth of dyestuffs, pharmaceuticals, and gemstones. She arrived in Baltimore on July 9, 1916 after a four week voyage and returned a few weeks later with nickel, tin, and rubber.

Material shortages continued throughout the war on both sides of the Atlantic. Under such conditions the time were ripe for inventors, dreamers, and fraudsters.

In the spring of 1917 Louis Clemont, a Danish chemist living in New York City, introduced a gasoline alternative he named "Nuoline." Clemont refused to disclose the formula of the milky-white liquid but stated that it contained naphthalene, camphor, and an extract of from hard coal. Nuoline, according to the inventor, contained 2/3 water and the remaining ingredients could be obtained from any drugstore. The fuel was tested by three automobile clubs in New York and was reported to run an engine as well as ordinary gasoline. The cost was 10 cents per gallon.

Clemont was charged with fraud by the District Attorney's office. In March of 1918 he was allowed to mix a batch of Nuoline under the watchful gaze of professional chemists. A test of the fuel mix took place at the New York City Fire Department's automobile repair shop. Two separate cars fueled with the mixture ran around the block but the observers noted that Clemont was largely ignorant of chemistry and that the fuel's actual cost would be between 18 and 40 cents per gallon. Nuoline's formula was revealed to include mothballs, benzene, saccharine, sodium bicarbonate, potassium chromate, alum, methanol, cedar oil, sulfuric acid, talcum powder, and kerosene. There is no record if any of the cars using the fuel were damaged beyond repair. The District Attorney's office had no comment about the test and the charges appear to have been dropped.

Clemont was far from the only amateur chemist active at the time. In June of 1916 the New York City Fire Commissioner Robert Adamson announced that experiments conducted by "amateur chemists" in apartment buildings were causing an outbreak of fires, several having occurred in the space of only a few weeks. While most of these chemists were untrained, some of them had at least taken a correspondence course.

Most of the experimenters were attempting to find replacements for drugs and industrial chemicals that were no longer available from Germany. It was said that millions of dollars could be made by the persons who found substitutes for these materials.

One "chemist" who was searching for a rheumatism treatment allowed air to come into contact with phosphorous and set fire to the building which housed his work rooms. In another instance a chemical laboratory above a restaurant caught fire and the fire fighters had difficulty approaching the blaze through a cloud of noxious smoke. Several fire fighters were overcome and required hospitalization.

The Fire Commissioner's office issued a warning to landlords that they should insure that their tenants were not experimenting with chemicals and any legitimate chemical firms should only be housed in fireproof buildings.

*(continued on page 8)*

## **MAKING THE WORLD SAFE FOR DEMOCRACY**

*(continued from page 7)*

Another problem was that legitimate chemical companies were hoarding materials and handling much larger quantities than they normally would. On May 1st a New York Central Railroad freight dock at St. John's Park (on the west side of Greenwich Village) received a shipment of 30 cases of bromine in glass bottles. While handling the shipment one of the bottles broke and seeing a brown gas leaking from the case, a panicked worker threw all thirty cases into the street. Bromine gas entered nearby apartment buildings and factories. Horses were overcome by the fumes and collapsed in the streets but there were no other injuries.

Chemical companies and manufacturing firms were also struggling to deal with unfamiliar process and new chemical hazards. Earlier in the year, a fire broke out at a factory on Gold Street (about four blocks north of Wall Street) where a mixture of aluminum, magnesium, zinc, copper, and lead was pulverized into a fine powder. Water from the firefighting came in contact with the dried powder releasing hydrogen gas. The fire fighters warned the company about the danger and workers quickly cleared out the storeroom, dumping the dry, metallic powder into the snow-covered streets. The release of hydrogen gas caused an explosion that injured three fire fighters.

The United States officially entered the war in December of 1917. President Woodrow Wilson had previously resisted all efforts to involve the United States but Germany's campaign of unrestricted submarine warfare and overtures to Mexico could no longer be ignored. President Wilson however saw America's involvement as part of the larger struggle between authoritarian and democratic governments. For Wilson, the war was about "making the world safe for democracy." The American war effort might have made the world safe, but there were no guarantees that their neighbors would not be in danger.

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## New York Meetings

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

### THE INDICATOR MIGRATES TO E-DISTRIBUTION

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For the present, we will continue mailing paper copies to people who request them, and to people whose current email addresses are not registered with ACS. Since we want to drastically reduce the number of paper copies, we kindly ask everyone to register their current email address – which you can do at this webpage: [www.acs.org/update](http://www.acs.org/update) (have your membership number handy). Please ask us for paper copy only if you have a compelling reason.

By the way, at [www.TheIndicator.org](http://www.TheIndicator.org) you can view and keyword-search through archived issues going back to 2004. And you can print a paper copies for yourself from the PDF files, naturally.

### ACS NEW YORK SECTION MEETINGS FOR 2009

The Board of Directors Meetings for the New York Section in 2009 are as follows:

#### Friday, November 13

The regular Board Meetings will be held at St. John's University, 8000 Utopia Parkway, Jamaica, NY. These meetings are open meetings and all are welcome. If you are not a member of the Board of Directors and wish to attend please inform the New York Section Office at 516-883-7510 or [njesper1@optonline.net](mailto:njesper1@optonline.net).

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

## CHEMICAL MARKETING & ECONOMICS GROUP

### Nanotech in Cleantech

Speaker: Doug Jamison  
President, COO &  
Managing Director  
Harris & Harris Group

Harris & Harris first invested in cleantech in 1989, seeding Molten Metal Technology an MIT spin-out in environmental remediation, with \$110,000 and exiting in 1993 by selling their shares in the open market on Nasdaq for over \$30 million. Additionally, Harris & Harris Group's 2003 investment in Nanogram Devices Corporation, a company commercializing a unique battery technology, yielded a 3.4 fold return when the company was acquired 13 months later. Harris & Harris Group's cleantech investment thesis is that nanotechnology is the enabling technology for many clean-technology solutions that will compete economically with currently available solutions, and address unmet needs in the global marketplace.

In his talk, Doug will touch upon some of the companies in its current portfolio, e.g., Innovalight, Bridgelux and Solazyme, and describe how Harris & Harris Group's position as a leading investor in nanotechnology-enabled companies uniquely positions Harris & Harris and its shareholders to profit financially from the emergence of cleantech companies in a new investment space.

**Date:** Thursday, October 1, 2009

**Times:** Cocktails 11:30 AM  
Luncheon 12 noon  
Presentation 1:15 PM

**Place:** Club Quarters  
40 West 45th Street  
New York, NYC

**Cost:** \$45 for Members who reserve by  
**Tuesday, September 8;** \$55 for  
Guests and Members (at door  
without reservations)

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Save the Dates - **Thursday, November 5th** Monthly Luncheon at Club Quarters. Speaker & Topic to be announced.

For latest details, view the CM&E website at: [www.nyacs-cme.org](http://www.nyacs-cme.org)

## LONG ISLAND SUBSECTION

### Chemistry in the Service of Microbiology

*Speaker:* Dr. Morris O. Paul  
US FDA Northeast Regional  
Laboratory

Microbiology has traditionally relied on chemical and biochemical reactions for identification and characterization of microbes, e.g., the ability of aerobic organisms to release water and oxygen from hydrogen peroxide ( $2 \text{H}_2\text{O}_2 + \text{catalase} \rightarrow 2 \text{H}_2\text{O} + 2 \text{O}_2$ ). The reliance is now even more pronounced with the advent of molecular biology techniques. This presentation seeks to provide a historical and practical evaluation of the interdependence of chemistry and microbiology in the development of strategies not only for the identification and characterization of microbes, but also for the ongoing challenge for the development of more effective antimicrobial agents.

