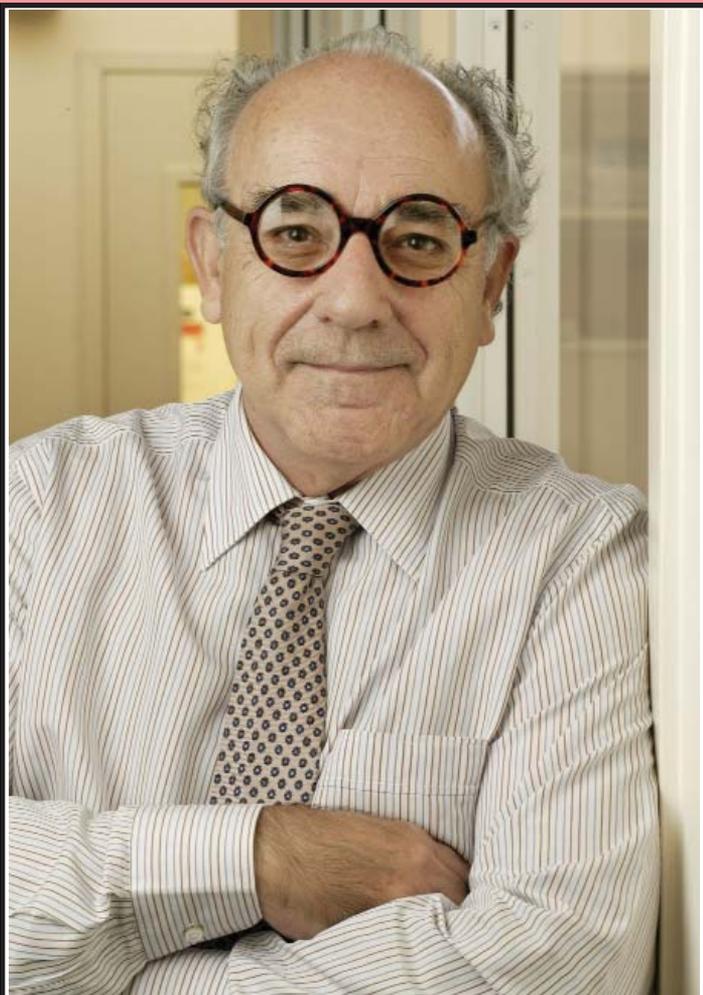


# THE Indicator

MARCH 2011

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**Professor Julius Rebek, Jr.**  
**2011 William H. Nichols Medalist**  
*Biography, page 11. Program, pages 12-13.*

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**Manager / Editor** - LINDA ATKINS  
1 Milbark Court West, Homosassa, FL 34446  
973-981-4383; Fax 352-503-7613  
[linatkins@tampabay.rr.com](mailto:linatkins@tampabay.rr.com)

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[vincegale@mboservices.net](mailto:vincegale@mboservices.net)

**INDICATOR COMMITTEE**

**Chair, DR. LES McQUIRE**  
17 Crown Drive, Warren, NJ 07059  
908-334-5473, [Les@LesMcQuire.org](mailto:Les@LesMcQuire.org)

**New York Section Rep.**  
**DR. NEIL JESPERSEN**  
Chemistry Dept., St. John's University  
8000 Utopia Parkway, Jamaica, NY 11439  
718-990-5221, [jespersn@stjohns.edu](mailto:jespersn@stjohns.edu)

**North Jersey Section Rep.**  
**DR. ANITA BRANDOLINI**  
TAS, Ramapo College, 505 Ramapo Valley Rd.,  
Mahwah, NJ 07430 • 201-684-7753  
[abrandol@ramapo.edu](mailto:abrandol@ramapo.edu)

**Web Masters**  
NY Section - DR. BRIAN GIBNEY  
[postmaster@newyorkacs.org](mailto:postmaster@newyorkacs.org)  
NoJ Section - PAUL TUKEY  
[tukey@verizon.net](mailto:tukey@verizon.net)

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<http://newyorkacs.org>  
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Computer Sciences, Medgar Evers College, CUNY  
1650 Bedford Avenue, Brooklyn, NY 11225  
718-270-5168; Fax 718-270-6197  
[hiroko@mec.cuny.edu](mailto:hiroko@mec.cuny.edu)

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Department of Chemistry and Physical Science  
Pace University, 1 Pace Plaza, New York, NY 10038  
212-346-1761 • Fax 212-346-1256  
[jrizzo@pace.edu](mailto:jrizzo@pace.edu)

**Secretary, DR. BRIAN GIBNEY**  
Dept. of Chemistry, Brooklyn College - CUNY  
2900 Bedford Avenue, Brooklyn, NY 11210  
718-951-5000 x6636 Fax: 718-951-4607  
[brg33@newyorkacs.org](mailto:brg33@newyorkacs.org)

**Section Office**  
St. John's University, Chemistry Dept.  
8000 Utopia Parkway, Jamaica, NY 11439  
516-883-7510; Fax 516-883-4003  
[njesper1@optonline.net](mailto:njesper1@optonline.net)

**NORTH JERSEY SECTION**  
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**Chair, DR. JIWEN CHEN**  
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[jiwen.chen@yahoo.com](mailto:jiwen.chen@yahoo.com)  
**Chair-Elect, DR. AMBER CHARLEBOIS**  
Fairleigh Dickinson University  
285 Madison Ave., M-SB1-01, Madison, NJ 07940  
973-443-8761

[charleb@fd.edu](mailto:charleb@fd.edu)  
**Secretary, BETTYANN HOWSON**  
49 Hillside Avenue, Madison, NJ 07940-2612  
973-822-2575  
[chemphun@optonline.net](mailto:chemphun@optonline.net)

**Section Office**  
4 Cameron Road, Piscataway, NJ 08854  
732-463-7271; [NJACSoffice@aol.com](mailto:NJACSoffice@aol.com)

**THE Indicator** 

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## March Calendar

### NEW YORK SECTION

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Chemical Marketing & Economics Group  
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**Wednesday, March 9, 2011**

Westchester Chemical Society  
See page 15.

**Thursday, March 10, 2011**

Long Island Subsection  
See page 16.

**Friday, March 11, 2011**

High School Teachers Topical Group  
See page 17.

**Friday, March 18, 2011**

Nichols Symposium & Award Banquet  
See pages 11-13.

**Saturday, March 19, 2011**

Younger Chemists Committee  
See page 17.

**Tuesday, March 22, 2011**

Biochemical Topical Group  
See page 18.

### NORTH JERSEY SECTION

**Thursday, March 3, 2011**

Careers in Transition  
See page 7.

**Thursday, March 3, 2011**

NoJ Teacher Affiliates Executive Meeting  
See page 7.

**Tuesday, March 8, 2011**

Mass Spectrometry Topical Group  
See [www.njacs.org](http://www.njacs.org).

**Tuesday, March 8, 2011**

ChemTAG  
See page 8.

**Friday, March 18, 2011**

Chromatography Topical Group  
See [www.njacs.org](http://www.njacs.org).

**Friday, March 18, 2011**

NMR Topical Group  
See [www.njacs.org](http://www.njacs.org).

**Monday, March 21, 2011**

NoJ Executive Committee Meeting  
See page 7.

