

# THE Indicator

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**Barbara Hillery receives the New York  
Section's 2011 Outstanding Service  
Award from Frank Romano at the  
Sectionwide Conference in January.**

*(See article on page 19.)*

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Wednesday May 9:

**Exhibition, Agrichemicals  
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#### Agenda

Monday May 7 – Wednesday May 9

**Monday May 7:  
10.45 Start**

2nd Scholarship Golf Outing at Manufacturers' Golf & CC in Fort Washington

**Tuesday May 8:  
9.00am – 5.30pm**

Exhibition, Pharma Outsourcing Panel

**Wednesday May 9:  
9.00am – 5.30pm**

Exhibition, Crop Science Panel

#### More Information

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# THE Indicator

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

# April Calendar

## NEW YORK SECTION

**Thursday, April 5, 2012**

Chemical Marketing & Economics Group  
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**Wednesday, April 11, 2012**

Westchester Chemical Society  
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**Thursday, April 12, 2012**

MetroWomen Chemists Committee  
See pages 9 and 14.

**Friday, April 13, 2012**

New York Section Board Meeting  
See page 7.

**Thursday, April 19, 2012**

Long Island Chemical Society  
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**Friday, April 20, 2012**

High School Teachers Topical Group  
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**Tuesday, April 24, 2012**

Biochemical Topical Group  
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**Friday, April 27, 2012**

Hudson-Bergen Chemical Society  
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## NORTH JERSEY SECTION

**Mondays, April 9 and 23, 2012**

Careers in Transition Group  
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**Thursday, April 12, 2012**

MetroWomen Chemists Committee  
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**Monday, April 16, 2012**

NoJ Executive Committee Meeting  
See page EFÉ

**Wednesday, April 18, 2012**

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

**Friday, April 27, 2012**

64th Annual Undergraduate Research  
Conference  
See page EFÉ

**The Indicator is posted to  
the web on the 15th of the  
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## THIS MONTH IN CHEMICAL HISTORY

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

A splendid new edition of one of the classics of scientific exposition has recently been published. This is a work that has been in print since it first appeared 150 years ago: I refer to "The Chemical History of a Candle" by Michael Faraday. In a column many years ago I wrote about Faraday, and I am reproducing that essay in this month's column before turning, in my next column, to an analysis of this long-lived book.

A towering giant of the physical sciences, and yet one of the most modest and unassuming of men, was born on September 22, 1791, in Surrey, England, third child of a blacksmith and a farmer's daughter. Michael Faraday has always been one of my scientific heroes. He was essentially self-educated, and born and raised in humble circumstances. By force of character and intellect he became a leader among chemists and physicists. The Faraday family moved to London when Michael was only 5, and when he was still in his teens his father died. His early education was fragmentary: "consisting of little more than the rudiments of reading, writing, and arithmetic at a common day school" to quote the man himself. At the age of 13 he became an errand boy in the shop of a bookbinder and stationer, and at 14 became an apprentice in the same shop. "Whilst an apprentice I loved to read the scientific books which were under my hands, and among them delighted in [Mrs.] Marcet's "Conversations in Chemistry" and the electrical treatises in the Encyclopaedia Britannica. I made such simple experiments in chemistry as could be defrayed in their expense by a few pence per week, and also constructed an electrical machine ...". We see here the themes of chemistry and electricity that were to become the center of Faraday's scientific work.

In 1812 a customer took Faraday to hear some lectures by Sir Humphrey Davy, Professor at the Royal Institution. Inspired by these, and by his own reading, Faraday made careful copperplate notes of the lectures, embellished with drawings, and eventually sent them to Davy with a request to be considered for a position. Davy interviewed Faraday, gave him a realistic appraisal of the prospects of a career in science: "telling me that science was a harsh mistress and in a pecuniary point of view but poorly rewarding those who devoted themselves to her service"; and eventually appointed him as a laboratory assistant. Davy had recently married a rich widow, and was reducing his involvement with the Royal Institution. In 1813 he and Lady Davy, accompanied by Faraday, made an extended tour of Europe and in Florence Faraday assisted Davy in a combustion of diamond at the focus of a large burning lens. Faraday was promoted in 1815, and in 1816 gave his first course of lectures and published his first paper, analyzing the native caustic lime of Tuscany. In 1817 six publications of Faraday's appeared. His early chemical work included a variety of analyses, and experiments on novel alloys of iron. In 1821 Faraday was promoted again, to the post of superintendent of the laboratory, and this allowed him to marry, since living quarters were furnished for him at the Institution.