**Date:** Thursday, October 1, 2009

Times: Coffee 5:30 PM

Seminar 6:00 PM

Place: Hofstra University  
Chemistry/Physics Building  
Lister Auditorium

Times: Dinner 7:00 PM

Place: Neighboring restaurant

Cost: \$20.00



## HIGH SCHOOL TEACHERS TOPICAL GROUP

### Backwards Learning Applied to Chemistry

*Speaker:* Prof. Mark M. Green  
Polytechnic Institute of NYU  
Dept. of Biological and Chemical  
Science  
6 Metrotech Center  
Brooklyn, NY  
[mgreen@duke.poly.edu](mailto:mgreen@duke.poly.edu)

In the academic study of the arts, the principles necessary to create a work of art such as a painting or a poem or a musical composition are discovered by studying the completed work. In this way the student encounters the beauty arising from the use of these principles at the very beginning, with the pleasure of this encounter stimulating the desire to understand what stands behind such an accomplishment. The method of learning of the arts is close to how we learn outside of the academic

world, how a child learns from the start. We don't learn the alphabet before we hear people speaking. We don't learn the colors or the shapes of common objects before seeing the world around us. The wonders of sound and shape and color intrigue us and stimulate our desire to figure out what is going on and what it all means.

The study of science rarely takes this 'backwards' path found in the study of the arts, instead insisting that the student learn the principles at first and only later see how these principles lead to the complexity of, for example, the production of an industrial product such as nylon, or the in vivo catabolism of a fatty acid. Although we may point to the complex result of the use of the principles we teach as we go along, we don't use this result as a template for introducing these principles.

At the Polytechnic we are using a backwards approach in the sophomore organic chemistry class. The success we are having demonstrates that this approach would be valuable over a wide range of grade levels.

**Date:** Friday, October 23, 2009

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.

**BIOCHEMICAL TOPICAL  
GROUP — JOINT MEETING  
WITH THE NYAS BIOCHEMICAL  
PHARMACOLOGY DISCUSSION  
GROUP**

**Is Alzheimer's Disease Type 3 Diabetes?**

*Organizers:* Barbara Petrack  
Drew University

Jean Lachowicz  
Schering-Plough Research  
Institute

*Speakers:* Suzanne M. de la Monte  
Brown Medical School

William L. Klein  
Northwestern University

José A. Luchsinger  
Columbia University

Mark Mattson  
National Institute on Aging, NIH

Alzheimer's disease (AD) has been called  
Type 3 diabetes, unique to the brain; others

suggest that diabetes is a risk factor for AD. This symposium will discuss the significance of cerebral metabolic disturbances in Alzheimer's disease.

**Date:** Tuesday, October 27, 2009

**Time:** 1:00 – 5:00 PM

**Place:** New York Academy of Sciences  
7 World Trade Center  
250 Greenwich Street – 40th Floor  
New York, NY

Reserve a seat on-line at:

[www.nyas.org/events](http://www.nyas.org/events)

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**EMPLOYMENT AND  
PROFESSIONAL RELATIONS  
COMMITTEE, NY SECTION**

**To Human Resources Departments in  
Industry and Academia**

The Employment and Professional Relations Committee maintains a roster of candidates who are ACS members seeking a position in the New York metropolitan area.

Members can request job information or employers can advertise for free. They can contact me, Chair of the Professional and Employment Committee at [hessytaft@hotmail.com](mailto:hessytaft@hotmail.com) if there is a job opening by employers or if a job seeker is looking for availability. The purpose of this mechanism is to put relevant people in contact who may not wish to give all their info on the web.

For job seekers, I would need their ACS member number, their latest degree, 3-5 words about their specialty/area of interest and about 1-2 lines on experience. For job posting, I would need a short description of the position available and the background required. If you have job openings and would like qualified candidates to contact you, please send a brief job description and educational/experience background required to [hessytaft@hotmail.com](mailto:hessytaft@hotmail.com).

---

**Position Available**

---

**BROOKLYN COLLEGE OF THE  
CITY UNIVERSITY OF NEW YORK**

The Department of Chemistry seeks a Lecturer for Spring 2010 to teach primarily undergraduate organic chemistry courses. Should the successful candidate hold a post-baccalaureate university degree, Master's level instruction may be possible. The lecturer will also contribute to the development of curricular materials and/or supplementary programs that support student success in organic chemistry. Baccalaureate degree in subject area required. Ph.D. and prior college teaching experience is preferred. Appointment is subject to financial availability. The College offers a competitive salary and an excellent fringe benefits package. Annual reappointment proceeds towards a Certificate of Continuous Employment. Please send cover letter indicating job title, curriculum vitae, writing sample or research plans and contact information for three references as one package to: Michael T. Hewitt, Assistant Vice President for Human Resource Services, 2900 Bedford Avenue, Brooklyn, NY 11210-2889 or [bcjobs@brooklyn.cuny.edu](mailto:bcjobs@brooklyn.cuny.edu).

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**BROOKLYN COLLEGE IS** 

## 50 & 60 YEAR MEMBERS OF THE NY SECTION OF THE ACS

A luncheon was held to honor the 50 and 60 year members of the New York Section for their continuous membership. It was held at Petrossian's in midtown Manhattan on May 28, 2009. Twelve members were presented certificates by NYACS Chair, Dr. Barbara Hillery. Also in attendance were other NYACS Board Members, Dr. Donald Clarke, Dr. Ralph Stephani and Dr. Yorke Rhodes, who also was an awardee.

### 60 Year Members of ACS

Dr. Amos Neidle  
Mr. Leo Gans I  
Dr. Alvin Krasna  
Mr. Jules S. Glick  
Mr. Martin Leonard Kantor  
Mr. Harold Bancroft Kaufman  
Dr. Irwin Norman  
Mr. Richard P. Cope  
Dr. Irwin A. Lichtman  
Dr. Bernard Kanner  
Dr. Morris London  
Dr. Edmund H. Immergut  
Dr. Eli M. Pearce  
Dr. Martin Pope  
Mr. Robert William Bassemir  
Mr. William P. Mc Donnell  
Dr. Richard Mather Powers  
Dr. Frederic Holtzberg

### 50 Year Members of ACS

Dr. Marvin Saul Aronoff  
Dr. Mario Q. Ceprini  
Dr. Benjamin T. P. Chu  
Mr. Eugene Thomas Clayton  
Dr. Jean Dayan  
Dr. Martin F. Epstein  
Dr. Mark M. Green  
Dr. Norbert Gruenfeld  
Dr. Paul Haberfield  
Dr. Albert Haim  
Dr. Eddie Hedaya  
Dr. Henry Joshua  
Dr. Arthur Karmen  
Mr. Richard William Klein  
Dr. Charles Kosky  
Dr. Ette P. Levi  
Mr. Nicholas Nenadkevich  
Sr. Mary Virginia Orna  
Dr. Yorke E. Rhodes  
Ms. Adma Antonia Ross  
Dr. Philip Rutkin  
Mr. R. W. Schultis  
Mr. Anthony Walter Schwally  
Dr. Thomas A. Seto  
Dr. R. Srinivasan  
Mr. Alan Richard Stevenson  
Dr. Nicholas J. Turro  
Mr. Paul B. West  
Dr. Andreas A. Zavitsas  
Dr. Barry Zimmerman

*(Photos courtesy of Dr. Ralph Stephani)*



### **LONG ISLAND SUBSECTION HIGH SCHOOL AWARDS CEREMONY**

The Ceremony was held at St John's University on June 9, 2009. There were 29 awardees from Queens, Nassau and Suffolk counties and their guests. Dinner was provided and our guest speaker was Dr. Denton Eble from the Museum of Natural History. He spoke about the Origins of Comets and Meteorites and their Properties. In attendance were Barbara Hillery, Chair NYACS, Jun Shin, Chair of the LIACS Subsection, who awarded the plaques to the awardees. Also present were members of LIACS Board of Directors, including Dr. Ralph Stephani, who provided the following photographs.



