

# THE Indicator

DECEMBER 2011

Vol. 92 • No. 10

ISSN0019-6924



**Dr. Amber Charlebois**  
**2012 North Jersey Section Chair**

*(See Chair's Message, page 16)*

**RECYCLE THIS PAPER**

**PERIODICALS POSTAGE**

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



**STEVENS**  
 INSTITUTE *of* TECHNOLOGY  
 THE INNOVATION UNIVERSITY

**Department of  
 Chemistry, Chemical Biology, and Biomedical Engineering**  
 Hoboken, NJ 07030  
[www.stevens.edu/ses/chem-bio](http://www.stevens.edu/ses/chem-bio)

**SPRING SEMESTER GRADUATE COURSES**

Classes 6:15pm-8:45pm

Semester begins January 17, 2012

*Special Courses*

**SYNTHETIC ORGANIC CHEMISTRY Ch 642 (Thursday eve)**

A survey of important synthetic methods with emphasis on stereochemistry and reaction mechanisms.

*Prereq.* – *Advanced Organic Chemistry*

*Prof. Percy Manchand*

**BIOCHEMISTRY I Ch 580**

**(Thursday eve)**

Metabolism and regulation; metabolic pathways in biosynthesis and catabolism of biomolecules including carbohydrates, proteins, lipids and nucleic acids; hormonal regulation of metabolism and vitamin metabolism.

*Prereq.* – *Undergraduate organic chemistry*

*Prof. Eunhee Kang*

**SPECIAL TOPIC: BIOLOGY OF CANCER Ch 780 (Friday eve)**

Molecular mechanisms involved in transformation of normal cell into tumor cell. Mutations at the level of genes and chromosomes, changes in intracellular signaling, changes in cell physiology that result in the transformed phenotype. Emphasis on epithelial-to-mesenchymal transition.

*Prereq.* – *Cell biology; molecular biology & genetics.* *Prof. Theresa Vincent*

*And Also*

Advanced Instrumental Analysis – Ch 660 (*Wed eve*)

Advanced Inorganic Chemistry – Ch 610 (*Mon eve*)

Kinetics & Thermodynamics – Ch 620 (*Tue eve*)

Advanced Physical Chemistry – Ch 520 (*Mon eve*)

Biophysical Chemistry – Ch 582 (*Wed eve*)

Cellular Signal Transduction – Ch 690 (*Wed.eve*)

Systems Biology – Ch 691 (*Mon. eve*)

Epigenetics – Ch 692 (*Thur eve*)

Immunology – Ch 686 (*Tue eve*)

Molecular Biology Lab Techniques – Ch 684 (*Sat 9am-12pm*)

**For Applications: Graduate School (201) 216-5234**

**For Information: Department (201) 216-5528**

**THE INDICATOR****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)**Advertising Manager** - VINCENT GALE

MBO Services, PO Box 1150

Marshfield, MA 02050-1150 • 781-837-0424

[vincegale@mboervices.net](mailto:vincegale@mboervices.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)**NEW YORK SECTION**<http://newyorkacs.org>**Chair, DR. HIROKO I. KARAN**

Department of Physical, Environmental and

Computer Sciences, Medgar Evers College, CUNY

1638 Bedford Avenue, Brooklyn, NY 11225

718-270-5168; Fax 718-270-6197

[hiroko@mec.cuny.edu](mailto:hiroko@mec.cuny.edu)**Chair-Elect, DR. JAIMELEE IOLANI RIZZO**

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**<http://www.njacs.org>**Chair, DR. JIWEN CHEN**

Bristol-Myers Squibb Company, 3B 0.01

311 Pennington-Rocky Hill Rd., Pennington, NJ 08534

609-818-6319

[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**

49 Hillside Avenue, Madison, NJ 07940-2612

973-822-2575; [chemphun@optonline.net](mailto:chemphun@optonline.net)**THE Indicator** 

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

**CONTENTS**

Advertisers Index	24
Call for Abstracts/Posters	21
Call for Nominations	20-21
New York Meetings	8-10
New York Sectionwide Conference	7
North Jersey Chair's Message	16
North Jersey Meetings	17
Others	21-23
Press Release	23
Professional/Product Directory	24

**EDITORIAL DEADLINES**

January 2012	November 15
February	December 15
March	January 15, 2012
April	February 15
May	March 15
June	April 15
September	July 15
October	August 15
November	September 15
December	October 15

**Visit Us**[www.TheIndicator.org](http://www.TheIndicator.org)

*The Indicator* (ISSN0019-6924) is published monthly except July and August by the New York and North Jersey Sections of the American Chemical Society, Office of Publication, 1 Milbark Court West, Homosassa, FL 34446. **Periodicals Postage Paid at Homosassa, Florida and at additional mailing offices.**

**POSTMASTER:** Send address changes to American Chemical Society, Department of Member and Subscriber Services, *THE INDICATOR*, P.O. Box 3337, Columbus, OH 43210, or e-mail: [service@acs.org](mailto:service@acs.org).

All views expressed are those of the editor and contributors and do not necessarily represent the official position of the New York and North Jersey Sections of the American Chemical Society unless so stated. **Subscription price included in dues paid by New York and North Jersey Section members. Distributed electronically to members through the website [www.TheIndicator.org](http://www.TheIndicator.org) and monthly emailings. Non-members are invited to read it online. Members should register their email addresses at [www.acs.org/update](http://www.acs.org/update).**

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

## December Calendar

### NEW YORK SECTION

**Tuesday, December 6, 2011**

Biochemical Topical Group

See pages 8-9 .

**Wednesday, December 7, 2011**

Westchester Chemical Society

See page 9.

**Thursday, December 8, 2011**

Long Island Subsection

See page 10.

**Friday, December 16, 2011**

High School Teachers Topical Group

See pages 10-11.

### NORTH JERSEY SECTION

**Saturday, December 3, 2011 and**

**Monday, December 12, 2011**

CHEMJOBES (formerly Careers in Transition Group) and CNJSTEM

See page 17.

**Tuesday, December 13, 2011**

Mass Spectrometry Topical Group

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

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

**Deadline for items to be included in the January 2012 issue of *The Indicator* is November 15, 2011.**

**A good vacuum system  
needs a great vacuum trap:**

**Posi-Trap** positive flow  
vacuum inlet traps!

- No "blow-by" . . . **ever!**
- Filter elements matched to **your** application.
- **Easy** cleaning and changing.

**When you want the best, you want MV Products.**



**PRODUCTS**

*A Division of Mass-Vac, Inc.*

247 Rangeway Road ■ PO Box 359 ■ North Billerica, MA 01862  
978 667 2393 Fax 978 671 0014 [sales@massvac.com](mailto:sales@massvac.com) [www.massvac.com](http://www.massvac.com)

## **THIS MONTH IN CHEMICAL HISTORY**

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

I am writing this column in late September 2011 and I am somewhat preoccupied with some presentations I plan to make at the Western Regional Meeting of the American Chemical Society in Pasadena, California in November 2011. One of those presentations is about "100 years of teaching chemistry" since the meeting is, in part, in celebration of the centennial of the Southern California Section. I hasten to add that I have not been teaching chemistry for 100 years, though sometimes it feels like it; I have only a mere half-century of teaching chemistry under my belt. But thinking about the last century, and scanning my bookshelves for some useful source material, I came across a book entitled "The Teaching of Science" by John F. Woodhull Ph.D., Professor of Physical Science at Teachers College, Columbia University. This was published in 1918 by The Macmillan Company in New York and is only 7 years short of a century old.

John Francis Woodhull was born in 1857 and died in 1941. Googling his name didn't give me much other biographical information, beyond the fact that at one time he was Acting President of Teachers College. But it did give me some idea of his range as an author. In this column I will examine his views on teaching science primarily in K – 12. In my next column I will look at some of his many other articles and books on teaching science.