By 1824, when he was 33, Faraday had been elected to the Royal Society, had collaborated with Davy on the liquefaction of chlorine and ammonia, and had begun his work on the relationship between magnetism and electricity. He was also involved in some more practical matters. The Royal Society asked him to work on improving optical glasses. Faraday was a hard worker, and unsparing of himself. His laboratory notebooks, which have been published and which are models of note-taking, show how hard he drove himself. In 1827 he published a book on Chemical Manipulation that went through four editions, and is a wonderful source of information about how early nineteenth-century chemistry was actually done.

He took few holidays, and suffered periodically from fatigue and exhaustion. In 1833 and 1834, turning to electrical conduction, he established the principles of electrochemistry in what we now call Faraday's Laws. Seeking a nomenclature for this new subject he turned to Whewell at Cambridge, and they coined the terms so familiar to us all: electrode, ion, electrolysis etc.-- all derived from impeccable classical roots. Towards the end of the 1830's Faraday took on yet more public responsibilities, including acting as an elder in his church (the Sandemanians). The weight of his burdens broke him for a while. He had to stop his scientific work for a year, and for four years he greatly reduced his lecturing and research. However he maintained one important tradition of the Royal Institution, namely the presentation of a lecture course around Christmas time to a juvenile audience. One of these lecture series is one of the classics of popular science, and has remained in print continuously from the time it was first given. I refer, of course, to Faraday's "Chemical History of a Candle". Faraday's last years as a researcher were devoted to studying the effects of magnetic fields on light, and he did further work on gas liquefaction. The last decade of his life saw a great diminution of his scientific work, but he had well earned his retirement. He died on August 25, 1867. Let me end with a quotation from J. R. Partington, the eminent historian of chemistry. "In his time Faraday was a model for scientific men. Of humble origin, he rose by his genius to the highest rank of scientific eminence, and his moral character and integrity were on the same level." I would omit the "in his time"; Faraday is for all time.

## APRIL HISTORICAL EVENTS IN CHEMISTRY

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

### April 1, 1887

One hundred and twenty-five years ago, Bernardo A. Houssay was born. He the Nobel Prize in Physiology or Medicine in 1947 for his discovery of the part played by the hormone of the anterior pituitary lobe in the metabolism of sugar with Gerty T. Cori and Carl F. Cori for their research on the hormone of the anterior lobe and its role in the metabolism of sugar; discovered how glycogen is catalytically converted.

### April 4, 1867

A pioneer in clinical chemistry, Otto Folin, was born on this day. He engaged in the systematic development of "micromethods"; the use of colorimetry in biochemistry using the Duboscq colorimeter; and the use of an enzyme for analytical purposes, urease to measure urea. With Vintila Ciocalteu, he developed the "Phenol Reagent" for use in protein analysis. That is the basis of the Lowry method for protein determination.

### April 6, 1928

Fifty years ago in 1962., James D. Watson shared the Nobel Prize in Physiology or Medicine with F. H. C. Crick and M. H. F. Wilkins for their discoveries concerning the molecular structure of nucleic acids and its significance for information transfer in living material. He was born on this date and is a researcher on the double helix structure of the deoxyribonucleic acid (DNA) molecule.

### April 10, 1790

The U. S. Patent Office was established on this date according to Article 8, Section 1 of the Constitution. The first patent was on potash and pearl ash granted to Samuel Hopkins.

### April 16, 1850

Sidney G. Thomas who solved the problem of separating phosphorus from iron in the Bessemer Converter, was born on this date.