**Dr. Denton Eble**



## 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, October 26, 2009

**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, October 21, 2009**.

**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.**

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

## SURPRISE

our editor by calling and saying you appreciate the quality and content of our newsletter. Our editor works hard to maintain a publication of interest to our membership. Oh, and by the way, you could also give credit to our advertisers who financially support us.

## 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, October 1, 2009**, 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.



## TEACHER AFFILIATES

### Executive Committee Meeting

**Date:** Thursday, October 1, 2009

**Time:** 4:30 PM

**Place:** JP Stevens High School  
855 Grove Street  
Edison, NJ

**Contact:** Paul Sekuler  
[researchehs@hotmail.com](mailto:researchehs@hotmail.com)



## ChemTAG

Two opportunities to volunteer and share experiences:

- 1) NJ Science Convention: **Tuesday, October 13** and **Wednesday, October 14**.

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

- 2) National Chemistry Week: ChemExpo 2009 at Liberty Science Center **Saturday, October 24, 2009** from 10 AM – 2 PM.

**Contact:** Bobbi Gorman  
[rosellerams@yahoo.com](mailto:rosellerams@yahoo.com)

(See page 19 for sign-up.)

## **POLYMER TOPICAL GROUP**

### **Polymers in Tissue Engineering**

The symposium "Polymers in Tissue Engineering" is presented by the Polymer Topical Group of the North Jersey Section of the American Chemical Society and co-sponsored by the Society for Biomaterials. This symposium is intended to bring the local polymer science and biomaterials community up to date on recent developments in the application of polymers to solve challenges in tissue reconstruction and regeneration. Through a combination of reviews and case histories, the attendees will gain a fundamental foundation, a broad perspective on the directions and growth, and an update on recent advances in the use of polymers in tissue engineering.

This event features presentations, posters and networking opportunities at a mixer during the poster session. In addition to posters on Polymers in Tissue Engineering, general polymer posters are being requested.

#### **Preliminary Program**

*Organizers:* Professors Trenea Livingston Arinzeh and Michael Jaffe  
NJIT-BME

#### **"Challenges for the Biomaterials Scientist in Tissue Engineering"**

*Speaker:* Joachim Kohn  
Rutgers

#### **"Biomimetic Scaffold Design for Integrative Soft Tissue Repair"**

*Speaker:* Helen Lu  
Columbia University

#### **"Polymeric Scaffolds for Stem Cell Tissue Engineering"**

*Speakers:* Trenea Livingston Arinzeh  
NJ Institute of Technology

Kam Leong  
Duke

Patrick Snowhill  
Integra Life Sciences

Representative from Johnson  
and Johnson, Inc.

#### **Poster Session**

Bin Wei (ICI National Starch and Chemical)  
([bwei01@gmail.com](mailto:bwei01@gmail.com))

**Date: Thursday, October 29, 2009**

**Times:** Registration 12:00 noon

Program 1:00 PM

Mixer/Posters 5:30 PM

**Place:** Rutgers University

Cook College Campus Center

59 Biel Road

New Brunswick, NJ

**Cost:** ACS or SfB Member, \$40;

non-member; \$50; student, \$25.

After October 15, 2009, member

\$45, non-member \$55, student, \$30

**Directions:** Can be found at the Rutgers University website:

<http://maps.rutgers.edu/building.aspx?id=92>

**Registration:** Please register on-line <http://www.njacs.org/ptg.html> or send your full contact information along with a check made payable to NJACS-Polymer Group to Dr. Willis B. Hammond, Treasurer, NJACS-PTG, 128 Center Ave., Chatham, NJ 07928.

**Poster Submission:** Contact Bin Wei  
([bwei01@gmail.com](mailto:bwei01@gmail.com))

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## **ACS LEADERSHIP DEVELOPMENT COURSE**

### **Leading without Authority**

*Facilitator:* Les McQuire

Sponsored by the North Jersey Section

As an experienced leader in a volunteer organization like ACS, you know that one of the biggest challenges in leading a project, committee, and local section is that you have no direct authority over the other volunteer members. As a volunteer leader you may have experienced:

The challenge of having to influence people who have different styles or views.

Needing to get a task force organized and committed to a project but find they aren't cooperating and they're putting up barriers.

Kicking off a new project, knowing what needs to be done but unable to get the buy in and support to carry it out.

The challenge of getting new volunteers to participate in the local section or division activities because they are too busy with other professional and personal obligations.

Leaders in many roles in the Society find themselves without formal or "positional" authority and therefore need to be able to engage members to get things done. This 4-hour workshop provides practical tools to help you gain cooperation without formal authority and motivate your committee, local section, or division members to accomplish important Society goals.

These skills learned in this course can also be applied to the workplace. We encourage those who are leading projects such as change initiatives, projects requiring working with other groups, or strategies that extend throughout any organization to attend this program.

**Date:** Saturday, November 7, 2009

**Time:** 8:00 AM -12:00 noon

**Place:** Rutgers University

Wright-Rieman Chemistry Building  
610 Taylor Rd.

Piscataway, NJ 08854

**Cost:** Free to ACS Members

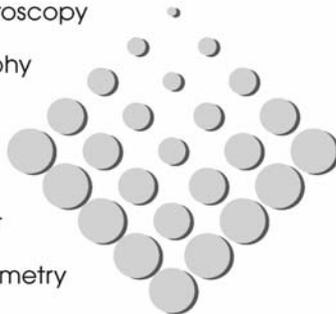
Enrollment is limited. For more information, please visit <http://www.njacs.org> or contact [jacqueline.a.erickson@gsk.com](mailto:jacqueline.a.erickson@gsk.com)



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**2009 LEO HENDRIK BAEKELAND AWARD SYMPOSIUM  
AND PRESENTATION TO PROFESSOR COLIN NUCKOLLS  
OF COLUMBIA UNIVERSITY**

**“At the Intersection of Organic Chemistry,  
Material Science, and Nanotechnology”**

**Date: Friday, November 13, 2009**

**Place: Rutgers University  
Piscataway, New Jersey**



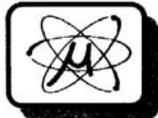
**Program**

- 11:30 – 12:00 Registration
- 12:00 – 1:00 *Hugh Karraker*, Great Grandson of Leo Baekeland  
“On Baekeland and the 100th Anniversary of Modern Plastics”
- 1:00 – 1:50 *Professor Klaus Mullen*, Professor of Chemistry  
Max Planck Institute for Polymer Research, Mainz, Germany  
“Self Assembly and Molecular Electronics”
- 2:00 – 2:50 *Professor Julius Rebek*, Professor of Chemistry  
The Scripps Research Institute, La Jolla, CA  
“The Inner Space of Molecules”
- 3:00 – 3:35 Break / Poster Presentations
- 3:45 – 4:35 *Professor Ronald Breslow*, S.L. Mitchill Professor of Chemistry  
and University Professor, Columbia University, New York, NY  
“The Origins of Homochirality on Earth”
- 4:45 – 5:00 Presentation of the Baekeland Medal
- 5:10 – 6:00 *Professor Colin Nuckolls*, Professor of Chemistry  
Columbia University, New York, NY  
“Reaction Chemistry Meets Lithography”
- 6:00 – 7:00 Reception / Social / Poster Presentation

Pre-registration is recommended. **Deadline is Friday, October 30, 2009.** Please register online at [www.njacs.org](http://www.njacs.org). The site also has information on directions, maps and parking, registration fee, etc.