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## **THIS MONTH IN CHEMICAL HISTORY**

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

*Prepared for SCALACS, the Journal of the Southern California, Orange County, and San Geronio Sections of the American Chemical Society*

I am writing this column early in 2011 and, as I have done in the past, I draw my inspiration from the chemistry of a century ago as presented in the "Annual Reports on the Progress of Chemistry for 1911" published for The Chemical Society [of London] in 1912. This is volume VIII of this interesting series which gives us an insight into the discoveries that were regarded as significant by leading chemists of the time. The Publication Committee of the Society included such distinguished chemists as Frankland, Groves, and Ramsay. Contributors were equally well-known including Baker, Chattaway, Lowry, and Soddy. There are Nobel Laureates in each group.

The first article to catch my eye describes an elegant new method for determining boiling points of liquids on samples ranging between 30 and 100 mg. New determinations of the absorption spectra of inorganic salts have been made by a photographic method, including absorption coefficients in the infrared, visible and ultraviolet regions. Photochemical studies have been carried out on the isomerization of maleic into fumaric acid, catalyzed by bromine. The complex allotropy of elemental phosphorus has been studied further including the white, red, violet, and "metallic" forms; I assume this last form is what we would call black phosphorus.

Revised atomic weights, many deriving from the work of the U.S. Nobelist T. W. Richards, have been determined for such familiar elements as calcium, iron, and mercury. Sir James Dewar's group (yes, he of the Dewar flask) has been studying carbon monosulfide, CS, formed by the action of a silent electric discharge on carbon disulfide vapor. When trapped at  $-210^{\circ}\text{C}$  a white deposit (monomeric or a low polymer of CS?) is obtained but within 15 minutes the deposit turns brown (a high polymer?) "the transformation being accompanied by a flash and sometimes by a detonation sufficiently violent to shatter the tube." An electric discharge in  $\text{N}_2$  seems to convert a small proportion of the nitrogen into an active form that the authors suggest may be nitrogen atoms.

H. B. Dixon and his colleagues have continued work on the ignition points of explosive mixtures of gases – a field of some practical importance in mining and chemical manufacturing. They have identified a period of pre-flame combustion when such mixtures are compressed which helps to raise the temperature of the gas mixture to the explosion point. Burgess and Wheeler have carried out parallel studies on aliphatic hydrocarbons, under the auspices of the Mining Association. Recent events in Chile and elsewhere remind us of the problems of explosive gas mixtures that plague mining to this day.

In inorganic chemistry studies of the luminescence of the sulfides of the alkaline earth metals have shown that while the pure sulfides do not luminesce, very small quantities of polysulfides are sufficient for luminescence. Old-fashioned cathode ray tubes made use of this phenomenon. Sir William Crookes has shown that a pure white diamond changes in color to "a splendid green" when exposed to the radiation from radium. Dewar has finally prepared solid  $\text{O}_2$  by evaporating liquid oxygen at low pressures. In experiments somewhat reminiscent of "Cold Fusion" Claude has reinterpreted experiments in which neon containing only a trace of helium seemed to have been transmuted into helium! More careful study has shown that the experiment only demonstrates the selective absorption of helium in preference to neon by metallic copper.

## **MARCH HISTORICAL EVENTS IN CHEMISTRY**

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

### **March 2, 1886**

One hundred and twenty-five years ago, H. Jermain Creighton was born on this date. He was a researcher in electro-organic chemistry and developed the industrial process for electroreduction of glucose to sorbitol and mannitol.

### **March 7, 1788**

One hundred and seventy-five years ago in 1836, Antoine-César Becquerel, was the first to use electrolysis to recover metals from ores. He also invented an electric thermometer and was born on this date.

### **March 8, 1886**

One hundred and twenty-five years ago, Edward C. Kendall was born. In 1915, he isolated thyroxine and shared the Nobel Prize in Physiology or Medicine in 1950 with Philip Hench and Tadeus Reichstein for their discoveries relating to the hormones of the adrenal cortex, their structure and biological effects.

### **March 12, 1824**

One hundred and fifty years ago in 1661, Gustav R. Kirchhoff and Robert Bunsen discovered rubidium (Rb, 37). They invented the spectroscope in 1859 and discovered cesium (Cs, 55) in 1860. He discovered that substances that emit radiation absorb the same type of radiation when cool (Kirchhoff's Law) and was born on this date.

### **March 12, 1838**

One hundred and fifty years ago in 1861, William H. Perkin with B. P. Duppa synthesized tartaric acid. Also, he discovered mauve, the first aniline dye, in his home laboratory in 1856, the Perkin reaction for condensation of unsaturated aromatic acids, and coumarin. He elucidated relationship between tartaric, fumaric and maleic acids and was born on this date.

### **March 22, 1788**

One hundred and seventy-five years ago in 1836, Pierre J. Pelletier with Philip Walter obtained toluene by distilling pipe resin. He discovered quinine, strychnine, and other alkaloids and was born on this date.

### **March 22, 1868**

Twenty-five years ago in 1986, Robert A. Millikan died. He measured the charge/mass ratio of the electron and received the Nobel Prize in Physics in 1923 for his work on the elementary charge of electricity and on the photoelectric effect. He was born on this date.

### **March 24, 1711**

Three hundred years ago, William Brownrigg, the first to describe platinum and use pneumatic trough for collection of gases, was born on this date.

### **March 24, 1884**

Seventy-five years ago in 1936, Peter Joseph William Debye received the Nobel Prize in Chemistry for his contributions to our knowledge of molecular structure through his investigations on dipole moments and on the diffraction of X-rays and electrons in gases. He was born on this date.

### **March 26, 1911**

One hundred years ago, Bernard Katz was born on this date. He shared the Nobel Prize in Physiology or Medicine in 1970 with J. Axelrod and U. Von Euler for discoveries concerning humoral transmitters in the nerve terminals and the mechanism for their storage, release and inactivation.

### **March 27, 1861**

One hundred and fifty years ago, Nikolai Y. Demjanov was born on this date. He was a researcher on decomposition of aliphatic diazonium ions and Demjanov-Tiffeneau rearrangement.

### **March 28, 1861**

One hundred and fifty years ago on this date, George C. Pond was born. He was a chemistry teacher and preserver of the Priestley home in Pennsylvania.

### **March 31, 1811**

Two hundred years ago on this date, Robert Bunsen was born. One hundred and fifty years ago in 1861, he and Gustav R. Kirchhoff discovered rubidium (Rb, 37). They also invented the spectroscope in 1859 and discovered cesium (Cs, 55) in 1860. He invented the Bunsen burner, filter pump, a galvanic battery, and with Henry E. Roscoe, the actinometer.

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

## 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, March 21, 2011

**Time:** 6:30 PM

**Place:** Fairleigh Dickinson University  
College at Florham  
Rutherford Room  
Recreation Center  
Madison, NJ

**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://www.fdu.edu/studentlife/2009florham/5455.pdf>

Reservations: call (732) 463-7271 or email [njacsoffice@aol.com](mailto:njacsoffice@aol.com) prior to **Wednesday, March 16, 2011**.

**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.**

### 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, March 3, 2011**, 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 [billsuits@earthlink.net](mailto:billsuits@earthlink.net), if you plan on attending this meeting.



### NJACS TEACHER AFFILIATES

#### Executive Committee Meeting

Meeting dates are subject to change due to school closings or inclement weather.

**Date:** Thursday, March 3, 2011

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

**Place:** College of St. Elizabeth  
Faculty Lounge/Study  
2nd Floor of Mahoney Library  
Madison, NJ

Contact: Mita Chaki

[mchaki@franklinboe.org](mailto:mchaki@franklinboe.org)



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## MASS SPECTROMETRY TOPICAL GROUP

Date: Tuesday, March 8, 2011

See [www.njacs.org](http://www.njacs.org) for more information.