"The Teaching of Science" is a collection of addresses and papers by Woodhull from the 1890s to 1918. The titles of some of its chapters in the chronological order in which they appear give a flavor of the book's contents. These include "The Educational Value of Natural Science"; "Modern Trend of Physics and Chemistry Teaching"; "The Intensive Method in Chemistry"; "Science for Culture"; "Practical Chemistry"; "Science Teaching by Projects"; "The High-school Situation"; and "The Imitation of the Masters".

An analysis of this last chapter, "The Imitation of the Masters" gives a strong impression of Woodhull's thinking about teaching science - thinking that I venture to say is forward looking even nearly a century after it was first expressed. Mind you, as a practitioner of the history of chemistry my reaction to Woodhull may be biased. See what you think.

He is a powerful proponent of the project method. "Are students in schools and colleges made into scientists by learning the so-called fundamental facts, or by practicing the methods of a scientist in finding the solution of real problems?" "We sometimes hear it said that one cannot teach applications of physical principles until the principles themselves are understood. I wish to contend that only the converse of this proposition is true. That is we cannot teach the principles of physics except through an experience with their applications."

Woodhull also asserts (and I happen to agree) that students of science should read and report on biographies of scientists, and popular accounts of science written by scientists. "The great masters of science, Galileo, Faraday, Pasteur, Darwin etc illustrated in their lives and works the project method". He recommends reading a biography of Pasteur, e.g. "The Life of Pasteur" by Rene Vallerey-Radot, Pasteur's son-in-law, for a host of illustrations of the project method.

The project method, that is hands-on science, has somewhat come back into favor in the past few decades. The work of Woodhull, long forgotten, shows that truly there is nothing new under the sun.

## **DECEMBER HISTORICAL EVENTS IN CHEMISTRY**

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

### **December 3, 1886**

One hundred and twenty-five years ago on this date, Karl Manne Georg Siegbahn, a researcher on x-ray spectroscopy, was born. In 1924, he received the Nobel Prize in Physics for his discoveries and researching the field of X-ray spectroscopy.

### **December 6, 1836**

One hundred and seventy-five years ago on this date, Charles F. Chandler was born. He was a researcher in sugar, petroleum and illuminating gas industries and a founder of the ACS.

### **December 6, 1863**

One hundred and twenty-five years ago in 1886, Charles M. Hall discovered method of extracting aluminum electrolytically from bauxite in his garage as Paul Louis Toussaint Héroult discovered the same process for isolating aluminum, which is called the Hall-Heroult process. He was born on this date.

### **December 7, 1810**

One hundred and seventy-five years ago on this date, Theodor Schwann named and investigated pepsin. He coined the word metabolism; discovered the striated muscle of the upper esophagus and the myelin sheath of peripheral axons, called Schwann cells. Also, he is known as the founder of modern histology and was born on this date.

### **December 9, 1742**

Karl W. Scheele, who discovered chlorine in 1774, phosphorus from bone ash, and the action of light on silver salts, was born on this day. He also synthesized organic acids.

### **December 11, 1911**

One hundred years ago on this date, Marja S. Curie (later Marie) gave her Nobel Lecture. Radium and the New Concepts in Chemistry, when she was awarded the Nobel Prize in Chemistry in recognition of her services to the advancement of chemistry by the discovery of the elements radium and polonium, by the isolation of radium and the study of the nature and compounds of this remarkable element.

### **December 13, 1938**

Casein fiber was patented on this date.

### **December 15, 1863**

A. D. Little, Inc. founded as firm for industrial research and control on this date.

### **December 17, 1938**

Discovery of neutron-induced nuclear fission of uranium (U, 92) was made by Otto Hahn and Fritz Strassmann, Berlin on this date.

### **December 25, 1761**

Two hundred and fifty years ago on this date, William Gregor was born. In 1791, he discovered titanium (Ti, 22) and analyzed minerals.

### **December 26, 1838**

One hundred and twenty-five years ago in 1886, Clemens A. Winkler discovered germanium (Ge, 32). He did analyses of gases and was born on this date.

Additional historical events can be found at Dr. May's website,

<http://faculty.cua.edu/may/Chemistrycalendar.htm>

# New York Sectionwide Conference

## PROGRAM

- 9:30 AM **Arrival and Refreshments**
- 10:00 AM **Greetings from the 2012 Chair of the ACS New York Section.** Dr. JaimeLee Iolani Rizzo
- 10:10 AM **Award Presentation**  
**Service Plaque and Pin to the 2011 New York Section Chair**  
 Dr. Hiroko Ito Karan
- New York Section Outstanding Service Award for 2011**  
 Dr. Barbara R. Hillery
- Nichols Foundation H.S. Chemistry Teacher Award for 2011**  
 Dr. Ara Nicholas Kahyaolu, Bergenfield High School
- 10:30 AM **Report from the 2011 Elections Nominating Committee.** (Presentation of Candidates) Dr. Philip H. Mark,  
 2012 Chair-elect of the  
 ACS New York Section
- 10:45 AM **Keynote Address: The Good, the Bad and the Ugly: From Carbonic Anhydrase to the Biorganometallic Chemistry of Mercury and Approaches to Detoxification** Prof. Gerard Parkin,  
 Department of Chemistry  
 Columbia University
- Despite the fact that certain metal ions are essential for life, some are highly poisonous. For example, while zinc is essential for humans, as exemplified by its roles in carbonic anhydrase and liver alcohol dehydrogenase, its congeners, cadmium and mercury, are most toxic. Synthetic analogues, i.e. small molecules that mimic the structure and function of enzymes, provide an important means to afford insight into the natural systems and the research described will focus on the application of tripodal nitrogen and sulfur ligands in the chemistry of zinc and mercury.
- 11:45 AM Coffee Break. There will be poster presentations by the New York Section Project SEED Students.
- 12:00 PM ACS, New York Section Committee Planning Sessions for 2012.
- Educational Activities:** (Chemagination, Continuing Education, High School Olympiad, National Chemistry Week, Nichols Foundation Teacher Award, Project Seed, Student Membership) Chair: Dr. Alison Hyslop
- Member Affairs:** (Awards, Employment and Professional Relations, History of the New York Section, *Indicator*, Membership, Outstanding Service Award) Chair: Dr. Ralph Stephani
- Program Review:** (Subsection and Topical Discussion Group Chairs) Chair: Dr. Anne T. O'Brien
- Public Affairs:** (Academe and Industrial Relations, Environmental Chemistry, Fund Raising, Government Affairs, Information Technology, Public Relations, Speakers Bureau) Chair: Dr. Robert P. Nolan
- 12:45 PM Reports from the Chairs of the Committee Planning Sessions.
- 1:00 PM Conclusion of the Meeting. Join with colleagues for lunch at a local restaurant.

**Date: Saturday, January 28, 2012**

Times: 9:30 AM – 1:00 PM

Place: St. John's University, 8000 Utopia Parkway, Jamaica, NY  
 (Please visit <http://www.NewYorkACS.org> for the meeting venue.)

Cost: Free to all

Please register for the conference at the New York Section Website at <http://www.NewYorkACS.org>.

To inquire about the Section-wide Conference, please call the New York Section Office at 516-883-7510 or e-mail Marilyn Jespersen, Office Administrator, at: [njesper1@optonline.net](mailto:njesper1@optonline.net)

Directions are at: <http://www.stjohns.edu/about/general/directions/directions/queens>

Hope you will attend.

## New York Meetings

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

### NEW YORK SECTION BOARD MEETING DATES FOR 2012

The dates for the Board Meetings of the ACS New York Section for 2012 were chosen and approved at the September 2011 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.

The 2012 Board Meetings will be held on the following Fridays at 5:00 PM at Queensborough Community College–CUNY, 225-05 56th Ave., Bayside, NY, Room 414 in the Science Building. Dr. JaimeLee lolani Rizzo will chair the meetings.