Poster presentations will be accepted on a first come first serve basis due to space limitation. This is a good opportunity to showcase your work and network with other scientist. Please email title of the poster, author's names and a brief abstract **by Friday, October 30, 2009** to: Dr. Ambarish Singh ([ambarish.singh@bms.com](mailto:ambarish.singh@bms.com)).

Additional questions contact Dr. Michael M. Miller ([michael.miller@bms.com](mailto:michael.miller@bms.com)), Chair of the Baekeland Award Committee.



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## National Chemistry Week

### NY ACS CELEBRATES AT NY HALL OF SCIENCE

The 2009 theme for National Chemistry Week is "Chemistry - It's Elemental". Again, the New York Section will present NCW at the New York Hall of Science, Flushing, on **Saturday, October 24** from 10 AM to 4 PM. The community activity will include collecting nonperishable food (in recyclable tin and aluminum cans) which will be delivered to a local food bank.

ACS is sponsoring a poster contest. The competition is looking for the best illustrated poster using the theme with a fun, motivational, and inspiring representation of an element or elements in the periodic table. There are four categories: kindergarten through second grade; third through fifth grade; sixth through eighth grade and ninth through twelfth grade.

Two posters may be submitted per grade level and received **by October 17**.

Size of the poster from 8-1/2 x 11 to 14 x 22.

Send to:

Joan Laredo-Liddell, 391 Palmer Road, Yonkers, NY 10701-5239. - (914-476-6860)



**VOLUNTEERS  
are seldom paid; not because  
they are worthless, but because  
they are PRICELESS!**

*(Sherry Anderson)*

This quote is a reminder of how valuable you are to our organization. Our national and sectional ACS officers are volunteers like you, who give freely of their time to make chemistry understood, vital, and appreciated. This is most obvious at national meetings where many leaders are needed to provide diverse programs giving expression to the different areas of life impacted by chemistry. October is the month when we celebrate National Chemistry Week. Perhaps you can do a program at a library or nearby classroom. Offer to share stories about your journey as a chemist to inspire young students and make chemistry exciting for them. Both the North Jersey and New York Sections have special programs at science centers so be sure to contact the leaders mentioned in

separate articles in this issue to be ambassadors of chemistry. If you celebrate at your workplace, send pictures and articles to the NCW coordinators so that can be included in reports to show the wide scope of participation.

*Bobbi Gorman*  
NJACS



### NoJ ACS CELEBRATES AT LIBERTY SCIENCE CENTER

Last year The North Jersey Section celebrated National Chemistry Week at the Liberty Science Center. We had a great time and the attendees really appreciated all of our efforts. Why don't you join us this year? On **Saturday, October 24**, the North Jersey Section will be holding its annual Expo in celebration of National Chemistry Week. As usual we will have many tables offering all kinds of hands-on activities for budding scientists. You can set up your own table or help out at another table. We need you to help us make a difference!

The theme for this year is "**Chemistry – It's Elemental**" which gives you great latitude. Check out the National Chemistry Week web page at <http://portal.acs.org/> to get some ideas for hands-on activities that you might want to present.

Your activities should be geared for 8 to 12 year olds. As usual our first priority is safety. Preferably presenters should use household materials to demonstrate a scientific principle. We would like the students to be able to redo these experiments at home and at school so it would be very helpful if you had handout instructions to distribute.

To minimize duplication of the presentations, we will need to know by October 3 the activity you would like to conduct at your table. Individuals contacting us first with their idea(s) will be given priority so please let us hear from you as soon as possible. Contact Bobbi Gorman at [rosellerams@yahoo.com](mailto:rosellerams@yahoo.com) to let her know what activities you will be doing at your table or if you want to volunteer at the Expo.

We also value and look forward to receiving financial support to help cover many of the expenses associated with the Section's NCW activities. If you would contact the

appropriate individuals at your company, the Section would be most grateful. The donation levels are \$500.00 for a Gold Sponsorship, \$250.00 gift for a Silver Sponsorship and a \$100.00 for a Bronze Sponsorship. Checks should be made out to the North Jersey ACS Section and sent to Valerie Kuck, 45 Warfield St., Montclair, NJ 07043.

Please fill out the following forms and return them to Bobbi Gorman at [rosellerams@yahoo.com](mailto:rosellerams@yahoo.com).

**Form 1.**

Count me in.

My name is: \_\_\_\_\_

I am volunteering to work on: **Saturday, Oct. 24, 10:00am – 11:30 am, 11:30 am – 2:00 pm, or 10:00 am – 2:00 pm (Underline times).**

I can be reached at: (work phone number) \_\_\_\_\_

My complete address is: \_\_\_\_\_

I am an employee at: \_\_\_\_\_

The activities at my table will be: \_\_\_\_\_

In addition to a table, I also need: \_\_\_\_\_

I will be bringing handouts on activities that the students can do at home. Yes No

I will need more than one table. Yes No  
How many additional tables will you need?  
\_\_\_\_\_

**Form 2.**

My company would like to support these efforts.

The following company/individuals are willing to help defray the costs of these events:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

An acknowledgement letter for this contribution should be sent to (name and full address):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Form 3.**

I will be joined at my table by the following volunteers.

Complete Name: \_\_\_\_\_ Institution: \_\_\_\_\_ Address (snail mail): \_\_\_\_\_

Activity \_\_\_\_\_ Time Volunteering \_\_\_\_\_  
\*\*\*\*\*

Complete Name: \_\_\_\_\_ Institution: \_\_\_\_\_ Address (snail mail): \_\_\_\_\_

Activity \_\_\_\_\_ Time Volunteering \_\_\_\_\_  
\*\*\*\*\*

Complete Name: \_\_\_\_\_ Institution: \_\_\_\_\_ Address (snail mail): \_\_\_\_\_

Activity \_\_\_\_\_ Time Volunteering \_\_\_\_\_  
\*\*\*\*\*

Acknowledge letters should be sent to: \_\_\_\_\_

Thanks very much for all of your help. The Section is most appreciative of your efforts. Bobbi Gorman and Valerie Kuck

## ACS NEWS

### REPORT OF COUNCIL MEETING IN WASHINGTON, DC

#### SUMMARY OF GOVERNANCE ACTIONS/REPORTS

##### AMERICAN CHEMICAL SOCIETY

238th ACS NATIONAL MEETING

WASHINGTON, DC

AUGUST 16-20, 2009

#### ACTIONS OF THE COUNCIL

##### Election Results

- The Committee on Nominations and Elections presented to the Council the following slate of candidates for membership on the Committee on Committees beginning in 2010: G. Bryan Balazs, Dawn A. Brooks, Victoria L. Finkenstadt, Wayne E. Jones, Jr., John M. Long, Les W. McQuire, Ingrid Montes, Douglas J. Raber, Frankie K. Wood-Black, and Steven W. Yates. By electronic ballot, the Council elected G. Bryan Balazs, Dawn A. Brooks, Les W. McQuire, Ingrid Montes, and Frankie K. Wood-Black for the 2010-2012 term.
- The Committee on Nominations and Elections presented to the Council the following slate of candidates for membership on the Council Policy Committee beginning in 2010: R. Gerald Bass, Alan B. Cooper, M. Elizabeth Derrick, Thomas R. Gilbert, Lydia E. M. Hines, Willem R. Leenstra, Sally B. Peters, and Carolyn Ribes. By electronic ballot, the Council elected M. Elizabeth Derrick, Thomas R. Gilbert, Willem R. Leenstra, and Carolyn Ribes for the 2010-2012 term.
- The Council Policy Committee presented to the Council the following slate of candidates for membership on the Committee on Nominations and Elections: Roger F. Bartholomew, Dwight W. Chasar, Milagros Delgado, Kevin J. Edgar, John W. Finley, Martin L. Gorbaty, Sharon P. Shoemaker, Walter O. Siegl, Herbert B. Silber, and Ellen B. Stechel. By electronic ballot, the Council elected Dwight W. Chasar, Milagros Delgado, Kevin J. Edgar, Sharon P. Shoemaker, and Ellen B. Stechel for the 2010-2012 term.