## ChemTAG

### Make and Takes

Date: Tuesday, March 8, 2011

Time: 4:00 – 6:00 PM

Place: Fair Lawn High School  
14-00 Berdan Avenue  
Fair Lawn, NJ

Hostess: Kelly Chladil

[kchladil@fairlawnschools.org](mailto:kchladil@fairlawnschools.org)

201-794-5450



## CHROMATOGRAPHY TOPICAL GROUP

Date: Friday, March 18, 2011

See [www.njacs.org](http://www.njacs.org) for more information.



## NMR TOPICAL GROUP

Date: Friday, March 18, 2011

See [www.njacs.org](http://www.njacs.org) for more information.



## LABORATORY ROBOTICS INTEREST GROUP

### Mid-Atlantic Chapter - Annual Technology Exposition and Vendor Show

This meeting features 90 automation and technology vendors, short courses and workshops, posters, and food. Admission is free but advance registration is required. Registration details, menus, and schedules will be posted on the chapter web site as they become available.

The URL for the Chapter Website is:

[http://www.lab-robotics.org/Mid\\_Atlantic](http://www.lab-robotics.org/Mid_Atlantic)

Date: Tuesday, May 17, 2011

Time: Exhibit Room 4:00 PM

Place: Hyatt Regency  
New Brunswick, NJ

Cost: Free

## REGULATORY-CMC TOPICAL GROUP

One of the goals of Dr. Ambarish Singh (2010 NJACS Chair) was to restart the Regulatory-CMC Topical Group (RCMC TG) that was originally formed in 2003. The Topical Group went dormant due to various reasons after it organized one symposium. The revival of the RCMC TG was fully supported by the NJACS-Executive Committee with Drs. Shankar Swaminathan and Siva Prasad serving as the Chair and Secretary, respectively. The mission of the Topical Group is to provide a forum for regulatory and compliance professionals to exchange ideas, share strategies, discuss current topics; enhance our knowledge and understanding of CMC regulatory affairs, quality assurance, and cGMPs.

Under the aegis of North Jersey ACS, the Regulatory CMC TG led by Shankar Swaminathan, Siva Prasad and Ambarish Singh, arranged a half day mini-CMC symposium at the Raritan Valley community college on **December 2, 2010**. They also had tremendous help from enthusiastic volunteers namely Agnes Yeboah, Bill Suits, Cristina Marquez, Linda Flynn, Rachel Mathew and Rajesh Israni and a generous financial support from Pfizer and Bristol-Myers Squibb. The symposium was very well received by not only the regulatory professionals working in the pharmaceutical industry in the tri-state area but also the scientists with background in quality, analytical, process chemistry and drug product development. More than 75 people attended the following talks of current interest:

- *Approval Pathway for Biosimilar and Interchangeable Biological Products* by **Xin Du**, Director, Regulatory and Compliance CMC Biologics - Bristol-Myers Squibb Co.
- *Drug Master Files in Regulatory Affairs* by **Satyam Upadrashta**, Executive Director, Forrest Labs
- *Changes in EU Regulations* by **Declan Kelly**, Executive Director, Bristol-Myers Squibb Co.
- *Application of QbD Concepts and PAT for Real Time Release Testing* by **Beth Kendersky**, Director, Pfizer

The attendees were also polled to provide feedback on the meeting and topics for future meetings. Encouraged by the overwhelming response, the RCMC TG has plans to organize half-day mini symposia in 2011. If you are interested in volunteering or giving a talk, please send an email to [asingh.njacs@gmail.com](mailto:asingh.njacs@gmail.com).



**Symposium Speakers (L to R): Satyam Upadrashta, Declan Kelly, Beth Kendersky and Xin Du.**



**Beth Kendersky (Director, Pfizer) answering a question on Quality-by-Design.**



**Attendees networking during the break.**



**Symposium volunteers with the speakers (standing L to R): Ambarish Singh, Rajesh Israni, Siva Prasad, Cristina Marquez, Linda Flynn, Shankar Swaminathan and Rachel Mathew.**



**Bill Suits (Chair NJACS Careers-in-Transition) discussing Regulatory affairs related job openings with the attendees.**

*(Photos courtesy of Ambarish Singh)*

## METRO WOMEN CHEMISTS COMMITTEE

In spite of the wintery mix of snow and ice on the roads the Metro-Women Chemists Committee gathered for their first meeting/networking event of 2011 on January 18th in Bloomfield, NJ. The meeting was part of the International Year of Chemistry Celebration (appropriately held at the International House of Pancakes). We participated in the worldwide event of "women sharing a chemical moment in time". We joined women from all over the world as they held their breakfast and networking events. Women from 37 countries and several US cities joined in to share this



experience. There were 18 women in attendance and we enjoyed breakfast for dinner. To keep with the international theme we all shared our favorite international places to visit and found that several of our members were born in other countries, including Turkey, Germany, Russia, and China.

The group made a short movie which will be sent to the national WCC and to the IYC for use in the official IYC launch on January 28th. We concluded the video with the phrase "women in chemistry" spoken in 5 languages.

Our next meeting will be on **April 12th**, if you are interested in attending or would like to be added to the mailing list for the MWCC please contact Sarah Carberry at [sbolton@ramapo.edu](mailto:sbolton@ramapo.edu) or check out our website.



MWCC members share a chemical moment in time as part of the international year of chemistry celebration.



Members discussed their international experiences as we wait for "breakfast" to arrive.

*(Photos courtesy of Sarah Bolton)*

## 2011 Nichols Medalist — Julius Rebek, Jr.

The ACS New York Section congratulates and extends its best wishes to Professor Julius Rebek, Jr. of the Scripps Research Institute who will receive the William H. Nichols Medal Award on March 18, 2011 in White Plains, New York. The Nichols Medal is presented at an award dinner following the Nichols Distinguished Symposium. Professor Rebek is the 105th recipient of the Nichols Medal Award.



Professor Julius Rebek, Jr. was born in Hungary in 1944 and lived in Austria from 1945-49. He and his family then settled in the U.S.A. in Kansas. He received his undergraduate education at the University of Kansas in 1966, and obtained the Ph.D. degree from the Massachusetts Institute of Technology in 1970 for studies in peptide chemistry with Professor D.S. Kemp. As an Assistant Professor at the University of California at Los Angeles (1970-1976) he developed the three-phase test for reactive intermediates. In 1976 he moved to the University of Pittsburgh where he rose to the rank of Professor of Chemistry and developed cleft-like structures for studies in molecular recognition. In 1989 he returned to the Massachusetts Institute of Technology, where he was the Camille Dreyfus Professor of Chemistry and devised synthetic, self-replicating molecules. In July of 1996, he moved his research group to The Scripps Research Institute to become the Director of The Skaggs Institute for Chemical Biology, where he continues to work in molecular recognition and self-assembling systems.

Professor Rebek is the recipient of many honors and awards, including the following: NSF Predoctoral Fellow 1967-1970, Eli Lilly Award 1972-1974, A. P. Sloan Fellow 1976-1978, A. von Humboldt Fellow 1981, J. S. Guggenheim Fellow 1986, A.C. Cope Scholar Award 1991, American Academy of Arts and Sciences 1993, National Academy of Science 1994, Highland Park High School Hall of Fame 1995, NIH Merit Award 1996, James Flack Norris Award in Physical Organic Chemistry ACS 1997, American Association for Advancement of Science Fellow 2000, Hungarian Academy of Science 2001, American Institute of Chemists, Chemical Pioneer Award 2002, Ronald Breslow Award for Achievement in Biomimetic Chemistry, ACS 2004, Medal of the Academy of Sciences; Prague, Czech Republic 2005, Medal of the National Academy of Sciences, Letters and Arts; Modena, Italy 2005, European Academy of Science (Academia Europaea) Member 2005, Distinguished Scientist Award, ACS, San Diego, California 2006, Evans Award, Ohio State University 2006, University of Oregon Creativity Award in Chemistry, Dance and Music 2007, Tau-Shue Chou Award, Academica Sinica 2008, A. von Humboldt Senior Scientist Award, Germany 2009, Fellow, Royal Society of Chemistry 2009, Israeli Chemical Society, Honorary Member 2009 Honorary Doctorate, University of Bonn 2010.