### April 17, 1869

Robert Robertson did research in explosives including amato and tetryl (trinitrophenylmethyl-nitramine). He was born on this day.

### April 19, 1912

One hundred years ago, Glenn T. Seaborg was born on this date. He codiscovered americium (Am, 95) 1944, berkelium (Bk, 97) 1950, californium (Cf, 98) 1950, curium (Cm, 96) 1944, einsteinium (Es, 99) 1952, fermium (Fm, 100) 1953, mendelevium (Md, 101) 1955, nobelium (No, 102) 1958, plutonium (Pu, 94) 1940, and seaborgium (Sg, 106) 1974. In 1951, he and Edwin M. McMillan received the Nobel Prize in Chemistry for their discoveries in the chemistry of the transuranium elements.

### April 20, 1912

One hundred ago, Gertrude E. Perlmann was born on this date. She did research in protein chemistry and received the Garvan Medal in 1965.

### April 20, 1927

Twenty-five years ago in 1987, K. Alexander Müller shared the Nobel Prize in Physics with J. Georg Bednorz for their important break-through in the discovery of superconductivity in ceramic materials. He was born on this date.

### April 21, 1889

Seventy-five years ago in 1927, Paul Karrer shared the Nobel Prize in Chemistry for his investigations on carotenoids, flavins and vitamins A and B2 with Walter N. Haworth for his investigations on carbohydrates and vitamin C. He synthesized vitamins A, 1931, B2 (riboflavin), 1935, and E (tocopherol), 1938, and was born on this date.

### April 22, 1919

Twenty-five years ago in 1987, Donald J. Cram shared the Nobel Prize in Chemistry with C. J. Pedersen and J-M. P. Lehn for their development and use of molecules with structure-specific interactions of high selectivity. He did research in the application of stereochemical techniques to organic reaction mechanism; invented carceplexes or guest molecules completely encapsulated by the host, synthesized a variety of host-guest complexes including crown ether complexes and was born on this date.

### April 28, 1937

Seventy-five years ago in 1837, Champion International was incorporated on this date.

Additional historical events can be found at Dr. May's website, [faculty.cua.edu/may/history.htm](http://faculty.cua.edu/may/history.htm).

## 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 6:00 PM at St. Johns University, Writing Center, Jamaica, NY. Dr. JaimeLee Iolani Rizzo will chair the meetings.

#### Friday, April 13

Friday, June 8

Friday September 14

Friday November 16

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



### CHEMICAL MARKETING & ECONOMICS GROUP

#### Inside Washington: Regulatory & Legislative Outlook

*Speaker:* Larry Sloan  
President and CEO  
Society of Chemical  
Manufactures and Affiliates



**Larry Sloan**

The chemical sector is increasingly facing onerous and overreaching regulations that threaten to undermine our nation's innovation and global competitiveness. Gain insights from the president of one of the most influential groups in specialty chemicals about:

- Stringent environmental regulations such as proposed amendments to the Chemical Management Area Sources Rule and Boiler MACT (Maximum Achievable Control Technology)

- The ongoing effort to reform the Toxic Substances Control Act (TSCA) that could weaken Confidential Business Information (CBI) protections that have helped the US's role as an innovation leader until now
- An update on key Congressional concerns on plant security under the Chemical Facility Anti-Terrorism Standards (CFATS)
- Current international trade issues, including the status of the Miscellaneous Tariff Bill and Free Trade Agreements Join us to learn more about issues that impact investment and growth strategies.

Join us to learn more about issues that impact investment and growth strategies.

Larry Sloan is currently President and CEO of the Society of Chemical Manufactures and Affiliates, the leading trade association serving small and mid-sized batch, custom and specialty chemical manufacturers. In this capacity, he focuses SOCMA's efforts on increasing public confidence in this industry sector, championing the passage of rational laws and regulations, and maximizing business opportunities for all SOCMA member companies.