Friday, February 10

Friday, April 13

Friday, June 8

Friday September 14

Friday November 16

Also, please mark your calendar with the dates of the following major events.

**Saturday, January 28**, Annual Section-wide Conference at St. John's University

Friday, March 16, William H. Nichols Medal Award Symposium and Dinner

More information will be posted in future issues of the Indicator and on the New York website at <http://www.NewYorkACS.org>.

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

#### Braininflammation: The Role of the Innate Immune System in CNS Disorders

*Organizers:* Robert Martone  
Covance Biomarker Center  
of Excellence

Sean Pintchovski, PhD  
Lundbeck Research USA

Roland Staal, PhD  
Lundbeck Research USA

Jennifer S. Henry, PhD  
The New York Academy  
of Sciences

*Speakers:* Hemmo A. Drexhage, PhD  
Erasmus Medical Center

Ru-Rong Ji, PhD  
Harvard University and  
Brigham & Women's Hospital

Dave Morgan, PhD  
University of South Florida

Carlos A. Pardo-Villamizar, MD  
Johns Hopkins University  
School of Medicine

V. Hugh Perry, DPhil  
University of Southampton

Richard Ransohoff, MD  
Lerner Research Institute

Jun Tan, MD, PhD  
University of South Florida  
College of Medicine

Annamaria Vezzani, PhD  
Mario Negri Institute for  
Pharmacological Research



## Micron Analytical Services

**COMPLETE MATERIALS CHARACTERIZATION  
MORPHOLOGY CHEMISTRY STRUCTURE**

**SEM/EDXA • EPA/WDXA • XRD XRF • ESCA • AUGER • FTIR • DSC/TGA**

Registered with FDA • DEA GMP/GLP Compliant

3815 Lancaster Pike Wilmington DE, 19805  
E-Mail [micronanalytical@compuserve.com](mailto:micronanalytical@compuserve.com)

Voice 302-998-1184, Fax 302-998-1836  
Web Page: [www.micronanalytical.com](http://www.micronanalytical.com)

This symposium gathers experts on microglia and monocyte biology to discuss the role of inflammation in neurological diseases and disorders, insights into their biology, and possible therapeutic interventions.

**Date:** Tuesday, December 6, 2011

**Time:** 9:00 AM – 5:00 PM

**Place:** New York Academy of Sciences  
7 World Trade Center  
250 Greenwich Street – 40th Floor  
New York, NY 10007

**Cost:** This event has reduced-rate registration for ACS and NYAS members, at \$25 or \$10 (for students and post-docs). Please use the Priority Code SPN1-ACS1. Non-members may attend for a fee of \$80 (corporate), \$60 (non-profit or academic) or \$40 (students and post-docs).

For more information and to register for the event, go to: [www.nyas.org/braininflammation](http://www.nyas.org/braininflammation)

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

  
**Nacalai USA**  
Innovations for Life Sciences

**COSMOSIL HPLC Columns**

**- Since 1979**

***New Phases Now Available!***

**HILIC (Triazole bonded)**  
- *Unique stationary phase for highly polar compounds*

**piNAP (Naphthylethyl group bonded)**  
- *Enhanced  $\pi$ - $\pi$  interactions for unsaturated compounds*

**Cholesterol (Cholesteryl group bonded)**  
- *New stationary phase for structural isomers*



Nacalai USA, Inc. 6640 Lusk Blvd., Suite A200 San Diego CA 92121  
**Tel: 858-404-0403 Email: [info@nacalaiusa.com](mailto:info@nacalaiusa.com)**  
**[www.nacalaiusa.com](http://www.nacalaiusa.com)**

## **WESTCHESTER CHEMICAL SOCIETY**

### **SPECIAL SEMINAR – Integration of Organic Chemistry and Activism in Human Rights**

*Speaker:* Professor Alexander Greer  
Department of Chemistry  
Brooklyn College

This talk will cover research conducted at Brooklyn College in the area of organic chemistry, to highlight advancements made in devices used for water disinfection, and as a photochemical surgical knife. Because chemists should promote responsibility to the profession, the second purpose of the talk is to describe how human rights and chemical education are intricately wound together. The 1970s was a high point of the human rights movement, even among scientists, but this activism has declined in recent years. Questions will be raised such as: Why do human rights matter in the context of chemical education? How are human rights defined? While thousands of undergraduate chemistry programs exist in the US, only a handful of programs, including Jeffrey Toney's at Kean University and ours at Brooklyn College, specifically involve human rights as a part of the training of chemistry majors. Among other things, I encourage student participation in organizations such as the Committee of Concerned Scientists (CCS), comprised of scientists, scholars, and physicians who protect and advance human rights, whose origins come from restrictions of mobility of scientists in the Soviet Union. The lecture will describe how incorporation of "specific" human rights problem solving may help diminish unchecked violations as a growing condition, which can advance to a larger scale end problem. That is, early intervention can serve to enhance security now, whereas instability and even war can be "viewed" as a later stage of human rights problems. Such specificity could fit chemists' research approach, which often favors specialization and reductionism rather than Systems Thinking.

**Date:** Wednesday, December 7, 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)  
Phone 1 (914) 524-3313

## LONG ISLAND SUBSECTION

### Biological Sensors based on Advanced Materials: Preparation, Characterization and Practical Applications

*Speaker:* Silvana Andreeescu  
Department of Chemistry and  
Biomolecular Science  
Clarkson University

An emerging area of research is the development and implementation of biological sensors that could respond to today's needs for low cost, rapid detection, higher selectivity and sensitivity for the analyte of interest. However, despite extensive research in biosensors and their enormous potential compared to laboratory-based analytical techniques, the biosensor market is relatively small and numerous problems still remain to be solved. Rapid progress of nanotechnology and advanced nanomaterials production offers significant opportunities for designing powerful biosensing devices with enhanced performances. This presentation will discuss new ways to construct biosensors with improved selectivity and lower detection limits as well as novel sensing platforms designed to address emerging health and environmental challenges. Examples of biological sensors that utilize advanced nanomaterials possessing interesting optical, catalytic and oxygen storage/release properties and applications of these devices for the detection of clinically and environmental important analytes will be presented. Recent work focusing on the development of nanoparticles based colorimetric test strips on paper platforms for point-of-care diagnosis and therapy will be discussed.

Dr. Silvana Andreeescu is Associate Professor in the Department of Chemistry and Biomolecular Science at Clarkson University, Potsdam, NY. She received her PhD in Chemistry, specializing in biosensors from the University of Perpignan, France, and University of Bucharest, Romania in 2002, and has been a member of the Clarkson faculty since 2005. Between 2003 and 2005 she was an NSF-NATO postdoctoral fellow at SUNY Binghamton. Her research interests are in analytical and bio-analytical chemistry focusing on investigations of basic biochemical mechanisms at bio-interfaces, biomimetic materials, and development of practical biosensors for clinical and environmental monitoring. She is the recipient of a French Government

Graduate Fellowship, a NATO-NSF Postdoctoral Fellowship, and the NSF-CAREER award.

**Date:** Thursday, December 8, 2011

**TimeS:** Doors open at 5:45 PM  
Board elections at 6:00 PM  
(Go to [www.newyorkacs.org/sub\\_island.php](http://www.newyorkacs.org/sub_island.php) for election details)  
Followed by seminar and

complimentary buffet dinner  
**Place:** Nassau Community College  
CCB Building, Room CCB-252  
Garden City, NY

**Directions:** [www.ncc.edu/campuservices/parkingandsafety/mapanddirections.shtml](http://www.ncc.edu/campuservices/parkingandsafety/mapanddirections.shtml)

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



## HIGH SCHOOL TEACHERS TOPICAL GROUP

The World Trade Center: Origin, Demise, and Resurgence – An Engineer's Perspective.