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 **WILLIAM H. NICHOLS MEDAL**  
**DISTINGUISHED SYMPOSIUM AND AWARD BANQUET** 

**Symposium: CHEMISTRY ON THE NANOSCALE**

Award Recipient: PROFESSOR JULIUS REBEK, Jr.  
The Skaggs Institute for Chemical Biology  
Department of Chemistry, The Scripps Research Institute  
LaJolla, CA

**Date: Friday, March 18, 2011**

Time: Registration 1:00 PM  
Symposium 1:30 PM – 5:30 PM  
Reception 5:45 PM  
Award Dinner 6:45 PM

Place: Crowne Plaza Hotel, White Plains, NY

**PROGRAM**

- 1:30 PM **Welcome** Professor Hiroko I. Karan  
2011 Chair, ACS, New York Section  
Medgar Evers College – CUNY
- 1:35 PM **Opening of the Distinguished Symposium** Dr. JaimeLee Iolani Rizzo  
2011 Chair-elect, ACS, New York Section  
Pace University – New York City
- 1:45 PM **Chemical Synthesis Directed to Small Molecule Natural Products and Biologics** Professor Samuel J. Danishefsky  
Memorial Sloan-Kettering Cancer Center  
Columbia University
- General operating perspective in pharma is that small molecule drug targets are fashioned by chemists through various means. The current emphasis is on producing huge libraries for heavy-duty screening. By contrast, biologics are presumed to arise from strictly natural means. The lecture will deal with the very special nature of small molecule natural products in enabling small molecule leads. It will also show that chemical synthesis is now able to think realistically about gaining access to biologic-level targets through chemistry.
- 2:30 PM **Mechanical Forces at the Molecular Scale** Professor Stephen L. Craig  
Duke University
- This talk will present studies of reactions that occur when large, directional forces are funneled from the macroscopic to the molecular scale. The outcomes are often unexpected and/or counterintuitive, including the ability to trap transition states for extended periods of time and molecules that get shorter in response to being pulled. In addition, mechanically active molecules will be presented as the basis for a new class of self-healing polymers, in which mechanical activation of chemical reactions leads to improved structure and properties under conditions that are typically destructive to both.
- 3:15 PM **Coffee Break**
- 3:45 PM **From Molecules to Materials** Professor Colin Nuckolls  
Columbia University
- This talk will develop methods to bridge, both literally and figuratively, the tools for lithography and those for creating complex molecular structures. Through this combination, we create molecular devices that are ultrasensitive sensors and efficient photovoltaic materials.
- 4:30 PM **Molecular Behavior in Small Spaces** Professor Julius Rebek, Jr.  
**NICHOLS MEDALIST**
- This lecture follows the course of molecular recognition by synthetic receptors that completely surround their targets: encapsulation complexes. These operate

through the proper filling of space and reveal new forms of stereochemistry, isomerism, asymmetry, contortions and reactivity of molecules held inside. Capsules with spacers offer a set of molecular devices that operate through compression and expansion of alkanes.

5:45 PM **Social Hour**

6:45 PM **William H. Nichols Medal Award Dinner**

More information on the Nichols Medal Events is available on the New York Section's website at <http://www.NewYorkACS.org>.

Tickets may be reserved using the following form or the form on the New York Section website.

-----  
**RESERVATION FORM**

***2011 WILLIAM H. NICHOLS DISTINGUISHED SYMPOSIUM & MEDAL AWARD BANQUET***

**in honor of Professor Julius Rebek, Jr.**

Return to: ACS, New York Section, c/o Dr. Neil D. Jespersen, Department of Chemistry,  
 St. John's University, 8000 Utopia Parkway, Jamaica, NY 11439  
 (516) 883-7510

Please reserve \_\_\_\_\_ places for the symposium & banquet at \$95/person ACS member  
 \_\_\_\_\_ places for the symposium & banquet at \$105/person Non-member  
 \_\_\_\_\_ places for the banquet at \$85/person  
 \_\_\_\_\_ places for the symposium at \$40/person, ACS member;  
 \_\_\_\_\_ \$50 Non-member  
 \_\_\_\_\_ (Student or unemployed at \$20/person)

(For table reservations of 8 or more, use the ACS member \$95/person rate for combination tickets)

Reserve a table in the name of: \_\_\_\_\_

Names of guests are: \_\_\_\_\_ Indicate numbers in your group who choose:

\_\_\_\_\_ Chicken \_\_\_\_\_

\_\_\_\_\_ Prime Rib \_\_\_\_\_

\_\_\_\_\_ Salmon \_\_\_\_\_

\_\_\_\_\_

Mail Tickets to:

\_\_\_\_\_ Name: \_\_\_\_\_

\_\_\_\_\_ Address: \_\_\_\_\_

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**BANQUET RESERVATION DEADLINE: MARCH 9, 2011**

Please make checks payable to:  
 ACS, NEW YORK SECTION

Check for \$ \_\_\_\_\_ enclosed

## New York Meetings

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

### NEW YORK SECTION BOARD MEETING DATES FOR 2011

The dates for the Board Meetings of the ACS New York Section for 2011 were chosen and approved at the June 2010 Board Meeting. The meetings are open meetings; all are welcome. If non board members would like to attend the meeting, please let the New York Section office know by emailing Mrs. Marilyn Jespersen at [njesper1@optonline.net](mailto:njesper1@optonline.net) or calling the office at (516) 883-7510. Refreshments are served at 6:00 PM and the meeting is held at 6:45 PM.

The 2011 Board Meetings will be held on the following Fridays in the library of St. John's University, 8000 Utopia Parkway, Jamaica, NY. Dr. Hiroko I. Karan will chair the meetings.

Friday, April 8, 2011

Friday, June 3, 2011

Friday, September 23, 2011

Friday, November 18, 2011

Also, please mark your calendars with the date of a major New York Section event in 2011. More information will be on the New York Section website at <http://www.NewYorkACS.org>.

Friday, March 18, 2011

Nichols Symposium and Award Ceremony



### CHEMICAL MARKETING & ECONOMICS GROUP

#### Panel Discussion: "Making Green with Green Chemistry"

*Panelists:* William Barclay  
Chief Technical Officer  
Martek Biosciences Corp.

Peter Shepard  
Executive VP  
Polymers, Novomer

Chris Cerimele  
Director, and Head of  
Chemicals Practice  
Houlihan Lokey

*Moderators:* Doris de Guzman  
Senior Editor  
ICIS Chemical Business

Neil Burns  
Neil Burns LLC

**Date:** Thursday, March 3, 2011

**Times:** Networking begins 11:15 AM  
(cash bar available)  
Lunch 12:00 Noon  
Panel and Webcast 1:00 PM

**Place:** To Be Announced

Please go to <http://www.nyacs-cme.org/> for details.