Prior to joining SOCMA, Larry served as President of the Adhesive and Sealant Council from January 2005 to February 2010. Larry joined the Council in 2001 as Director Member Services, and was promoted to Senior Director in 2004. Larry began his career as a chemical engineer at Air Products & Chemicals in Allentown, PA and later worked for Nalco Chemical Company in Naperville, IL in marketing, manufacturing and later sales capacities. Larry entered the nonprofit sector in 2000 as Director Membership for the Consumer Specialty Products Association, a trade association of companies in the chemically formulated products industry, before moving to the ASC the following year. Larry graduated magna cum laude from the University of Pennsylvania with a Bachelor of Science in Chemical Engineering. Later he returned to J.L. Kellogg Graduate School of Management at Northwestern University where he received his Masters of Management and graduated with honors. In 2006, Larry received his Certified Association Executive (CAE) designation through the American Society of Association Executives. He is actively involved in the

*(continued on page 8)*

## CHEMICAL MARKETING & ECONOMICS GROUP

(continued from page 7)

NAM's Council of Manufacturing Associations, and in 2012 was elected to serve as Council Board Chair.

**Date:** Thursday, April 5, 2012

**Times:** 11:15 AM - 12:00 Noon

Registration and Networking

12:00 Noon - 1:00 PM Luncheon

1:00 - 2:15 PM Presentation &

Webcast

**Place:** Yale Club

50 Vanderbilt Avenue

New York, NY (between 5th

Avenue and Park Avenue)

**Cost:** \$90 for Non-members \$70 for 2012

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## WESTCHESTER CHEMICAL SOCIETY

### SPECIAL SEMINAR - The Role of TSG-6 Protein in Extracellular Matrix Remodeling Associated with Inflammation and Fertility

**Speaker:** Georg Wisniewski  
Department of Microbiology  
School of Medicine  
New York University

TSG-6 protein is a highly conserved protein involved in inflammatory processes, ovulation, and innate immunity. TSG-6 expression is induced by pro-inflammatory cytokines in many cell types, and by certain hormones and growth factors in a tissue-specific man-

ner. Both the spatial and temporal pattern of TSG-6 expression is tightly controlled. TSG-6 interacts with the constitutively expressed plasma protein inter-alpha-inhibitor and with hyaluronan, a ubiquitous glycosaminoglycan in the extracellular matrix of most tissues. TSG-6 transfers a subunit of inter-alpha-inhibitor to hyaluronan, forming covalent hyaluronan-protein complexes. These are the only covalent hyaluronan-protein complexes currently known. These complexes have been associated with stabilization of hyaluronan and protection of the structural integrity of the extracellular matrix during conditions of stress. TSG-6 has shown potent anti-inflammatory and tissue-protective activities in experimental models of acute inflammation and autoimmune arthritis. TSG-6 is produced in large quantities by mesenchymal stem cells and it mediates some of their therapeutic effects.

Dr. Wisniewski is an Associate Professor in the Department of Microbiology at the NYU School of Medicine. His research is focused on the damage to and the remodeling of the extracellular matrix, in particular in cartilage, during inflammation and related pathologic processes, including rheumatoid arthritis and osteoarthritis, and in the identification of biomarkers that characterize the disease process, predict progression and thereby help to improve medical decision making.

**Date:** Wednesday, April 11, 2012

**Times:** Refreshments 5:30 PM

Lecture 6:00 PM

**Place:** Westchester Community College

75 Grasslands Road

Gateway Building Room 110

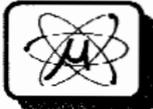
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## METRO WOMEN CHEMISTS COMMITTEE

**Date:** Thursday, April 12, 2012  
(See under NoJ Meetings, page 14.)



## LONG ISLAND SUBSECTION

### Shape Memory Alloys and the Use of Nanocomposites to Improve Their Characteristics

**Speaker:** Dennis Brown  
Department of Physics  
Northern Illinois University

Ferromagnetic shape memory alloys belong to a class of materials that change their dimension upon the application of an external magnetic field. In this talk, the magnetoelasticity and magnetoplasticity behavior of ferromagnetic shape memory alloys is explored. These alloys undergo a reverse phase transformation that can be influenced by temperature, magnetic field, and stress fields. To understand the unusual strain behavior of these materials, one must have an understanding of the rearrangement of martensite variants and the movement of twin boundaries. Also, the shape memory effect can be greatly influenced by nanocomposites or nanoparticle alloys. This talk will cover how high energy synchrotron x-ray diffraction has been critical to observing and understanding the striking properties of ferromagnetic shape memory alloys.