*Speaker:* Gary Winsper  
Project Exec.  
WTC Transportation Hub  
Skanska Granite JV  
SVP Skanska USA Civil, NE

Gary Winsper and/or his company has been associated with the World Trade Center from the "ground up": beginning with the construction of the foundations of the Twin Towers in the 1960s to the erection of the unique steel skeleton framing of the towers to the repairs after the bombing in 1993 to the cleanup following 9/11 to the current renaissance of the site. Gary's unique perspective will combine history, groundbreaking technical approaches used to construct the Twin Towers, the work involved after the bombing in 1993, and the incredible journey that he has been a part of, in the urban planning, design and construction of the 16-acre site, that began with the \$500 million temporary PATH station, and is continuing with the building of a small city within Lower Manhattan.

**Date:** Friday, December 16, 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.



### **INFORMATION-DIRECTED MULTISCALE ASSEMBLY: FROM NATURE TO DESIGN**

**A Symposium in Honor of Nadrian C. Seeman, New York University  
 Department of Chemistry**

*Speakers:* Paul Chaiken  
 New York University

Chengde Mao  
 Purdue University

Greg Petsko  
 Brandeis University

Alex Rich  
 Massachusetts Institute of  
 Technology

Hao Yan  
 Arizona State University

Ned Seeman  
 New York University

This symposium is held to celebrate the achievements of NYU Chemistry Professor Nadrian C. (Ned) Seeman, including his recent acceptance of the prestigious Kavli Prize in Nanotechnology. Ned is considered the founding father of the field of DNA Nanotechnology.

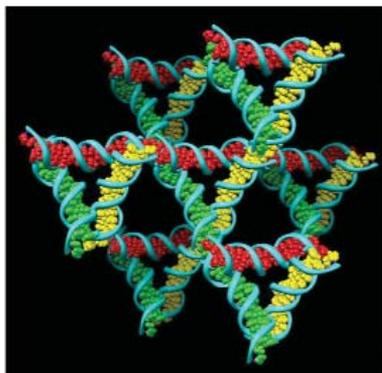
Ned is a recipient of the ACS Nichols Medal, awarded by the New York Section of the American Chemical Society.

**Date: Friday, December 2, 2011**

Times: 9:00 AM to 5:00 PM  
 Place: New York University  
 Silver Center  
 Jurow Lecture Hall/  
 Silverstein Lounge, Room 101  
 31 Washington Place  
 (between Greene Street and  
 Washington Square East)  
 New York, NY

Cost: Free

For more information about the symposium, please contact Julie Kaplan at [julie.kaplan@nyu.edu](mailto:julie.kaplan@nyu.edu).



**Environment of a Single Triangle**

*(Photo credit J.Zheng, J.J.Birktoft,  
 Y.Chen, T.Wang, R.Sha,  
 P.E.Constantinou, S.L.Ginell, C.Mao &  
 N.C.Seeman, Nature 461, 74-77 (2009))*



### **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 [hessyaft@hotmail.com](mailto:hessyaft@hotmail.com).

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

## **DR. ALAN G. MARSHALL IS THE WILLIAM H. NICHOLS MEDALIST FOR 2012**

The New York Section is pleased to announce that the William H. Nichols Medal Award for 2012 will be presented to **Dr. Alan G. Marshall** of Florida State University. Dr. Marshall is the Robert O. Lawton Professor of Chemistry and Biochemistry, and Director of the Ion Cyclotron Resonance Program, National High Magnetic Field Laboratory. The Nichols Distinguished Symposium and Medal Award Dinner will be held on **March 16, 2012** at the Crowne Plaza Hotel, 66 Hale Avenue, White Plains, NY. The title of the Distinguished Symposium is "Mass Spectrometry: New Ways to Probe Molecular Structure and Reactivity." Along with Dr. Marshall, the speakers are: Dr. R. Graham Cooks of Purdue University, Dr. Michael L. Gross of Washington University and Dr. Richard N. Zare of Stanford University. Dr. John D. Baldeschwieler of the California Institute of Technology will formally introduce Dr. Alan Marshall to the guests at the Award Dinner.

Dr. Philip H. Mark, Chair-Elect of the ACS New York Section in 2012 will conduct the Distinguished Symposium, and Dr. JaimeLee Iolani Rizzo, Chair of the ACS New York Section in 2012, will present the Nichols Medal Award at the dinner that follows.

The entire program and reservation form will appear in the January, February and March *Indicators* and on the New York Section website at <http://www.NewYorkACS.org>



## **NOMINATING COMMITTEE**

### **2012 Elections**

The New York Section Nominating Committee will meet in December to choose candidates for the 2012 elections. Dr. JaimeLee I. Rizzo, 2011 chair-elect of the ACS New York Section, will chair this committee meeting.

Positions available are:

Chair-elect for 2013  
Secretary for 2013 and 2014  
Directors-at-Large for 2013  
Councilors and Alternate Councilors for 2013 – 2015

If a member of the New York Section wishes to run for office or to suggest a member for consideration by the Nominating Committee, please write to the American

Chemical Society, New York Section, Inc., St. John's University, Department of Chemistry, 8000 Utopia Parkway, Jamaica, NY 11439 or send an e-mail to the New York Section office at [njesper1@optonline.net](mailto:njesper1@optonline.net) or an email to [jrizzo@pace.edu](mailto:jrizzo@pace.edu).

The New York Section truly appreciates the time and efforts contributed by our many dedicated volunteers and we highly encourage our New York Section members to run for office. This is a wonderful way to meet and network with others from local universities/industry and to make a difference in our community! Come and join us!



## **UPCOMING BIOCHEMICAL PHARMACOLOGY DISCUSSION GROUP SYMPOSIA FOR 2012**

Please visit [www.nyas.org/BPDG](http://www.nyas.org/BPDG) for more details and to register for these events.

### **Tuesday, January 24, 2012**

1:00 PM–5:00 PM

Biomarkers and Brain Imaging of Presymptomatic Alzheimer's Disease: Exploring The Silent Years

*Organizers:* Robert Nelson and Ken Jones  
Lundbeck Research USA  
and

Robert Martone  
Covance Biomarkers Center  
of Excellence

The events leading to AD may begin decades prior to diagnosis. This symposium explores the structural, functional, and biochemical events that may precede and predict both AD and amnesic mild cognitive impairment (aMCI).

### **Tuesday, February 28, 2012**

1:00 PM–5:00 PM

Allosteric Modulation of G Protein-Coupled Receptors: Opportunities and Challenges for Drug Discovery

*Organizer:* Andrew Alt  
Bristol-Myers Squibb

Allosteric modulation of GPCRs as a therapeutic strategy offers improved selectivity and safety. This symposium discusses emerging screening strategies for allosteric modulators and in vitro assessment of allosteric modulator activity.

### **Tuesday, March 27, 2012**

1:00 PM–5:00 PM

The Pharmacology of Aging: Why Age Matters

*Organizers:* Seongeun Cho  
FDA

and  
Ed Tamer  
Sanofi-Aventis US

Considering age-dependent changes in physiology, pharmacology and psychiatric functions, better understanding of the elderly is essential. This symposium reviews the regulatory and industry perspectives on clinical drug development for older patients and key clinical pharmacology considerations.

### **Tuesday, April 24, 2012**

9:00 AM–5:00 PM

Translating Preclinical Response to the Clinical Outcome using Pharmacokinetic–Pharmacodynamic (PK–PD) Modeling: Guiding Principles and Recent Progress

*Organizers:* Cheng Chang, Anis Khan, Tristan Maurer and Mercedes E. A. Beyna  
Pfizer

When advancing compounds to clinical trials based on gross pharmacological responses, there is a high rate of attrition. PK-PD modeling and systems pharmacology are essential tools for the systematic integration of diverse preclinical information in rational drug design, candidate selection and development.