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

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## WESTCHESTER CHEMICAL SOCIETY

### Special Seminar – Improved Performance of Polyaryl Ether Amide Matrix Resins

*Speaker:* Borys Schafran  
Evonik Degussa Corporation  
Parsippany, NJ

A new generation of single-component, room-temperature-stable polyaryl ether amide thermoset matrix resins was introduced to the aerospace and electronics industries within the past year. Promising mechanical properties were obtained with this technology. Recent developments led to the discovery of enhanced long-term stability, particularly for hot/wet conditions, while maintaining critical characteristics including glass transition ( $T_g$ ) and flame-smoke-toxicity (FST) performance. In addition, ease of processing was addressed to lower curing temperatures. An update will be presented with relevance toward fiber-reinforced composite materials.

Borys Schafran presently serves as

Director, Marketing & Business Development, Industrial Chemicals for Evonik Degussa Corporation, Parsippany, NJ. Schafran leads a team focused on value-added fine chemical intermediates and custom-manufacturing services for the agrochemical and industrial market spaces. He has over 25 years of chemical industry experience with Evonik and Akzo Nobel. Schafran holds a BS in Chemical Engineering and an MS in Polymer Science & Engineering, both from Polytechnic University, Brooklyn, NY.

**Date:** Wednesday, March 9, 2011

Times: Refreshments 5:30 PM

Lecture 6:00 PM

Place: Westchester Community College  
Gateway Building Room 110  
75 Grasslands Road  
Valhalla, NY

Cost: Free and open to the public

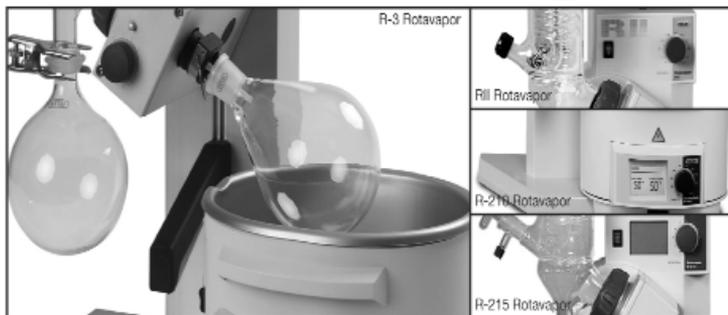
For more information, contact Paul Dillon:

E-Mail [paul.dillon@siemens.com](mailto:paul.dillon@siemens.com)

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## LONG ISLAND SUBSECTION

### Ferrates (VI, V, and IV): Green Chemistry Oxidants

*Speaker:* Virender K. Sharma  
Florida Institute of Technology

The involvement of high-valent iron-oxo intermediates in biological, environmental, and industrial processes is of current interest. Ferrate(VI) (FeVIO<sub>4</sub><sup>-</sup>), ferrate(V) (FeVO<sub>4</sub><sup>3-</sup>, Fe(V)), and Fe(IV) have a high oxidizing power and upon decomposition form a non-toxic byproduct, Fe(III). Iron, unlike chromium and manganese, is considered non-toxic; therefore, ferrates can make industrial processes more environmentally benign. This will ultimately lead to cleaner technology for organic synthesis. Ferrates can also be potential oxidants in the so-called "green" treatment of polluted waters. Ferrate(VI) efficiently oxidizes emerging contaminants, estrogens and pharmaceuticals. Sulfonamide antimicrobials transformed to products that are expected to be less toxic. Disinfection tests of sodium ferrate(VI) on spore-forming bacteria showed that aerobic spore-formers are reduced up to 3-log units while sulfite-reducing clostridia

are effectively killed by ferrate(VI). Both bacteria are resistant to chlorination. The multi-functional properties of Fe(VI) can thus be utilized in a single dose for recycling and reuse of water and wastewater. A combination of ferrate(VI) and TiO<sub>2</sub> photocatalyst has the potential to enhance the oxidation of contaminants. The potential role of ferrate as oxidant, coagulant, and disinfectant in water and wastewater treatment processes will be presented. Correlations of rate constants with reduction potentials of pollutants will be shown to understand the mechanism of the reactions.

**Date:** Thursday, March 10, 2011

**Time:** Social 6:00 PM  
Seminar 6:30 PM

**Place:** Hofstra University, Breslin Hall  
Room 103

Please note that this is a different room than for recent seminars

**Cost:** Seminar is free and open to all.  
Dinner: following the seminar at a nearby restaurant (\$25.00)

Please visit the LI-ACS webpage at [http://www.newyorkacs.org/sub\\_island.php](http://www.newyorkacs.org/sub_island.php) for details, updates, and directions.



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• Daikin • Almac Sciences • Dishman • Ash  
Stevens • TCI America • Kaneka • Adesis •  
Spectrum • Kalexsyn

#### CONTACT

Benjamin W Jones, Global Consultant,  
[jonescentury@verizon.net](mailto:jonescentury@verizon.net), Tel: +1 610 225 2396

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

Registration Open - visit [www.chemspecamerica.com](http://www.chemspecamerica.com) for further details

## HIGH SCHOOL TEACHERS TOPICAL GROUP

### A Profile of The Father of Modern Plastics: Leo H. Baekeland

*Speaker:* Hugh Karraker  
The LH Baekland Project  
Redding, CT

With the visual aid of rarely seen photographs, I will share personal observations, family lore, revealing anecdotes and significant milestones in the life and work of my great grandfather. I will reveal aspects of his genius and creativity, which initiated the beginning of the fourth kingdom on earth.

**Date:** Friday, March 11, 2011

**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.

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## YOUNGER CHEMISTS COMMITTEE

### The Inaugural NY ACS Younger Chemists Committee (YCC) Research Symposium

This symposium is an opportunity for undergraduate students, graduate students, post-docs, faculty members, and workers in government and industry in the NYC-metro area to meet fellow scientists and present research. We plan to have oral presentations, a keynote speaker and a poster session highlighting work in analytical chemistry, biochemistry/chemical biology, inorganic chemistry, organic chemistry, physical chemistry and theoretical chemistry. In addition, a networking reception will immediately follow the poster session.

We welcome abstract submissions on all topics of chemistry. The best abstracts will be selected as oral presentations. There will be prizes for the best posters also. To submit an abstract, please request a form at [nyacsyccsymposium@gmail.com](mailto:nyacsyccsymposium@gmail.com) and fill it out by **March 1, 2011**.

#### Schedule:

1:00-1:15

Welcoming remarks from  
*Dr. Hiroko Karan*, NY ACS Chair

1:15-2:00

Oral session I  
Chaired by *Dr. David Cormode*

2:15-3:00

Oral session II  
Chaired by *Ms. Elizabeth Onufrey*

3:15-4:15

Keynote speaker  
*Prof. Ron Breslow*, Columbia University

4:15-4:30

Closing remarks from *Prof. Ruben Savitzky*

4:30-6:00 — Poster session

6:00-7:30 — Networking reception

**Date:** Saturday, March 19, 2011

**Place:** The Cooper Union  
41 Cooper Square  
(between 6th and 7th Streets)  
New York, NY

If you are interested in attending, please email [nyacsyccsymposium@gmail.com](mailto:nyacsyccsymposium@gmail.com) by **March 15, 2011**.

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

**Are Neurodegenerative Diseases  
Spreading? Disease Propagation in  
Protein Misfolding Disorders**

*Organizers:* Robert Martone, MS  
Covance Biomarkers Center  
of Excellence  
Heather Shih, PhD  
Pfizer  
June Sonnenberg-Reines, PhD  
Jennifer Henry, PhD  
The New York Academy of  
Sciences

*Speakers:* Ron R. Kopito, PhD  
Stanford University  
Eliezer Masliah, MD  
UCSD  
Stephen M. Strittmatter, PhD  
Yale University  
X. William Yang, MD, PhD  
UCLA School of Medicine

Protein misfolding causes many neurodegenerative diseases, including Alzheimer's, Parkinson's and Huntington's. This symposium reviews breakthroughs in characteristic non-autonomous disease propagation, and reviews the development of novel therapies.