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

- The candidates for the fall 2009 ACS national election were announced as follows:

##### President-Elect 2010

Nancy B. Jackson, International Chemical Threat Reduction Department Manager, Sandia National Laboratories, Albuquerque, NM

Cheryl A. Martin, Currently on sabbatical; former Corporate Vice President and General Manager, Rohm and Haas Company, Philadelphia, PA

Mary Virginia Orna, Professor of Chemistry, College of New Rochelle, New Rochelle, NY

##### Directors-at-Large - 2010-2012

Dennis Chamot, Associate Executive Director, Division of Engineering and Physical Sciences, National Research Council, Washington, DC

H. N. Cheng, Research Chemist, US Department of Agriculture, New Orleans, LA

Ray A. Dickie, Retired, Ford Motor Company, Efland, NC

Valerie J. Kuck, Retired, Lucent Technologies, Montclair, NJ

Howard M. Peters, Retired, Peters, Verry, LLP, Palo Alto, CA

##### Director, District I - 2010-2012

D. Richard Cobb, Senior Research Associate, Eastman Kodak Company, Rochester, NY

Neil D. Jespersen, Professor of Chemistry, St. Johns University, Jamaica, NY

##### Director, District V - 2010-2012

Judith L. Benham, Retired, 3M Company, St. Paul, MN

Peter K. Dorhout, Vice Provost, Colorado State University, Fort Collins, CO

#### Petitions

(For Action)

- The Council received two amendments to the ACS Constitution and Bylaws for

action: The Petition on Candidate Selection by Member Petition – (to be considered for Urgent Action) and the Petition on Election Timelines and Procedures 2009.

- o The Petition on Candidate Selection by Member Petition proposes to permit candidates to be selected by a petition process from members. To be considered for urgent action, the petition required a \_ affirmative vote. After considerable discussion, a vote to consider the petition at the 2009 fall meeting FAILED. Absent urgent action, the Petition on Candidate Selection by Member Petition will now be up for action at the 2010 spring meeting of the Council.
- o Next, the Council discussed in great detail the Petition on Election Timelines and Procedures 2009. This petition proposes to shorten certain election timelines and change petition candidates (who go straight on the ballot if they obtain enough signatures) to petition nominees (who need to be screened by Council along with other nominees chosen by the Committee on Nominations and Elections). After rejecting a request to have a recorded vote, the Council VOTED to recommit the petition to the Committee on Nominations and Elections with instructions. Following this action, N&E sought input through a nonbinding survey to help guide their revisions. A revised petition will likely be up for action at the 2010 spring Council meeting.

(For Consideration)

- The Council received one petition for consideration: the Petition on Admissions Committee. This petition removes the Admissions Committee from the Bylaws and transfers its functions to the Council Committee on Membership Affairs. Action is expected on the petition at the 2010 spring meeting.

#### **Committee Review**

- As part of a regular performance review, the Council VOTED to continue the Committees on Chemical Safety, Minority Affairs, Chemical Abstracts Service, Technician Affairs, and Analytical Reagents. Continuing the first three committees requires Board of Directors concurrence.

#### **Registration Report and 2010 National Meeting Registration Fee**

- As of August 19, 2009, the ACS fall national meeting had attracted 14,319 registrants. This was the largest Washington meeting in history. Totals in select categories are as follows: Regular attendees 8,575; Students 3,159; Guests 462; Exhibit Only 676; and Exhibitors 1,447. In keeping with the objective of the National Meeting Long Range Financial Plan, previously approved by the Board of Directors and Council, the Meetings and Expositions Committee recommended to the Board an increase of \$10 for the 2010 national meeting registration fee. The Board will act on this recommendation shortly.

#### **Membership Activity**

- The provisions of the Petition on Membership Categories and Requirements were fully implemented this past June with the transfer of former Student Affiliates to Student Member status, and Associate Members to regular Member status. As of July 31, the Society had 9,732 Student Members – 6,500 of them former Student Affiliates and more than 3,000 of them new Student Members.

#### **Dissolution of the Division of Chemical Technicians**

- At the 2009 spring Council meeting, the Divisional Activities Committee (DAC) reported that it had voted to accept a recommendation from the Division of Chemical Technicians (TECH) that the division disband and to recommend this action to Council in the fall. On recommendation of DAC, as recommended by TECH, the Council VOTED to disband the Division of Chemical Technicians effective December 31, 2009. DAC agreed that TECH has accomplished its mission of enhancing the status of technicians in the American Chemical Society, and now they are integrated into the other technical divisions.

#### **Changes to Charter Bylaws for New Local Sections and International Chemical Sciences Chapters and Bylaws for Divisions in Probationary Status**

- The Council VOTED to accept changes to charter bylaws for new local sections and

*(continued on page 22)*

## REPORT OF COUNCIL MEETING IN WASHINGTON, DC

(continued from page 21)

international chemical sciences chapters, and bylaws for divisions in probationary status. These changes, which were developed in cooperation with the Committees on Divisional Activities, Local Section Activities, and International Activities, are a result of changes to the Constitution and Bylaws made as a result of the Petition on Membership Categories and Requirements, which became effective on June 30.



### SUMMARY OF ACS BOARD ACTIONS – 2009 FALL MEETING

By Valerie Kuck

NoJ ACS and ACS Board

The ACS Board of Directors met in Washington, D.C. prior to the national meeting and took several actions. It approved of the nominees from the Committee on Grants and Awards for the 2010 Perkin Medal and the Alan T. Waterman Award.

The Perkin Medal is awarded by the American section of the Society of Chemical Industry to a scientist residing in the US and recognizes innovation in applied chemistry resulting in outstanding commercial development. The Alan T. Waterman Award is presented by the National Science Foundation and recognizes an outstanding young researcher, under the age of 35 years, in any field of science or engineering.

The Committee on Public Affairs and Public Relations announced the designation of "Dip-and-Read Tests for Blood and Urine Glucose", the efforts of Al and Helen Free, as a National Historic Chemical Landmark.

On the recommendation of the Committee on Budget and Finance, the Board agreed to fund a new program from the Board–Presidential Task Force on Education, Science Coaches, and to reauthorize an existing program, ACS Green Chemistry Institute®, in the 2010 budget.

The Board approved an action recommended by the Committee on Professional & Member Relations to accept, with minor revision, the key terms contained in a draft Memorandum of Understanding between ACS and the Royal Society of Chemistry. The initial effort will be to develop and distribute a "primer," both in hard-copy and electronic format, for the general public on the chemistry underlying issues related to sustainability. Subsequently there will be a series of joint seminars in the UK, US and elsewhere focusing on sustainability. In addition, collaborative activities will be held that train scientists to address issues relating to sustainability and other global challenges in non-technical, readily understandable language.

In view of the ongoing global recession and its impact of the Society's finances, the Board received an update on the Society's current financial position and the projected financial performance for 2009. The Society is projected to end the year with a net contribution from operations of \$11.2 million, or \$528,000 favorable to the 2009 approved budget. The favorable projection is largely the result of Contingency Plan actions and expense management initiatives implemented in early 2009.

Finally, the Board received a briefing on a new program to equip ACS members to be more effective spokespersons for chemistry. It is called the Chemistry Ambassadors program, and information may be found at [www.acs.org/chemistryambassadors](http://www.acs.org/chemistryambassadors).