### **Tuesday, May 15, 2012**

1:00 PM–5:00 PM

Cancer Vaccines and Cancer Immunotherapy and Immunomodulation

*Organizers:* Eyal Talor  
CEL-SCI Corp.

and  
George Zavoico  
MLV

Cancer vaccines target specific tumor antigens while sparing the immune suppressive effects of radiation and chemotherapy. This symposium reviews the current approaches in cancer immunotherapy, immunomodulation, and highlights emerging cancer vaccines.

### **Tuesday, September 25, 2012**

1:00 PM–5:00 PM

Autophagy as a Therapeutic Target in Multiple Diseases — From Molecular Mechanisms to Drug Discovery

*Organizers:* Zdenek Berger, Warren Hirst and Mercedes E. A. Beyna  
Pfizer

Autophagy represents a major route for degradation of aggregated cellular proteins and dysfunctional organelles. This symposium will review molecular mechanisms its impairment across diverse diseases, and discuss ongoing drug discovery strategies

for modulating autophagy for therapeutic benefits.

### **Tuesday, October 23, 2012**

9:00 AM–5:00 PM

The New Age of Antibody Therapeutics

*Organizers:* Robert Martone  
Covance Biomarkers Center of Excellence

Heather Shih  
Pfizer

June Sonnenberg-Reines  
and Mohammad Tabriz  
Merck Research Laboratory

and  
Dane Wittup  
MIT

There are many monoclonal antibody therapeutics on the market, and hundreds of candidate molecules in development. We review cutting-edge pharmaceutical technology in the development of next-generation antibody therapeutics.

### **Tuesday, December 11, 2012**

9:00 AM–5:00 PM

The Single Gene Target is Not Enough: A Systems Biology Approach to Drug Discovery

*Organizers:* Manuel Duval  
Network Therapeutics Inc.

Thomas B. Freeman  
Boehringer-Ingelheim  
and

Mercedes E. A. Beyna  
Pfizer

The most pressing medical needs correspond to syndromes that are determined by a combination of various genes and environmental conditions. This symposium discusses the design and implementation of biological assays that feature some level of complexity during the primary discovery steps.



## **ACS NY SECTION—60TH ANNUAL UNDERGRADUATE RESEARCH SYMPOSIUM (URS)**

In 2012, the 60th Annual Undergraduate Research Symposium will be hosted by SUNY College at Old Westbury, Old Westbury, NY on **Saturday, May 5, 2012.**

We look forward to your participation!

2012 URS Committee

## **NEW YORK SECTION — PROJECT SEED**

On September 27th, over fifty Project SEED students from the NY Section participated in the 10th Annual Research Posters Competition sponsored by the North Jersey Section of ACS.



**A group of students who participated in that competition that took place at Seton Hall University.**



**Winners of the lap top computers with printers. They are from left to right: Nadia Makar, Project SEED coordinator for the NY Section; Mauricio Aristizabal who worked at St. Peter's College under the mentorship of Dr. Jose Lopez; Billy Aguinaga who did research at NYU in the lab of Dr. James Canary; Shruti Patel who worked for Dr. Jamie Link at Princeton University; Luisa Marcos, a teacher; Emad Miqbel worked in the lab of Dr. Howard.A. Stone at Princeton University; Bill Suits, North Jersey Section of ACS.**

*(Photos courtesy of Nadia Makar)*

## NY SECTION — NATIONAL CHEMISTRY WEEK REPORT

It was a beautiful sunny Saturday on October 22nd, when the New York Section celebrated National Chemistry Week in the Great Hall of the New York Hall of Science (NYHOS). The NYHOS was built onto the Great Hall which is leftover from the 1964/65 World's Fair grounds!

This was the 7th year in a row that the New York Section had celebrated this special week at the NYHOS. There were over 300 volunteers from 19 different institutions in academia/industry who engaged children and their parents in hands-on activities and demonstrations. There were over 1,000 visitors to the NCW Event!

The theme this year was, "Chemistry – Our Health, Our Future". We explored the positive impacts of chemistry as it relates to nutrition, hygiene, and medicine. With that, our volunteers put on demos that pertained to the theme which included: Extracting Iron from Cereal (Pace); Magic Milk and Banana DNA (Polytech of NYU); Acids, Bases and Your Health (Stony Brook); Pur Water Purification (St. John's); Alkaseltzer Rockets (Adelphi); Chemical Cold Pack (Queensborough). Other demos included: Catch a Rainbow (NYU); Atomic

Trampoline (Columbia); Making Flubber (Hofstra); Shrinkers (St. Joseph's); Foaming Mushrooms (Mount Saint Vincent); Can't Pop this Balloon (Iona); Methylene Blue Sodium Hydroxide (Urban Assembly High School).

Scientists from PepsiCo taught kids how to flavor and color their own Gatorade. Scientists from International Flavors & Fragrances tested participants' ability to identify different scents, and VWR Scientific demonstrated equipment used in chemistry labs (they made it especially fun by using a balance to count M&M's!). Dr. Met, of the New York Mets (aka Mr. Met, who was given an honorary Ph.D. for the day!) made a special guest appearance and entertained kids and the volunteers!

The fun didn't stop there! We held a Poem Contest and the winning poems were displayed at the Great Hall for all to see; we hosted a Chemistry Bingo in the Viscusi Hall and gifts were given out to the lucky winners; universities prepared IYC Posters that were also displayed in the Hall! Volunteers were given and proudly wore IYC 2011 lapel pins! It was certainly a fun time for all and a wonderful way to celebrate our favorite time of the year together!

*(Photos courtesy of JaimeLee Iolani-Rizzo)*



## North Jersey Chair's Message

My fellow members of the ACS,

I am truly honored to serve as the Chair of the North Jersey Section (NJ ACS) for 2012. It amazes me how the officers and volunteers in North Jersey have made our Section one of the most dynamic within the ACS and I look forward to working with this dedicated and creative group to continue in our support of the ACS mission; "Improving people's lives through the transforming power of chemistry."

The North Jersey Section is lucky to have so many active topical groups and committees, including the Mass Spectrometry Discussion Group, Chromatography Group, Organic Topical Group, Teacher Affiliates, NMR Topical Group, MetroWomen Chemists Committee, Younger Chemists Committee, and the most recent addition, the NJ Regulatory CMC and Quality Topical Group. Because these groups offer top-notch programming throughout the year, the section has numerous unique events being planned for 2012. In addition, the section will host the Chemistry as a Life Science Symposium XV in March 2012 at Rutgers. In response to the economic downturn, our Careers In Transition Committee will continue their monthly meetings, in order to assist our members with their employment needs. Finally, we will continue our public outreach activities such as Project SEED, National Chemistry Week, and the Chemistry Olympiad.

As Chair of the Section, I will forge a stronger bond between industrial and academic chemists so that we can develop ways of better preparing future chemists for the chemical and pharmaceutical industries. I will also try to keep the wide-ranging and valuable activities of the Section in the national spotlight, so that we get the recognition we deserve for the efforts of our wonderfully dedicated members and volunteers. In addition, I will reach out to undergraduate student members at all North Jersey colleges and universities and encourage them to take advantage of the local section's topical groups and other programs, and the activities of the ACS as a whole.

As we move into 2012, I ask that you consider getting more involved in the North Jersey ACS and I encourage you to contact me with any thoughts, ideas and/or suggestions you may have for the section.

Amber Flynn Charlebois

2012 Chair, North Jersey Section ACS



### Robertson Microlit Laboratories

*Where speed and accuracy are elemental*

Elemental CHN, S, X, Analysis (*same day service*)

Metals by ICP-OES, ICP-MS, A/A

HLR, UV/VIS Spectroscopy

Ion Chromatography

Bioavailability

Polarimetry

DSC, TGA, melting point

KF Aquametry, Titrimetry

1705 U.S. Highway 46 • Suite 1D • Ledgewood, NJ 07852 • 973.966.6668 • F 973.966.0136

www.robertson-microlit.com • email: results@robertson-microlit.com

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

---

## North Jersey Meetings

---

<http://www.njacs.org>

### NORTH JERSEY EXECUTIVE COMMITTEE MEETING

There will be no Executive Committee Meeting in December.