**Date:** Tuesday, March 22, 2011  
**Time:** 1:00 – 5:00 PM  
**Place:** New York Academy of Sciences  
7 World Trade Center  
250 Greenwich Street – 40th Floor  
New York, NY  
**Cost:** NY-ACS members, NYAS members and BPDG affiliates may attend these meetings free of charge using the Priority Code SPN1-ACS1. Non-members may attend for a fee of \$30, or \$15 for students and post-docs.

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

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**59TH 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, presentation of student papers (15 minute talks to small groups), and a poster session to be followed by a luncheon.

**Date:** Saturday, May 7, 2011  
**Place:** College of Mount Saint Vincent

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

If you have any questions please contact:  
Barbara Hillery, Co-chair  
[hilleryb@oldwestbury.edu](mailto:hilleryb@oldwestbury.edu)

Joseph Serafin, Co-chair  
[SerafinJ@stjohns.edu](mailto:SerafinJ@stjohns.edu)

Justyna Widera, Co-chair  
[widera@adelphi.edu](mailto:widera@adelphi.edu)

NY Section, Student Affiliate Committee  
Co-chairs Barbara Hillery, Joseph Serafin,  
and Justyna Widera.



**EMPLOYMENT AND  
PROFESSIONAL RELATIONS  
COMMITTEE OF THE NEW  
YORK 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. 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).

Candidates from our roster who meet the requirements you describe will be asked to contact you.

## **2011 SECTIONWIDE CONFERENCE HELD AT ST. JOHN'S UNIVERSITY**

### **Theme - International Year of Chemistry**

The annual Section-wide Conference of the New York Section was held on January 15 at St. John's University. Dr. Hiroko I. Karan, 2011 New York Section Chair, hosted the event that had as its theme, the International Year of Chemistry. Dr. Karan opened the conference with a presentation about IYC – displaying the 4 themes for the year – Environment, Energy, Materials and Health. Attendees received IYC pins for themselves and to distribute to others. The Sectionwide Conference included the presentation of awards for volunteerism and achievement, a keynote address by Dr. Etsuko Fujita of Brookhaven National Laboratory, poster presentations by Project SEED students, breakout planning sessions for year 2011 and a luncheon at Acquista Trattoria.

At the award ceremony, Mr. Frank Romano received the ACS plaque and past chair pin in appreciation of his extraordinary work as chair of the New York Section in 2010. The 2010 Outstanding Service Award went to Dr. James Canary of New York University, who had an excellent year as chair of the Section in 2005 and now chairs the NanoScience Topical Discussion Group. The Section presented the Nichols Foundation High School Chemistry Teacher Award for 2010 to Mrs. Kay Sirianni of Brooklyn Technical High School. Mr. Stephen Radice introduced Mrs. Sirianni and enumerated her many accomplishments as an outstanding chemistry teacher. For their superb organization of the Undergraduate Research Symposium for over five years, ACS Salutes to Excellence Awards were given to Dr. Alison Hyslop of St. John's University, Dr. JamieLee Iolani Rizzo of Pace University and Dr. Sharon Lall-Ramnarine of Queensorough Community College, CUNY – all co-chairs of the Student Affiliate Committee. Dr. Rizzo, 2011 Chair Elect of the New York Section, then presented the names of the candidates for the upcoming 2011 elections and introduced those who were present.

Dr. Etsuko Fujita, Senior Chemist and group leader for the Artificial Synthesis Group in the Chemistry Department of Brookhaven National Laboratory, presented the keynote address in keeping with the themes – Environment and Energy – for the International Year of Chemistry. The title of her excellent talk was "Photochemical CO<sub>2</sub> Reduction: Current Status and Future Prospects." Attendees were very impressed with Dr. Fujita's research and its implications for a better environment.

Project SEED students, accompanied by Project SEED coordinator Nadia Makar, attended the conference and displayed the results of their research. These students have been accepted to Ivy League universities and will be majoring in chemistry or chemical engineering. Their posters were excellent and their appreciation of the support for Project SEED by the Section was evident. During their high school years, they have thoroughly enjoyed working with local chemists as they developed their research skills.

The last hour of the conference is always devoted to a planning session for subsections, topical groups and committees and it concludes with reports from the chairs of each of the groups. The traditional luncheon with colleagues was enjoyed by many – this year at Acquista Trattoria.



**Group photo of  
awardees with 2011  
Chair Dr. Hiroko  
Karan and Mr.  
Stephen Radice.**

*(Photos courtesy of  
Marilyn Jespersen)*

*(More photos on  
pages 20-21.)*

## NY SECTIONWIDE CONFERENCE

(continued from page 19)



Mr. Frank Romano accepts the ACS plaque, Past Chair pin and gift from Dr. Karan for his dedicated service as Chair for 2010.



Dr. James Canary (center) is honored with the Outstanding Service Award for 2010. Dr. Canary chaired the Section in 2005 and developed the Nanoscience Topical Discussion Group.



Mr. Stephen Radice, Chair of the Nichols Foundation Award Jury, presents the High School Chemistry Teacher Award to Mrs. Kay Sirianni of Brooklyn Technical High School for her dedicated work as an outstanding chemistry teacher from the ACS New York Section.



Dr. Etsuko Fujita of Brookhaven National Laboratory presenting an excellent keynote address for the IYC's first and second quarter's themes of the Environment and Energy.



The three co-chairs of the Student Affiliate Committee receiving the Salutes to Excellence Awards for their dedicated service in organizing the annual Undergraduate Research Symposium. They are Dr. Alison Hyslop, Dr. JaimeLee Rizzo and Dr. Sharon Lall-Ramnarine.



2011 Chair Dr. Hiroko Karan and Past Chair Mr. Frank Romano begin the celebration of the International Year of Chemistry at the Section-wide Conference on January 15.



Dr. Hiroko Karan presents a Merck Index to Dr. Fujita as she thanks her for her presentation which was enjoyed by many.



Dr. Karan explains the four themes for the IYC celebration in 2011.



Project SEED student explains her project to Dr. Marc Walters.



Coordinator Nadia Makar with Project SEED students who presented their research results to attendees at the Sectionwide Conference.

## HIGH SCHOOL TEACHERS TOPICAL GROUP



High School Teachers Topical Group  
 “The Myth of the ‘War of the Currents’ (AC v. DC)”;  
 Presenter Joseph J. Cunningham, TCI College of Technology; HSTTG Co-chairs Jean Delfiner and Joan Liddell.

“Great Mysteries in Astrophysics”;  
 Presenter Dr. Roy R. Gould, Director, Harvard-Smithsonian Center for Astrophysics; HSTTG Co-chairs Jean Delfiner and Joan Liddell.

(Photos courtesy of Al Delfiner)



## LONG ISLAND SUBSECTION

### Events Schedule for 2011

#### Friday, April 8

“11th Annual Chemistry Challenge”  
 Location: Queensborough Community College

#### Thursday, April 14

“Heavy Metals and Chronic Disease”  
 Christopher Calapai  
 C.C. Medical Services  
 Location: Hofstra University

#### Thursday, May 5

“Characterizing Nanoparticle-Based MRI Contrast Agents”  
 Marc Walters  
 New York University  
 Location: Hofstra University

#### Thursday, June 2

“LI-ACS High School Awards”  
 Location TBA

Please visit the LI-ACS webpage at [http://www.newyorkacs.org/sub\\_island.php](http://www.newyorkacs.org/sub_island.php) for details, updates, and directions.