  
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## 2009 ACS FELLOWS

The following is a link to the C&EN article on the 2009 ACS Fellows that is on the ACS web site (and was in the July 27 C&EN hardcopy edition): <http://www.cen-online.org/acsnews/87/8730acs.html> We hope you agree that it is a remarkable group of colleagues who span the breadth of our membership.

### North Jersey Section

Jeannette E. Brown  
Chemical Heritage Foundation (Retired)

Maureen G. Chan  
Bell Labs Lucent Technologies

Edwin A. Chandross  
Bell Labs Lucent Technologies

Elsa Reichmanis  
Georgia Institute of Technology

Marian José Smith  
College of Saint Elizabeth

Susan R. Fahrenholtz  
Fordham University

Malcolm L. Sturchio (recently deceased)  
Fairleigh Dickinson University

William J. Greenlee  
Schering-Plough Research Institute

George Heinze  
Rockland Technimed

### New York Section

Spiro Alexandratos  
Hunter College

Ronald Breslow  
Columbia University

John M. Alexander  
Stony Brook University

Kathlyn A. Parker  
Stony Brook University

Gerard Parkin  
Columbia University

Eli M. Pearce  
Polytechnic Institute of New York

Gilbert J. Stork  
Columbia University

Nicholas J. Turro  
Columbia University

**Learn more about the  
American Chemical Society at  
[www.chemistry.org](http://www.chemistry.org)**

## CANDIDATE FOR PRESIDENT-ELECT AND BOARD OF DIRECTORS

The candidates for the Fall 2009 ACS national election have been announced and are listed in the "Summary of Governance Action" on page 19. Learn more about the candidates at [www.acs.org/elections](http://www.acs.org/elections).



## MY LIFE AS AN AMERICAN CHEMICAL SOCIETY COUNCILOR

*By Jeannette Brown*

I have had the pleasure, thanks to you, to be reelected as an ACS Councilor many times. You may wonder what I do. Well, currently I am on the Women Chemist Committee as the historian, and on the Committee on Minority Affairs as a member of this committee. I also serve as the CMA delegate to the Joint Task Force on Diversity in which all the diversity committees have delegates and the Chairs of those committees are also members. With all those committees, I am very busy at the ACS National meeting starting the Friday before the meeting with the task force meeting and then WCC on Saturday and CMA on Sunday. Each of these committees is an active working committee so you leave the meetings with assignments, which you must do either during the meeting or directly after the meeting.

Since I write a Blog on [www.njacs.org](http://www.njacs.org) I have a Press Pass for the National Meetings. So during the meeting when I am not in committees I try to attend events, take photos and write a daily blog about my day's events. I started this at the Salt Lake meeting so I hope you read it. I will continue this at all the National Meetings from now on.

Between national meetings, I serve on the NJACS Executive Committee which meets once a month. At this meeting we set policy for the section and do the business that comes before the group.

During my terms as Councilor, I have served on two of the elected committees — Council Policy Committee and Nominations and Elections. I chose to play the role of insisting on diversity in selections for nominations for ACS elective office. This is still going on even though I no longer serve on these committees. I was also the third Chair of the

*(continued on page 24)*

## MY LIFE AS AN AMERICAN CHEMICAL SOCIETY COUNCILOR

(continued from page 23)

Project SEED Committee and I helped organize it and kept the program going when the ACS threatened to terminate the program because of the expense.

So you see, you get your money's worth when you elect councilors. It should not be just attending the Council meeting and voting. All of the North Jersey Councilors are actively involved in the Governance of the society and serve on one or more committees.



## WHY NOT BECOME A CHEMISTRY AMBASSADOR?

Are you concerned about the public's appreciation for chemistry? Why not join other chemists and chemical engineers in making a difference? The Chemistry Ambassador program is designed to equip and train ACS members to be effective spokespersons for chemistry and the benefits it delivers to society. The Chemistry Ambassador program and the web-based toolbox will be launched to coincide with the ACS Fall National Meeting in Washington, DC.

Chemistry Ambassadors is custom made to fit your schedule and your interests, no matter how little time, or how much you can afford to spend. Some of the program's activities include: providing ACS scholarship information to a high school guidance counselor, informing local K-12 students about Bytesize science podcasts for younger students by contacting local schools or scout groups, or joining [act4chemistry.org](http://act4chemistry.org) and informing your government representatives about the importance of supporting science education.

To learn more about the program go to [www.acs.org/chemistryambassadors](http://www.acs.org/chemistryambassadors).

Learn how you could get involved in ACS by e-mailing [Volunteer@TheIndicator.org](mailto:Volunteer@TheIndicator.org)

## GROW YOUR OUTREACH — HOW ABOUT HELPING OUT AN ACS HIGH SCHOOL CHEMISTRY CLUB?

Chemists and chemical engineers workers can have a tremendous impact by establishing a partnership with an ACS High School Chemistry Club and supporting teachers who sponsor the clubs. The ACS High School Chemistry Clubs program provides opportunities for students to cultivate their interest in chemistry beyond the classroom. There are over 180 clubs across the U.S. and Puerto Rico. The ACS Education Division provides organizational support for these clubs such as start-up handbooks and ideas for activities throughout the year. To find the ACS High School Chemistry Clubs in your area check out the ChemClub Directory at [www.acs.org/chemclub](http://www.acs.org/chemclub).

Suggested activities you might consider is giving a talk about the diversity of careers in chemistry or plan a community outreach event involving chemistry. If you have a great idea for an activity with a high school chemistry club and need some financial support, the North Jersey Section can help you apply for an Innovative Project Grant. Contact Valerie Kuck at [vjkuck@yahoo.com](mailto:vjkuck@yahoo.com) to discuss your proposed activities. To find out more about the out about the ACS High School Chemistry Club program go to [hschemclubs@acs.org](http://hschemclubs@acs.org).

Be sure to let Valerie Kuck know about all your activities with a High School Chemistry Club.



## HELP FOR REACHING OUT TO HIGH SCHOOL STUDENTS

Are you considering visiting a local high school in celebration of National Chemistry Week (NCW)? The ACS can help you with some ideas on topics you might want to present. The Education Division publishes quarterly *ChemMatters*, an award-winning magazine geared for high school students, which demystifies chemistry and shows its importance in everyday life. Each issue has intriguing stories that inform students about creative applications of chemistry or real-life mysteries solved by chemistry. In addition, each issue includes a free, web-based Teacher's Guide containing background information, follow-up hands-on activities, classroom demonstrations, and other

resources to facilitate student comprehension.

Twenty-five years of *ChemMatters* are also available on CD. This collection is great for class projects, library research, and science fair information. For more information about these great resources, go to [www.acs.org/ChemMatters](http://www.acs.org/ChemMatters). To receive a limited number of free copies of *ChemMatters* contact Marta Gmurczyk at [m\\_gmurczyk@acs.org](mailto:m_gmurczyk@acs.org) or 202-452-2105.

Be sure to let Valerie Kuck at [vjkuck@yahoo.com](mailto:vjkuck@yahoo.com) know if you visited a high school during NCW or anytime during the year and briefly describe your visit.



## KIDS AND CHEMISTRY

### Are You Considering Doing A Classroom Demonstration?

Are you aware that there is information at <http://acs.org> that has lots of tips on helping you become a star in an elementary or middle school classroom? There are tips on safety guidelines, how to plan your visit, choosing a hands-on activity, examples of great experiments, preparing a checklist so you have everything you will need, and other information to make your visit to a local school a success. Just go to **Kids and Chemistry** at the ACS website to get this valuable information.

With your chemical knowledge, love of science, and enthusiasm you can make a big difference in the way the students view chemistry. Show them that chemistry plays a very important role in everyday life. Join the team that is trying to make a difference in public's perception of chemistry.