### CHEMJOB (FORMERLY CAREERS IN TRANSITION GROUP) AND CNJSTEM MEETINGS

#### Job Hunting??

Are you aware that the North Jersey Section holds monthly meetings at Students 2 Science, Inc. in East Hanover, NJ 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 Chemjobs will be held **Monday, December 12, 2011**, at Students 2 Science, Inc., 66 Deforest Avenue, East Hanover, NJ. The meeting will start at 5:30 PM and end at 9:00 PM. Networking, Informational Surveys, LinkedIn Optimization, Resume writing, and Interview Practice will provide the program with considerable interaction among the participants. A pizza snack and soda will be served at 6:30 at a cost of \$5.

**Date:** Monday, December 12, 2011

**Times:** 5:30 - 9:30 PM

6:30 PM Pizza snack and soda

**Cost:** \$5.00

**Place:** Students 2 Science, Inc.  
66 Deforest Avenue  
East Hanover, NJ

A second monthly session will be held on the first Saturday of the month with a group called CNJSTEM led by Don Truss from 8:30 AM to 11:30 AM. There the format will differ from Chemjobs with a networking and job lead sharing, followed by a topical talk and demonstration. Participants are encouraged to bring their lap tops for hands on exploration of LinkedIn and other resource sharing. Coffee and Donuts will be shared for a small donation.

**Date:** Saturday, December 3, 2011

**Times:** 8:30 AM - 11:30 AM

**Cost:** Donation for coffee and donuts

Please contact [bill suits@earthlink.net](mailto:bill suits@earthlink.net), if you plan on attending these meetings.



### MASS SPECTROMETRY

**Date:** Tuesday, December 6, 2011

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



### CHEMISTRY AS A LIFE SCIENCE — SYMPOSIUM XV

The fifteenth in a series of CAALS biennial symposia.

#### *Distinguished Invited Speakers:*

Laura Kiessling  
University of Wisconsin-Madison

Marisa Kozlowski  
University of Pennsylvania

Kevan Shokat  
University of California  
San Francisco

Eric Sorensen  
Princeton University

Brian Stoltz  
California Institute of Technology

Jin-Quan Yu  
The Scripps Research Institute

**Date:** Friday, March 16, 2012

**Place:** The Paul Robeson Campus Center  
Rutgers, The State University of  
New Jersey  
Newark, NJ

**Cost:** Free and open to the public.

Further information regarding the symposium will be added to the website for the North Jersey Section of the American Chemical Society as it becomes available. Due to limited seating, advance registration is required. <http://www.njacs.org/caals>

Organizing Committee: V. Lombardo (The Chipperson Law Group), Shawn Erickson (Hoffman-La Roche), Stan Hall (Rutgers), Darren Hansen (Rutgers), Dave Hughes (Merck), Joseph Kozlowski (Merck), William Metz (Sanofi), Michael Miller (Bristol-Myers Squibb), Wen Shieh (Novartis)

## LABORATORY ROBOTICS INTEREST GROUP

### MID-Atlantic Automation User Meeting: Automation Applications and Technologies - The View From the Bench

This meeting is designed as an opportunity for scientists who want to share their automation experience and expertise with their peers.

Scientists and academicians from all disciplines and industries are welcome to submit an abstract for this unique meeting that will focus on automation solutions to real world problems from the perspective of the end users.

Poster and Podium presentations are sought, especially from bench-level scientists who have used automation to solve perplexing real world problems or have created unique applications for laboratory robotics systems. End-user presentations about the design and implementation of automated systems or novel software applications are also welcome.

Presentations may explore the history, development, and philosophy of robotics and automation. Users who have achieved expertise in a specific aspect of automation are invited to present an overview of that field. Scheduling preference will be granted to persons who have not made a presentation at a previous LRIG meeting.

Please submit an abstracts of 200 words or less. Please include the complete title of the presentation and the names, titles, and affiliations of all of the contributors with the presenter's name listed first. Podium presentations will be ten minutes long. Submit abstracts to Kevin Olsen at: [OlsenK@Mail.Montclair.Edu](mailto:OlsenK@Mail.Montclair.Edu) (973) 655-4076. **Deadline for submissions is December 10, 2011.**

**Date:** Thursday, January 12, 2012  
**Time:** Doors open at 5:30 PM  
**Place:** Rutgers Student Center  
Rutgers University  
New Brunswick, NJ

All are welcome and refreshments will be provided.

## 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.

## CECIL BROWN LECTURE



**Louis E. Brus**  
(Photo courtesy of Joseph Potenza)

**Professor Louis E. Brus**, from Columbia University delivered the 2012 Cecil Brown Lecture at Rutgers University on October 4, 2012. As part of the program, Professor Brus met separately with groups of graduate students, postdoctoral fellows, and professors from several disciplines. His lecture, entitled "Electron Correlation in Carbon Nanotubes and Graphene," was well attended and involved aspects of the fundamental nature and dynamics of these new and exciting species whose empirical formula is C<sub>n</sub> for Carbon.

The Cecil Brown lectureship dates to 1969. Previous lecturers include seven Nobel laureates among many distinguished Outstanding chemists. The lecture was sponsored by the North Jersey Section of ACS and by The Department of Chemistry and Chemical Biology of Rutgers University.

For further details of Professor Brus's work, visit [www.columbia.edu/cu/chemistry/groups/brus](http://www.columbia.edu/cu/chemistry/groups/brus)



**Dr. Louis Brus** of Columbia University Chemistry Dept. presenting the North Jersey American Chemical Society 2011 Cecil Brown Lecture at Rutgers University on October 4.

(Photo courtesy of John Penna)

## **RAMAPO COLLEGE IS NAMED “NORTH JERSEY’S NCW UNDERGRADUATE STUDENT CHAPTER FOR 2011”**

The Executive Committee of the North Jersey Section of the American Chemical Society was very pleased with the undergraduate participation during the Chem. Expo held at the Liberty Science Center on Saturday, October 22nd in celebration of National Chemistry Week. The second annual undergraduate competition was a huge success. The best interactive demonstration that applied to the theme of “Our Health; Our Future” was clearly the Ramapo College Student Chapter.

A total of five undergraduate chapters presented hands on demonstrations to the many excited young “future” scientists in attendance. This year’s winner, Ramapo College (eight students and two advisors) assisted the public in their understanding of DNA by allowing participants to visualize their own DNA. The seven Kean University chemistry students and their advisor enthusiastically shared with the crowd the chemistry of aromatherapy and aromatic compounds in an interactive display that showed samples and interesting chemical structures. Eight students and their advisor from The College of St. Elizabeth showed everyone how to make their own toothpaste and provided a set of vampire teeth for participants to take home. The College of New Jersey group had a fun display that included participants adding to their polymer-paper chain and to touching/playing with GOOP as they

explained the differences between liquids and solids. Finally, Fairleigh Dickinson University with ten students and one of their advisors displayed the salt, sugar and fat contained in a McDonald’s Happy Meal and showed attendees how raisins can dance in seltzer water.

All of these chapters did such a wonderful job demonstrating the chemistry of Our Health-Our Future! The section would like to thank each group very much for their participation in this year’s Celebration of National Chemistry Week!

The section has awarded Ramapo College Student Chapter with the title “North Jersey’s NCW Undergraduate Student Chapter for 2011” as well as the grand prize of \$150 prize for their outstanding demonstration. In addition the four other student chapters will be awarded with Honorable Mentions and will be presented with a check for \$75 each.

Congratulations to all of our Undergraduate Students and Chemistry Chapter Advisors!

See you all next year at the Chem. Expo!



*(Photos courtesy of Amber Charlebois)*



---

## Call for Nominations

---

### **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 Bettyann Howson,  
[chemphun@optionline.net](mailto:chemphun@optionline.net).