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## Call for Nominations

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### **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).



### **2011 LIFETIME ACHIEVEMENT AWARD OF THE NORTH JERSEY SECTION**

The biennial award consists of a recognition plaque and \$1000 prize. It recognizes a North Jersey Chemist or chemical engineer over fifty years of age for conspicuous achievements in chemistry, not heretofore recognized by any major scientific awards.

Please submit nominations and supporting letters to Michael Miller, Awards Committee Chair, c/o 4 Cameron Rd, Piscataway, NJ 08854. Telephone (732) 463-3987. Email [Jppenna@aol.com](mailto:Jppenna@aol.com). Nominations must be received by **March 15, 2011**. Visit <http://www.njacs.org/awards.html> for the nomination form and the list of past recipients.

## **METRO WOMEN CHEMISTS COMMITTEE**

### **2011 Mentorship Award Nominations**

MWCC is now accepting 2011 Mentorship Award Nominations. Please share your stories with us if you have benefited from mentorship or you have had positive influence over other people's lives or careers. Please write your stories with no more than 300 words and send them to Amber Charlebois [charleb@fdu.edu](mailto:charleb@fdu.edu) or Kelly George [kelly.george@roche.com](mailto:kelly.george@roche.com)

**Deadline: March 31, 2011**

The MWCC Mentoring Award Dinner will be held **Tuesday April 12, 2011** at 6:00 pm on the Fairleigh Dickinson University Madison Campus in Lenfell Hall in the Mansion. Check out our website for details.

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## Call for Papers

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### **THE INAUGURAL NY ACS YOUNGER CHEMISTS COMMITTEE (YCC) RESEARCH SYMPOSIUM**

This symposium is an opportunity for undergraduate students, graduate students, post-docs, faculty members, and workers in government and industry in the NYC-metro area to meet fellow scientists and present research. We plan to have oral presentations, a keynote speaker and a poster session highlighting work in analytical chemistry, biochemistry/chemical biology, inorganic chemistry, organic chemistry, physical chemistry and theoretical chemistry. In addition, a networking reception will immediately follow the poster session.

We welcome abstract submissions on all topics of chemistry. The best abstracts will be selected as oral presentations. There will be prizes for the best posters also. To submit an abstract, please request a form at [nyacsyccsymposium@gmail.com](mailto:nyacsyccsymposium@gmail.com) and submit it by **March 1, 2011**.

**Send any suggestions for articles to**  
**[Suggestions@TheIndicator.org](mailto:Suggestions@TheIndicator.org)**

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## Others

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### THE 2011 MIDDLE ATLANTIC REGIONAL MEETING



The 2011 Middle Atlantic Regional Meeting (MARM) of the American Chemical Society will be held **May 21-24, 2011** on the campus of the University of Maryland, College Park, hosted by the Chemical Society of Washington. This meeting will feature national and international leaders in the chemical sciences and will include a broad selection of symposia in BIOCHEMISTRY, ORGANIC CHEMISTRY, INORGANIC / MATERIALS CHEMISTRY, ANALYTICAL / PHYSICAL / THEORETICAL CHEMISTRY, and CAREER, EDUCATION and PROFESSIONAL areas. Several Workshops are planned, and there will be events that feature career development, funding opportunities, and education.

Research presentations are open to all, and symposia will include contributed papers selected from those submitted that best represent the symposium topic. Invited speakers for each symposium will include national and international leaders. Graduate students, postdoctoral associates, and young professionals are encouraged to come to increase their visibility, and undergraduate students will find ample opportunity to learn about employment and graduate school opportunities. There will be activities for senior chemists, who will also be available to advise and inform younger chemists.



### AMERICAN INSTITUTE OF CHEMICAL ENGINEERS

#### AIChE Launches Water Initiative

NEW YORK – The increasing importance of issues surrounding water supplies and their sustainability has led the American Institute of Chemical Engineers (AIChE) to launch a new water initiative. Its initial focus will be on determining the optimal roles and approaches for chemical engineers addressing water access, purification and sanitation, and the “water-energy nexus,” the relationship between the energy footprint of water and the water footprint of energy.

David Klanecky of Dow Water & Process Solutions and Wendy Young of GE Water & Process Technologies are co-chairing the initiative’s advisory board. They convened a special water workshop during AIChE’s Annual Meeting in Salt Lake City in November that marked the official launch of the initiative. Discussion focused on a framework of workshops, webinars and leadership panels for 2011. The advisory board also considered potential partnerships with companies, other engineering societies, and academic institutions.

The group hosted an additional workshop during the 2nd International Congress on Sustainability Science and Engineering in January in Tucson at the University of Arizona.

June Wispelwey, AIChE’s executive director, said that the new effort is driven by concerns around future supplies of potable water, freshwater for crops, and encouraging efficiency in industry’s needs for water. “Beyond access,” she explained, “there is, of course, a special role for chemical engineers in dealing with purification and sanitation issues, especially combating bacterial diseases, pollution by heavy metals and agricultural run-off, and the growing awareness of the impact of pharmaceuticals in wastewater.”

Wispelwey explained that AIChE’s water initiative will serve both as a clearinghouse for information and a network hub for engineers and scientists in the water community. However, she emphasized that the initiative will also “build on AIChE’s historic record of success in pioneering efforts in process safety, like the Center for Chemical Process Safety, in industrially-important physical property data, and more recent initiatives in biological engineering, sustainability and energy.”

Additional activities are being planned around AIChE’s Spring Meeting in Chicago from **March 13-17, 2011**, and at its Annual Meeting in Minneapolis in mid-October. For more information, visit <http://water.aiche.org>.



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

#### Graduate Seminar Series – Spring 2011

Sponsors: Infineum USA L.P. and  
ConocoPhillips Bayway Refinery

**Monday, March 7**

"Microstructure and Rheology Relationships for Concentrated Colloidal Dispersions: Shear Thickening Fluids and Their Applications"

*Professor Norman Wagner*

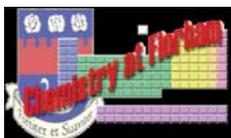
Alvin B. and Julia O. Stiles Professor and Department Chairperson  
Department of Chemical Engineering  
University of Delaware, Newark, DE

OPEN TO PUBLIC



## **FAIRLEIGH DICKINSON UNIVERSITY**

**Spring 2011  
Seminar Series**

**March 1**

"A 'Sticky' Problem: The Molecular Basis of Adhesion"

*Anita Brandolini, Ph.D.*

Assistant Professor of Analytical Chemistry,  
School of Theoretical and Applied Science  
Ramapo College, Mahwah, NJ.

**March 8**

"The Future of Pharmacy"

*Dr. Ruth Nemire*

Founding dean of the Fairleigh Dickinson University School of Pharmacy at Maxwell Becton College of Arts and Sciences, College at Florham

**Date: Tuesdays**

Time: 4:00 PM

Place: Fairleigh Dickinson University  
Science Building Room 9  
College at Fordham  
Madison, NJ

Seminar coordinator: Dr. Bill Fordham  
(973) 443-8791 [fordham@fd.edu](mailto:fordham@fd.edu)



## **ADELPHI UNIVERSITY**

**2011 Henry Drysdale Dakin Memorial  
Lecture**

**"Transport of Potassium and Chloride  
across Biological Membranes"**

*Speaker:* Professor Roderick MacKinnon  
Rockefeller University, HHMI  
2003 Nobel Laureate in  
Chemistry

Ion channels are responsible for generating

electrical impulses and mediating numerous cellular processes. To accomplish their tasks in biology, ion channels must exhibit two basic properties, selectivity and gating. Selectivity refers to the property of high fidelity discrimination among similar ions, while gating refers to protein conformational changes that open a channel in response to specific stimuli such as ligand binding or membrane voltage. Recent developments on the molecular principles of selectivity and gating in potassium channels will be presented as well as a new mechanism for the counter transport of chloride ions and protons.