Dr. Brown earned his Ph.D. at Stanford University in synchrotron research on nuclear resonance scattering at SSRL/SLAC. His postdoctoral work at the National Institute of Standards and Technology was on neutron interferometry. He is currently Associate Professor of Physics at Northern Illinois University where his research interests include Mossbauer physics and high energy x-ray diffraction.

**Date:** Thursday, April 19, 2012  
**Time:** Social 6:30 PM  
Seminar 7:00 PM  
**Place:** Hofstra University  
Breslin Hall, Room 106 (please note that this is a new location)  
**Cost:** Seminar is free and open to all.  
Dinner: following the seminar at a nearby restaurant (\$25)

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.

## HIGH SCHOOL TEACHERS TOPICAL GROUP

### Annual Demo Derby

An evening of non-stop demonstrations by the attendees (5-8 minutes max.) If you want to participate, just bring your demo along with clean-up equipment and your safety apparel, and write your name on the board. Remember, it is quick, quick, quick. You are not teaching, just showing what can be demonstrated in the classroom. If you demonstrate, a write up of the procedure (including safety), required materials, scientific principles and expected conclusions for distribution to the audience of 50 would be appreciated but not required.

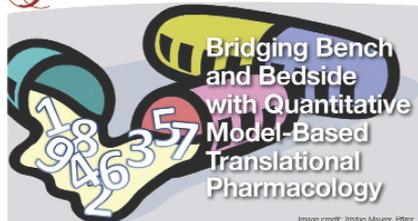
**Date:** Friday, April 20, 2012  
**Time:** Social and Dinner — 5:45 PM  
**Place:** M&G Pub (Murphy and Gonzales)  
21 Waverly Place  
(at Green Street, North-east corner)  
New York, NY  
No reservations required  
**Time:** Meeting 7:15 PM  
**Place:** New York University  
Silver Center Room 207  
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; (516) 385-4698 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.

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

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



**Bridging Bench and Bedside with  
Quantitative Model-Based Translational  
Pharmacology**

**Organizers:** Cheng Chang, PhD  
Pfizer

Anis Khan, PhD  
Merck

Tristan Maurer, PhD  
Pfizer

Mercedes Beyna, MS  
Pfizer

Jennifer Henry, PhD  
The New York Academy of  
Sciences

**Speakers:** Cheng Chang, PhD  
Pfizer

James M. Gallo, PhD  
Mount Sinai School of Medicine

Donald E. Mager, PhD  
State University of New York  
at Buffalo

Tristan Maurer, PhD  
Pfizer

Matthew Onsum, PhD  
Merrimack Pharmaceuticals

Eric Stefanich, PhD  
Genentech, Inc.

Dane Wittrup, PhD  
MIT

Jing Yu, PhD  
Novartis

Modeling and simulation are critical in systematically integrating diverse preclinical information to predict clinical response. In this symposium, guiding principles and specific applications in quantitative translational research will be reviewed.