### **SOCIETY FOR APPLIED SPECTROSCOPY— NEW YORK SECTION**

#### **Gold Medal Award**

Nominations are being sought for the 2012 Gold Medal Award of the New York Section of the Society for Applied Spectroscopy. This coveted award was established in 1952 to recognize outstanding contributions to the field of Applied Spectroscopy. The Gold Medal will be presented at a special award symposium, arranged in honor of the awardee, at the 2012 Eastern Analytical Symposium. A nominating letter describing the nominee's specific accomplishments should be submitted along with a biographical sketch and list of publications by **January 31, 2012**. Please send all materials to Deborah A. Peru, Colgate Palmolive Co., 909 River Road, Piscataway, NJ 08855.

For further information, call (732) 878-7295 or email [Debbie\\_Peru@colpal.com](mailto:Debbie_Peru@colpal.com).

### **2012 AWARD FOR CREATIVITY IN MOLECULAR DESIGN & SYNTHESIS**

The ACS North Jersey Section seeks nominations for its 2012 Award for Creativity in Molecular Design & Synthesis. The award is sponsored by Bristol-Myers Squibb Co., Hoffmann-La Roche, Merck & Co., Novartis, and Rutgers University and is presented by the section biannually. The prize consists of a crystal plaque and a \$5,000 honorarium. The award recognizes initiative, creativity, leadership, and perseverance in pure and/or applied chemistry. Qualified candidates must be American chemists who are not younger than 40 years old prior to Jan. 1, 2012. Nominees must have had broad impact in the areas of chemical synthesis, method development, bioorganic/medicinal chemistry, pharmaceutical sciences, and/or molecular recognition.

Nominations should include a letter describing the nominee's achievements, a brief biography and curriculum vitae, and a list of the nominee's important published works. Successful nomination packets will include two to three recommendation letters supporting the candidate. Re-nominations are encouraged.

Please submit materials **by January 1, 2012**, to Akin Davulcu, Chemical Development Department, Bristol-Myers Squibb Co., 1 Squibb Drive, New Brunswick, NJ 08903.



### **2012 LI-ACS BOARD**

Nominations are open for the following positions on the Board of the LI-ACS subsection for 2012:

Chair-Elect (Chair 2013)  
Treasurer  
Director-at-Large (2 positions)

Nominations will be accepted from October 15 - November 30, 2011 and the election will be held at the LI-ACS holiday party on December 8, 2011. Nominations may be sent to David Sarno, Chair of the Nominations Committee, at [dsarno@qcc.cuny.edu](mailto:dsarno@qcc.cuny.edu). Please visit the LI-ACS webpage at [http://www.newyorkacs.org/sub\\_island.php](http://www.newyorkacs.org/sub_island.php) for more details.

## WCS DISTINGUISHED SCIENTIST AWARD 2012

The Westchester Chemical Society is accepting nominations for the "WCS Distinguished Scientist Award 2012". Scientists who live or work in Westchester qualify. Please send a resume by January 31, 2012 to Dr. Richard Goodman, 38 Aspinwall Road, Briarcliff Manor, NY 10510.

## Call for Abstracts/Posters

### LABORATORY ROBOTICS INTEREST GROUP

#### MID-Atlantic Automation User Meeting: Automation Applications and Technologies - The View From the Bench

Poster and Podium presentations are sought, especially from bench-level scientists who have used automation to solve perplexing real world problems or have created unique applications for laboratory robotics systems. End-user presentations about the design and implementation of automated systems or novel software applications are also welcome.

Presentations may explore the history, development, and philosophy of robotics and automation. Users who have achieved expertise in a specific aspect of automation are invited to present an overview of that field. Scheduling preference will be granted to persons who have not made a presentation at a previous LRIG meeting.

Please submit an abstracts of 200 words or less. Please include the complete title of the presentation and the names, titles, and affiliations of all of the contributors with the presenter's name listed first. Podium presentations will be ten minutes long.

Submit abstracts to Kevin Olsen at: [OlsenK@Mail.Montclair.Edu](mailto:OlsenK@Mail.Montclair.Edu), (973) 655-4076. **Deadline for submissions is December 10, 2011.**

## Others

### GOODSHOP.COM

Shoppers Turn to Innovative Ways to Help Their Favorite Nonprofits this Holiday Season – And Save Money While Doing So!

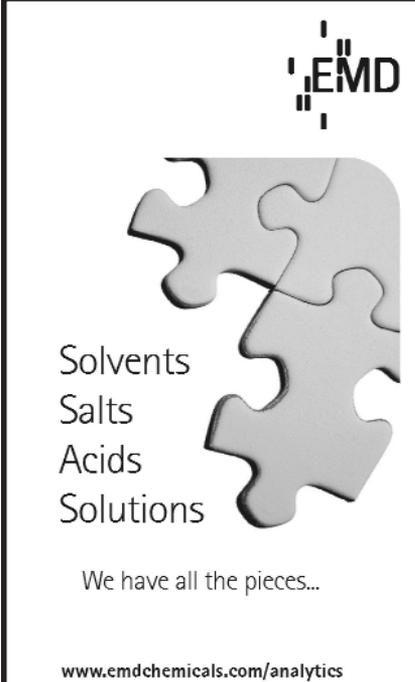
**GoodShop.com** donates up to 30% of

every purchase from more than 3,000 top stores to your favorite cause — and provides over 100,000 money saving coupons! No need to pull out your wallet to donate to your favorite cause this year — supporters are revolutionizing charitable giving this holiday season by ensuring that a percentage of every purchase they make is going back to their favorite nonprofit or school. In addition, these shoppers are getting access to great money-saving deals and coupons.

**How? By using [GoodShop.com](http://GoodShop.com).**

GoodShop.com works with more than 3,000 top online retailers including Toys "R" Us, Target, Best Buy, Apple, Sephora, Macy's, 1-800-Flowers, PetSmart, and Expedia among others. The shopping experience and prices are the same as going to the retailer directly, but each time you shop at one of these stores via GoodShop, a percentage of what you spend goes back to your favorite charity or school. And, even more exciting, [GoodShop.com](http://GoodShop.com) offers over 100,000 money saving coupons and free shipping offers. So, not only are you helping your cause, but you are also saving money while doing so.

*(continued on page 22)*



EMD

Solvents  
Salts  
Acids  
Solutions

We have all the pieces...

[www.emdchemicals.com/analytics](http://www.emdchemicals.com/analytics)

## OTHERS

(continued from page 21)

If you'd like to know organizations or individuals in your area using GoodSearch, please contact us and we can provide you a list.

For more information contact: JJ Ramberg, GoodSearch.com, (877) 466-3004 x 702, [jj.ramberg@goodsearch.com](mailto:jj.ramberg@goodsearch.com)



## INSPIRE YOUR CHILDREN OR SHARE WITH THEIR SCIENCE TEACHERS

### Video Series: What Made Me Become a Chemist

Check out Spellbound, a new ACS video series that tells the stories of eight chemists whose childhood curiosity about everyday things helped them launch careers in laboratories, win Nobel Prizes and make other notable achievements. Videos can be downloaded from [www.acs.org/Spellbound](http://www.acs.org/Spellbound), [www.youtube.com/ACSVideoTheater](http://www.youtube.com/ACSVideoTheater), iTunes, and on DVD by request from Michael Bernstein ([m\\_bernstein@acs.org](mailto:m_bernstein@acs.org)). The

videos are suitable for classrooms and other audiences of scientists and non-scientists.



## YOUNG PROFESSIONALS IN HEALTHCARE (YPH)

Dear Fellow ACS members!

Are you looking to meet and network with over 500+ young professionals in the life science/healthcare industry? If so, please become a member of YOUNG PROFESSIONALS IN HEALTHCARE (YPH) at [www.yphprinceton.com](http://www.yphprinceton.com).