**Date: Monday, April 4, 2011**

Time: 7:00 PM

Place: University Center Ballroom

Cost: Free and open to the public

Travel Directions:

<http://www.adelphi.edu/visitors/directions.php>

Additional Information: Contact Professor Stephen Z. Goldberg, (516) 877-4147 or [goldberg@adelphi.edu](mailto:goldberg@adelphi.edu)

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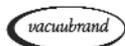
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## SCIENCE CAFÉ

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(Reservations suggested but not required:  
[jrmlevkov@gmail.com](mailto:jrmlevkov@gmail.com))

### “Suburban Ecosystems; Soil and Climate Change”

*Speaker:* Dr. William H. Schlesinger  
 President of the Cary Institute of Ecosystem Studies

Dr. William Schlesinger will discuss the fascinating activities of the Cary Institute of Ecosystem Studies and his groundbreaking work in linking environmental chemistry and global climate change. How does suburban life impact the ecosystem? What small measures can add up to big changes? These and other timely questions will spark the conversation.

To learn more about Dr. Schlesinger click here: [http://www.ecostudies.org/people\\_president.html](http://www.ecostudies.org/people_president.html) and the Cary Institute of Ecosystems Studies, click here: <http://www.ecostudies.org>

**Date:** Tuesday, March 8, 2011

**Time:** 7:00 PM

**Place:** Coromandel Restaurant  
 30 Division Street  
 New Rochelle, NY

\*\*\*\*\*

### “Ocean Depths – Changing Tides”

*Speaker:* Dr. Carl Safina  
 Blue Ocean Institute

Dr. Carl Safina will share his explorations of how the ocean is changing, and what those changes mean for wildlife and for people. Looking at the scientific dimensions as well as moral and social implications of our relationship with nature, he will describe his campaigns to ban high-seas driftnets, rewrite U. S. federal fisheries law, work toward international conservation of tunas, sharks, and other fishes, and achieve passage of a United Nations global fisheries treaty.

Participants will also learn about the Blue Ocean Institute, which uniquely works through science, art, and literature to inspire

solutions and a deeper connection with nature. The Institute shares reliable information that enlightens personal choices instills hope, and helps restore living abundance in the ocean.

To learn more about Dr. Carl Safina, click here: <http://carlsafina.org/about-carl/biography/> and the Blue Ocean Institute, click here: <http://www.blueocean.org/home>

**Date:** Tuesday, April 14, 2011

**Time:** 7:00 PM

**Place:** Linda Kelly Theater  
 New Rochelle High School

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## Press Releases

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### NOVA Chemicals

In January, NOVA Chemicals introduced a sustainable, high-performance polyethylene resin for the caps and closures market. SURPASS® IGs153-A resin is a lightweight, high purity performance resin with superior organoleptic properties for bottled water and beverage applications that helps molders meet their sustainability objectives through material source reduction and energy savings. To read the press release, please follow this link:

<http://www.novachemicals.com/app/press/news.cfm?ID=502>



### Intelligrated

#### New Intelligrated White Paper Asks: Is Conventional Palletizing Dead?

Intelligrated®, a leading North American-owned automated material handling solutions provider, announces the release of a new white paper that discusses the viability of various types of palletizing technologies, ranging from conventional machines to robotic solutions. Written by Intelligrated Product Manager Pat O'Connor, “Conventional vs. Robotic Palletizing” outlines the specific applications that favor robotic, conventional and hybrid palletizing solutions.

Will one type of technology dominate palletizing in the future? Download “Conventional vs. Robotic Palletizing” to find out what Intelligrated thinks. To download the white paper, visit the Intelligrated Information Center at

[http://www.intelligrated.com/information\\_center/white\\_papers](http://www.intelligrated.com/information_center/white_papers).

## **UTEP Offers New Biochemistry Degree**

Beginning in the spring 2011 semester, The University of Texas at El Paso will offer a new undergraduate degree in biochemistry.

With the new degree, the University will have 82 bachelor's, 86 master's and 17 doctoral degrees, with more in development.

Students who earn the new biochemistry degree will be prepared to go to medical school or a graduate program on their way to careers as doctors or with pharmaceutical companies discovering new treatments for disease.



## **RMT Robotics**

### **Wins Major Warehouse Automation Project for North American Beer Distributor**

RMT Robotics® ([www.rmtrobotics.com](http://www.rmtrobotics.com)) of Grimsby, Ontario, Canada, a Cimcorp Oy company, announces that it has been awarded a contract to supply a large-scale robotic case picking solution for a major North American beer distributor. The system, which has a footprint of less than 40,000 square feet, is designed to pick 300 SKUs at a rate of more than 250,000 cases per day. The project is scheduled to start in late 2011. Specific details of the contract are subject to confidentiality.

The automated case picking system consists of several robotic gantries, picking a mixture of loose cases and full layers. The system will provide 100 percent picking accuracy, reduce product damage and dramatically improve product traceability. An intelligent replenishment routine ensures the size of the system is minimized by storing only the inventory needed to fulfill orders.

For more information, please contact Derek Rickard, Distribution Systems Manager for RMT Robotics, at [derekrickard@rmtrobotics.com](mailto:derekrickard@rmtrobotics.com).



## **ToxCast**

### **EPA Screens 1,000 Chemicals Using ToxCast**

ToxCast has entered a new phase, screening 1,000 chemicals for potential toxicity to people and the environment. ToxCast is

designed to determine how chemical exposures impact human biological processes and how the chemicals most likely lead to health effects. When fully implemented, ToxCast will be able to screen thousands of chemicals in fast, cost-effective tests that are relevant to human health. The chemicals being tested are found in industrial and consumer products, food additives and drugs that never made it to the market.

More information on ToxCast and the list of chemicals: <http://www.epa.gov/comptox>



## **NanoInk**

### **Launches Application for Single Cell Arrays**

NanoInk's NanoFabrication Systems Division has announced the launch of a new application for single cell studies that enables micropatterning of proteins and polyethylene glycol (PEG)-based hydrogel at sub cellular scales. The new application note should be available on NanoInk's Web site in the coming weeks.

Launched in 2009 as a tool for bioscience research, NanoInk's NLP 2000 System is a simple, user-friendly desktop nanolithography platform. The system leverages patented Dip Pen Nanolithography® (DPN®) technology to deposit sub-cellular-scale features of a wide variety of materials with nanoscale registry, all under ambient conditions. With the addition of the new capability to its portfolio of biological research support materials, NanoInk continues to serve as a true partner to the life science community.

NanoInk has successfully demonstrated the patterning of single cells on protein arrays constructed using NanoInk's NLP 2000. Multi-component arrays at sub cellular scales patterned with nanoscale registry have been used to investigate the cellular response at single cell levels. Cell binding areas are constructed using ECM proteins and PEG-based hydrogels are used for targeted delivery of materials to single cells.

Please visit [www.nanoink.net](http://www.nanoink.net) or call (847) 679-8807 for more information on the NanoFabrication Systems Division, the NLP 2000 System, and related Application Notes.

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