Don't forget to share your success story with [vjkuck@yahoo.com](mailto:vjkuck@yahoo.com) so that others may learn from your experience.

## Tools That Work

### ON-LINE TOOLS THAT WORK FOR CHEMISTS

In addition to the ACS Network ([www.acs.org/acsnetwork](http://www.acs.org/acsnetwork)) discussed last month there are many other social networks that chemists and other can use to enhance their careers and share the wonder of chemistry.

LinkedIn ([www.LinkedIn.com](http://www.LinkedIn.com)) is a rapidly growing "professional" networking site, no pictures of drunken college parties here. Users can join interest groups to help expand their network and you can see the friends and contacts of your own contacts which also helps you track down useful leads. There are job searches and increasingly recruiters are both using LinkedIn to post jobs and to check up on applicants. LinkedIn users can post an extensive profile listing their training, experience etc. and they can even be recommended by co-workers etc.

Facebook ([www.Facebook.com](http://www.Facebook.com)) is now widely used by people outside schools and colleges and while this is a little less professional than LinkedIn it has all of the same features and might be a better place to recruit volunteers for your next event. It is a great way to stay in touch with people you know but do not see regularly.

The key to all networks and relationships, virtual and "real life", is that you must share and be willing to help as well as be helped. The idea is to build up your network by sharing ideas and tips with others.

An unrelated but useful tool for you to explore is xobni ("inbox" reversed). It is a free plug in for Microsoft Outlook that makes searches super fast and also generates interesting statistics about how you use and reply to e-mail. Learn more at: [www.xobni.com](http://www.xobni.com).

If you have comments or suggestions of tools to highlight in this column e-mail [Tools@TheIndicator.org](mailto:Tools@TheIndicator.org).

**Give us feedback on  
The Indicator by completing the survey at  
[www.TheIndicator.org/survey.html](http://www.TheIndicator.org/survey.html)**

## Chemistry Olympiad

### US NATIONAL/INTERNATIONAL CHEMISTRY OLYMPIAD

This year marks the 25th Anniversary of the participation by the national ACS, as well as by the North Jersey Section, in the Chemistry Olympiad program. A total of 18 sections were invited to Washington, DC last week to help celebrate this auspicious event. All invited sections, including North Jersey and New York, were given certificate for this honor.

The North Jersey Section, was especially proud since we placed two students in the top 20 in the United States for each of the last 7 years, and one member of the International team in each of the last 6 years.

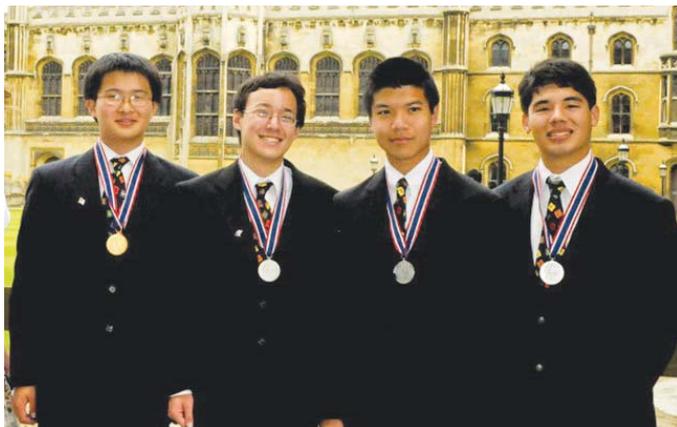
This year, our entry in the International Chemistry Olympiad at Cambridge, England, Yixiao Wang of Westfield High School, earned a gold medal, while the other three earned silver medals (see photos). This represents the best performance the US has made since 2002.

It should be noted that while the ACS strives to achieve the best possible performance of the team and revels in their performance at the International level, it is not the main goal of the Olympiad program. Instead, its overall goal is to promote chemistry among young students, award teachers for disseminating good chemical information and improve the image of chemistry in the US.



**Yixiao Wang receiving gold medal from Nobel Laureate Sir Harry Kroto, discoverer of fullerenes.**

**Yixiao Wang (North Jersey Section), Brian Seifried (Georgia Section), Nathan Benjamin (Purdue Section), Colin Lu (Binghamton Section).**



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## Call for Nominations

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### ACS NEW YORK SECTION'S OUTSTANDING SERVICE AWARD FOR 2009

Each year since 1958 the New York Section presents an 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 2009 will be presented at the New York Section's Section-wide Conference in January 2010.

Nominations with supporting data should be mailed to the OSA Committee Chair, Dr. Robert H. Beer, Department of Chemistry, Fordham University, 441 East Fordham Road, Bronx, NY 10458, or emailed to [beer@fordham.edu](mailto:beer@fordham.edu).

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



### EDWARD J. MERRILL AWARD FOR OUTSTANDING HIGH SCHOOL CHEMISTRY TEACHER FOR 2010

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 2010.

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).

### NOMINATIONS ARE OPEN FOR 2011 ACS NATIONAL AWARDS

Nominations for the national awards administered by ACS that will be presented in 2011 are now being taken. The deadline date for submitting nomination packages for 2011 is **November 1, 2009**. Earlier transmittal of nomination documents is strongly encouraged.

The ACS Board Committee on Grants and Awards, which oversees the awards program, urges the nomination of individuals from groups not commonly named as recipients of ACS awards such as women, minorities, chemists from industry and the National Laboratories and faculty members at universities not well-represented in the awards program. If you are aware of individual who has done outstanding work, please consider preparing a nomination package for the person. Nomination forms as well as detailed descriptions of all of the ACS national awards are available online at [www.acs.org/awards](http://www.acs.org/awards). The awards cover all branches of chemistry.

It should be noted that any individual may nominate a person for an award, unless that individual is a member of the Selection Committee for that award. However, Selection Committee members may submit nominations for other awards.

If you have any questions concerning the awards, it is recommended that you email the Office of the Awards Programs at [awards@acs.org](mailto:awards@acs.org). For help in nominating ACS members from the NY/NJ area, you can contact Les McQuire ([Les@LesMcQuire.org](mailto:Les@LesMcQuire.org)) or Val Kuck ([VKuck@Comcast.net](mailto:VKuck@Comcast.net)).

Don't let someone's outstanding efforts go unnoticed by the chemistry community. Help the Society recognize those individuals who have made a difference!



### 2010 SISTER MARIAN JOSE SMITH EXCELLENCE IN EDUCATION AWARD

This American Chemical Society award consists of \$1,000 prize and a recognition plaque. It recognizes a Chemistry professor from a degree-granting Institution in the North Jersey area for inspiring students and launching them on successful careers in chemistry as manifested by their accomplishments.

(continued on page 28)

## CALL FOR NOMINATIONS

(continued from page 27)

Please submit nominations and supporting letters to Jiwen Chen, Awards Committee Chair, c/o NJ ACS, 4 Cameron Road, Piscataway, NJ 08854. Tel: 609-818-6319, email: [jchen@njacs.org](mailto:jchen@njacs.org). Nominations will be received by **February 19, 2010**. Visit <http://www.njacs.org/awards.html> for more information and a list of past recipients.

## Others

### ASSOCIATION OF CONSULTING CHEMISTS & CHEMICAL ENGINEERS

#### 1928–2009 81st Anniversary Membership Meeting

*Speaker:* Dr. Richard M. Goodman

Incoming ACC&CE President Richard M. Goodman offers a special invitation to non-members of ACC&CE to come to Ben's Deli and attend the 81st Anniversary annual meeting of the Association of Consulting Chemists & Chemical Engineers, Inc. (ACC&CE). First, Ben's Deli is a very special place and the cost for the dinner is a real bargain. Second, with the downturn, many chemical businesses are cutting back on their full-time employees. It would serve many career chemists and chemical engineers well to attend our meeting to find out how to become a consultant. President Goodman will describe the nature of the consulting business with the aid of our many successful members. You just aren't an educated career professional until you've learned what it takes to become a consultant.