At no cost, members will receive updates on upcoming

- Happy Hour/Networking events
- Career Panels and Fairs
- Charity Benefit Galas
- Guest Speaker Presentations

And MORE!



## ALTERNATIVE FUEL-POWERED CARS RACE AT 13TH ANNUAL AICHE CHEM-E-CAR COMPETITION

Colleges Apply Engineering Principles and Ingenuity to Construct Chemically Powered Vehicles; [WINNER] Takes Top Honors

The American Institute of Chemical Engineers (AIChE) yesterday announced that the University of Puerto Rico – Mayaguez took top honors at the international Chem-E-Car competition at AIChE's Annual Meeting in Minneapolis. The team's car, "CoKi Stroj" was powered by uses pneumatic pressure to run and a color changing reaction to stop. Coki Stroj defeated 31 other shoe-box sized cars bedecked with cougars, tiger tails and school logos.

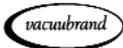
The Chem-E-Car competition, which began in 1999, is a fun and practical way for students to apply their knowledge of chemical engineering principles while helping build interest and expertise in alternative fuels. With a growing interest in real-world applications of alternative fuels worldwide, it's more important than ever for college students to learn about chemical reactions that can move vehicles.

"The student engineers do not know the size

# Mercury-free Vacuum Gauges

VACUUBRAND electronic vacuum gauges eliminate hazardous mercury. Displays show exact reading and trending. Choose the cordless DVR2 for vacuum to 1 mbar/Torr, or the DCP 3000 for vacuum to 0.1 mbar/Torr and RS232 interface.

DVR2 &  
DCP3000  
vacuum  
gauges



888-882-6730

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

[info@vacuubrand.net](mailto:info@vacuubrand.net)

of the load their car has to carry or the distance it must travel until the competition begins. The students then scramble to figure out how to get their car as close to the distance goal as possible. In this year's event, students were challenged to transport 350 milliliters of water 68 feet. Each team received two chances to run their cars, with their final score being their best attempt at meeting the established distance. University of Puerto Rico-Mayaguez came the closest and took the top prize of \$2,000.

Finishing in second place and taking home \$1,000 was the University of California-Davis. Their car, "Stroeve," was powered by an aluminum air battery with an iodine clock stopping mechanism. Missouri University of Science & Technology placed third with their car "Chem-E-Boat" and took home \$500. The Inherent Safety in Design Award (SACHE) went to Texas Tech for "The Dude," powered by a 6-galvanic cell battery. Bucknell University's car "Bessie," powered in part by bovine liver, received an award for the best use of a biological reaction to power a car.



## **AMERICAN INSTITUTE OF CHEMICAL ENGINEERS NAMES NEW OFFICERS AND BOARD MEMBERS FOR 2012**

NEW YORK – The American Institute of Chemical Engineers (AIChE) announced that David A. Rosenthal, reliability delivery and assets management manager for Jacobs Engineering Group, Inc. in its Houston, Texas office will become president of the 40,000 member organization in 2012.

Rosenthal succeeds 2011 President Maria K. Burka, program director in the Chemical, Bioengineering, Environmental and Transport Systems Division of the National Science Foundation in Arlington, Virginia. Joining him on the Board of Directors will be Phillip R. Westmoreland, who will serve as president-elect in 2012 and as president in 2013. Westmoreland is a professor of chemical and biomolecular engineering at North Carolina State University and executive director of the University's Institute for Computational Science and Engineering.

Also newly elected to three year terms as directors were: John Cirucci, senior engineering associate at Air Products and Chemicals, Inc., in Allentown, Pennsylvania; John G. Ekerdt, Dick Rothwell endowed

chair in chemical engineering and associate dean for research in the Cockrell School of Engineering at the University of Texas at Austin; Jack Hipple, principal with Innovation-TRIZ in Tampa, Florida; and Rosemarie D. Wesson, program director of the Chemical and Biological Separations Program at the National Science Foundation in Arlington, Virginia.

Rosenthal, an AIChE Fellow, has previously served as AIChE's treasurer and as a member of the board of directors. Before joining Jacobs Engineering earlier this year, Rosenthal's career in manufacturing competitiveness and asset reliability has included a variety of consulting and staff assignments, including 28 years with Rohm and Haas. He has been active in several AIChE local sections, chaired its Management Division, and served as chair of the 1996 Spring Meeting. Recently, he was instrumental in the formation of the Institute's new Upstream Engineering and Flow Assurance Forum. He received his B.S. in chemical engineering from Drexel University and an M.S. from the University of Texas.

---

## **Press Release**

---

### ***USA Science & Engineering Festival Expands for 2012 Event in Washington, D.C.***

#### **Lockheed Martin-hosted Festival lines up engineering and science stars to inspire next generation of innovators**

WASHINGTON – The Nation's largest celebration of science and engineering, the USA Science & Engineering Festival, is returning to Washington, D.C., **April 28-29, 2012**. Adam Savage and Jamie Hyneman, hosts of the Discovery Channel's hit TV series *MythBusters*, and Bill Nye the Science Guy are among the science superstars signed up to join the Festival Expo at the Walter E. Washington Convention Center and other key locations in the greater District of Columbia area. The 2012 Festival will include a new book fair and career pavilion as part of the Finale Expo.

The USA Science & Engineering Festival is a grassroots collaboration of over 500 of the United States leading science and engineering organizations.

For more information on the USA Science & Engineering Festival, please visit the Festival website.

# Professional/Product Directory

**NJIT**

New Jersey's Science & Technology University

**MATERIAL CHARACTERIZATION LABORATORY** • A Unique Combination of State-of-the-Art Analytical Instruments and Expertise

GC/MS • HPLC • NMR • FTIR • TOC • AA  
ICP-MS • XRD • XRF • AFM • SEM

York Center for Environmental Engineering & Science  
www.ycees.njit.edu/labs

138 Warren Street  
Newark, NJ 07102

Tel: (973)-596-5858  
Fax: (973)-642-7170



**Eastern Scientific**  
www.easternsci.com  
781-826-3456

## Vacuum Pump Problems?

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



Free pick-up & delivery  
Restrictions apply

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

\*Mass

\*Elemental Analysis

**NuMega Resonance Labs**

numegalabs.com P- 858-793-6057

**Elemental Analysis**

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

**HUFFMAN**

LABORATORIES, INC.

Quality Analytical Services Since 1936

Phone: (303) 278-4455

FAX: (303) 278-7012

chemistry@huffmanlabs.com

www.huffmanlabs.com



## PROMOTE YOUR PRODUCTS AND SERVICES • ADVERTISE IN THE INDICATOR

*The Indicator* readership is New York and Northern New Jersey's largest source for chemical and biochemical buyers. *The Indicator* reaches more than 12,000 readers each month. It has been estimated that these buyers annually purchase more than \$6,000,000 of:

- EQUIPMENT
- SUPPLIES
- CONSULTING SERVICES

Placing an advertisement in *The Indicator* is the lowest cost method of reaching this select audience.

For further information and other options for promoting your company's products and services visit:

[www.mboservices.net](http://www.mboservices.net)

## TELL OUR ADVERTISERS

Membership surveys show that you want more articles in our newsletter. If you tell our advertisers that you saw their ad here, they will provide more financial support and this will allow us to add more articles.

## Ad Index

### ANALYTICAL

EMD Chemicals	21
Huffman Laboratories, Inc.	24
Micron Inc.	8
Nacalai USA Inc.	9
New Jersey Institute of Technology	24
NuMega Resonance Labs.	24
Robertson Microlit Labs	16
Vacuubrand, Inc.	22

### EDUCATION

Stevens Institute of Technology	2
---------------------------------	---

### EQUIPMENT

Eastern Scientific Co.	24
Mass Vac, Inc.	4

### GENERAL

ACS-NY/NoJ Sections	18
ACS-NY/NoJ Sections	24
ACS-NY/NoJ Sections	24