**Date:** Tuesday, April 24, 2012

**Time:** 9:00 AM – 5:00 PM

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

**Cost:** This event is has reduced-rate registration for ACS and NYAS members, at \$25 or \$10 (for students and post-docs). Please select the appropriate non-member Registration Category and use the Priority Code ACS. 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/Pharmacology](http://www.nyas.org/Pharmacology)

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



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

### The 14th Annual Undergraduate Research Symposium

This is a forum for undergraduate students and their faculty mentors from colleges and universities that participate in the subsection's activities to present the results of their research. Outstanding graduating students are also being recognized (they receive the Hudson-Bergen Chemical Society Award consisting of a certificate and a book). All the presenters will receive certificates and a book. Students who wish to present posters must send an abstract via e-mail to [mleonida@fdu.edu](mailto:mleonida@fdu.edu), by **April 10, 2012**. The abstract should be in MS Word format and must include the names and addresses of the student(s) and their faculty adviser(s) in addition to the title of the abstract. The abstract should not exceed 200 words. The name of the student presenting the poster should be underlined. The posters have to be self-supported. There is no registration fee.

This year's symposium also features the lecture:

#### Molecular Docking, Inhibitors and Probes in Pharmaceutical Chemistry

*Speaker:* Ish Kumar, Ph.D.  
FDU (Metropolitan campus)

Molecular docking is an important computational tool in early stage of ligand discovery, where a structure of the target is available. Docking is frequently used to predict the binding orientation of small molecules as candidates to their protein targets and to determine the affinity and activity of those molecules. We have applied this technique to identify inhibitors to Goodpasture's disease (GP).

Goodpasture's disease is an autoimmune disorder affecting kidney and lung basement membranes causing organ damage. The responsible antigen has been identified on the non-collagen domain of the alpha-3 chain of type IV collagen protein. The working hypothesis was that molecular inhibitors

against this antigen could change the course of disease. In collaboration with University of Virginia, we performed virtual screening of a 75,000 small molecules subset of ZINC database against the antigen epitope (P21N). We have identified 16 molecules; three of them were evaluated for biological activity using rat lymphocyte proliferation assays (LPA). These molecules showed more than 50% LPA inhibition. They could be potential inhibitors of GP. In another project, in collaboration Queens College, a series of 2-(arylsulfonyl) oxirane compounds have been synthesized, and evaluated as potential mechanism-based inhibitors of human Protein Tyrosine Phosphatase 1B. In a third project, we synthesized a library of fluorescent styryl compounds by the condensation of aldehydes and pyridinium salts. All the compounds were isolated, purified and characterized. Further these molecules were evaluated using confocal microscopy.

Dr. Kumar holds a Ph.D. in bioorganic chemistry from the Institute of Microbial Technology, Council of Scientific Industrial Research Laboratory (Chandigarh, India). He did his first postdoctoral research work with Dr. B. N. Singh at SUNY, Upstate Medical University. He continued as Research Associate with Prof Rex Pratt at Wesleyan University. He always has been working on the interface of Chemistry and Biology. Presently, he is an Assistant Professor of Chemistry at Fairleigh Dickinson University (Metropolitan Campus). His research interests involve designing new molecular inhibitors using the tools of computational chemistry, enzyme structures, enzyme kinetics and chemical synthesis.

**Date:** Friday, April 27, 2012

Times: Poster Session 5:00 PM  
Pizza Dinner 6:00 PM  
Awards and Lecture 7:00 PM

Place: Jeepers Café  
Fairleigh Dickinson University  
Teaneck, NJ

## 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.

## **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.



## **WESTCHESTER CHEMICAL SOCIETY**

### **THE DISTINGUISHED SCIENTIST AWARD AND DINNER AND COLLEGE STUDENT ACHIEVEMENT AWARDS**

#### **Biomarkers of Cell Proliferation and Death Applicable for Multiparameter Cytometry**

Speaker: Zbigniew Darzynkiewicz, MD, PhD  
New York Medical College  
Valhalla, NY

Advances in instrumentation and new methodologies are the driving force for progress in research in cell biology and medicine. Major methodological developments from my laboratory, which led to the establishment of novel biomarkers to investigate individual cells in large cell populations by flow and laser scanning- cytometry, will be reviewed. Our methods to concurrently assess cellular DNA and RNA content as well as the degree of chromatin condensation have found worldwide application in studies of cell proliferation, in programmed cell death (apoptosis), and in male fertility assays. The methodology that relies on detection of DNA strand breaks in cell nuclei is now widely used in studies of cell death. Methods designed to assess DNA damage signaling as well as cell senescence, now widely used to study the mechanism of action of anticancer drugs, will also be presented. Major applications of these methods in the fields of cell biology and medicine will be outlined.