If you apply for membership at the ACC&CE meeting, we will comp your dinner. We look forward to seeing all of our members and guests at our 81st Anniversary annual membership meeting.

**Date:** Tuesday, October 27, 2009

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

**Place:** Ben's Deli  
209 West 38th Street  
New York, NY

**Registration:** \$35 ACC&CE members  
\$45 non-members

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

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

### EARTH AND ENVIRONMENTAL SCIENCE LECTURE SERIES AT MONTCLAIR STATE UNIVERSITY

The public is welcome to attend this series of lectures sponsored by the Earth and Environmental Science Department.

#### October 6

*Dr. Mike Weinstein*, Montclair State University Institute of Sustainability Studies

The salt marsh paradigm revisited: what have we learned in 25 years of trying to link primary and secondary production?

#### October 13

*Dr. Ron MacGillivray*, Delaware Basin River Commission

"Contaminants of Emerging Concern in the Tidal Delaware River"

#### October 20

*Dr. Feng Qi*, Kean University  
"Environmental Sata Mining and Visualization"

#### October 27

*Dr. Jeffrey Strickland*, Montclair State University, College of Humanities and Social Sciences

"The Unsanitary City: Mapping Morbidity in Charleston, South Carolina."

**Date:** Tuesdays

**Time:** 4:00 PM

**Place:** Mallory Hall Room 265.

For information about these lectures contact Kevin Olsen, 973-655-4076 or

[OlsenK@Mail.Montclair.Edu](mailto:OlsenK@Mail.Montclair.Edu)



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

#### Graduate Seminar Series – Fall 2009

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#### October 12

"Transport Phenomena in Polymer Electrolyte Membrane Fuel Cells"  
*Professor Yossef Elabd*  
Drexel Univesity, Philadelphia, PA

**October 26**

"Selective Potentiometric Detection of Macromolecular Ions"

*Professor Kalle Levon*

Polytechnic Institute of NYU, New York, NY

**Dates: Mondays**

Times: Refreshments 2:30 PM

Seminars 2:45 PM

Place: Room 373, Tiernan Hall

Seminar Coordinator: Professor Marino

Xanthos, 973-642-4762,

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



**MERCK DONATES THE MERCK INDEX TO HIGH SCHOOL CHEMISTRY TEACHERS**

Merck & Co., Inc., a national partner for the 2009 National Chemistry Week (NCW) celebration, has donated 10,000 copies of the 14th edition of the Merck Index to ACS for teachers across the US. North Jersey ACS members can request a copy for their students High School Teacher by visiting [www.njacs.org](http://www.njacs.org) and completing the online request form.

To complete the online request, please have the following information available: ACS member's name, member's email, name of teacher, school, school address, ACS meeting/event at which you will pick up your copy. The copy will come with a letter signed by our chair, Joe Potenza, which you can also sign before giving the book to the teacher. It will also have directions to an njacs.org site where the teacher can acknowledge receipt and obtain access to many ACS resources to help in their teaching role.

Copies will also be provided for teachers who volunteer to judge for the SEED poster session at Seton Hall University on **September 21, 2009**, or help with NCW at the Liberty Science Center on **October 24th**. A limited number of copies will be distributed at the New Jersey Science Convention **October 13-14, 2009**.

Thank-you Merck for this and all the support you have given to chemists, the profession and chemical education.

*Submitted by Bill Suits*

**25th ANNUAL ASTRA ZENECA EXCELLENCE IN CHEMISTRY AWARD SYMPOSIUM**

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- Professor Martin Burke  
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Urbana-Champaign

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- Professor Eric Jacobsen  
Harvard University  
(1993 AZ EIC Awardee)

**Date: Wednesday, October 14, 2009**

**Place:** AstraZeneca

Wilmington Campus

Brandywine Auditorium

Wilmington, DE

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## Partners In Science

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*This new monthly column will highlight other societies and groups providing programming which may interest ACS members. If you have comments or suggestions of groups to highlight e-mail [Partners@TheIndicator.org](mailto:Partners@TheIndicator.org).*

### **AMERICAN INSTITUTE OF CHEMICAL ENGINEERS**

#### **Engineering Societies Join Forces to Manage Carbon Emissions**

*Multi-discipline effort, funded by United Engineering Foundation, has developed scorecards to assess merits of various technologies, gaps in technology, and barriers to managing carbon emissions*

NEW YORK, NY – For the past year, leaders of five societies representing more than one million engineers and other technical professionals have been meeting to identify steps the country might take toward managing carbon emissions, a key issue in climate change discussions, should that become public policy. The group has developed a web site for collaboration (<http://www.aiche.org/FSCarbonMgmt/>) and scorecards for benchmarking carbon management alternatives. The scorecards are part of an effort to assess the merits of different carbon management technologies, to identify barriers to technology deployment, and to address gaps and barriers to measuring and verifying carbon emissions.

The societies participating are: the American Institute of Chemical Engineers (AIChE), the American Institute of Mining, Metallurgical, and Petroleum Engineers; the American Society of Civil Engineers; the American Society of Mechanical Engineers; and the Institute of Electrical and Electronics Engineers.

The scorecards developed so far focus on electric power and transportation systems, with expansion to other sectors planned. Dale L. Keairns, past president of AIChE, who serves as chair of the group, said that these two areas were selected for the first scorecards because “together they emit more than four billion metric tons of carbon dioxide a year—about 70 percent of total emissions in the U.S.”

The scorecards employ an A, B, C, D and F grading system similar to one used in many schools. The electric power scorecard charts a variety of power sources, including coal

(with and without carbon capture and sequestration), natural gas, petroleum, nuclear, renewables (solar, wind, biomass, and tidal energy) by emission per kilowatt hour, emission per generated kilowatt, and total greenhouse gas emissions per unit, among other attributes. The transportation scorecard rates vehicular, air, and rail transportation systems, using traditional and new fuel sources and technologies, by carbon emissions, miles traveled, availability, safety, impact on land and water use, and air quality issues.

Keairns said the overall goal of the engineers’ effort, underwritten by the United Engineering Foundation, is to assure that “engineers, educators, the general public, and policy makers have the best-available information, and sound engineering advice and recommendations” for managing greenhouse gasses.

“Stabilizing and reducing greenhouse gas emissions requires involvement from a broad range of industries, technologies and disciplines,” Keairns commented. “The participating societies bring together the expertise of engineers along the entire supply chain of energy, from extraction to use, including the development and use of next generation technologies,” he said. He also pointed out, given the importance of incorporating global developments into carbon management, that the societies have international reach and membership.

The engineers see that controlling carbon emissions from energy generation requires a long-term perspective. Unfortunately, the energy challenge has tended to receive only short-term attention when fossil fuel prices are high or when there are disruptions or shortages in supplies. They believe that this lack of long-term commitment and focus is no longer acceptable. “The need for energy security and for economically and environmentally sustainable energy systems is extremely serious and must be ongoing,” Keairns said.

He added that the professional engineering societies have an important role to play because of their balanced, technically-based approach and their experience disseminating new technical information, be it through traditional conferences and publications, online discussions and training, or Congressional briefings.

Danielle Kozich  
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[kozich@thebravogroup.com](mailto:kozich@thebravogroup.com)

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

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

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

- [www.mboservices.net](http://www.mboservices.net)
- <http://newyorkacs.org/jobs.html>
- <http://njacs.org/jobs.html>

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