Zbigniew Darzynkiewicz, M.D., Ph.D. is the Director of the Brander Cancer Research Institute at the New York Medical College and the Professor of Pathology, Medicine and Microbiology/Immunology at the same College. Dr. Darzynkiewicz has been a Member of the Sloan-Kettering Institute for Cancer Research, New York, N.Y. and Professor of Cell Biology and Genetics at Cornell University Medical School. He received his M.D. (with the highest honors) and Ph.D. degrees from the Medical University of Warsaw, Warsaw, Poland and completed post-graduate studies at the State University of New York at Buffalo and at the Medical Nobel Institute of the Karolinska Institute, Stockholm, Sweden. His research concentrates on cell biology with a focus on molecular mechanisms associated with cell proliferation, apoptosis, and sensitivity to anti-cancer drugs and he has developed analytical methods with world-wide application. He has been the president of the Cell Kinetics Society and the International Society for Analytical Cytology. His research has been supported, by grants from the NIH (including a prestigious MERIT award) and NASA. Dr. Darzynkiewicz is the Editor or Co-editor of 5 scientific journals and a Member of the Editorial Board of 11 other scientific journals. He is a Foreign Member of the Polish Academy of Sciences (PAN; Warsaw), Polish Academy of Learning (PAU, Krakow) and a Fellow of American Institute for Medical and Biological Engineering (AIMBE). He has published over 680 peer-reviewed articles, and has authored and/or edited 15 books. He holds eight US patents. His publications have been cited over 28,000 times in the scientific literature and 86 of his publications were cited over 86 times, which ranks him at # 86 citation metrics Hirsch "h-index". He has presented over 345 invited lectures and seminars at national and international congresses, symposia, and in various research institutions.

**Date: Wednesday, May 2, 2012**

Times: Social 5:00 PM  
Lecture and Awards 6:00 PM  
Dinner 7:00 PM

Place: Pace University  
861 Bedford Road – Entrance #2  
The Campus Center, Butcher Suite  
Pleasantville, NY 10570

Cost: Students \$25  
ACS Member \$25  
ACS Non-members \$30

RSVP Required – [pwrc@earthlink.com](mailto:pwrc@earthlink.com)

For more information, contact Paul Dillon:  
E-Mail [PaulWDillon@hotmail.com](mailto:PaulWDillon@hotmail.com)

Phone (914) 524-3313

For Pace University information:  
[eweiser@pace.edu](mailto:eweiser@pace.edu)

Westchester Chemical Society Webpage:  
[http://www.newyorkacs.org/sub\\_west.php](http://www.newyorkacs.org/sub_west.php)



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

*Presented by The New York Chemistry Students' Association, Student Affiliate Committee – New York Section American Chemical Society*

**Nanoscience: Semiconductor Quantum Dots and Carbon Nanotubes**

### Keynote Speaker

**Prof. Louis E. Brus**

Dept. of Chemistry, Columbia University, New York  
 The highlight of this year's symposium is the Keynote Address to be delivered by Prof. Louis Brus of Columbia University, New York.

The Keynote Address will be followed by original research presentations given by students from colleges and universities throughout the tri-state area.



*Speaker:* Prof. Louis E. Brus  
 Dept. of Chemistry  
 Columbia University, NY

The talk is aimed for a broad audience. I describe the chemistry and physics of semiconductor nanocrystals and carbon nanotubes. Both materials are intermediate between molecules and crystalline solids in their electronic properties. Simple molecular orbital ideas help us to understand the size dependence of their properties. Novel synthesis is the key to scientific progress in both materials. Rigorous understanding and characterization requires that the properties of single nanocrystals and tubes be observed.

The Keynote Address will be followed by original research presentations given by students from colleges and universities throughout the tri-state area.

**Date: Saturday, May 5, 2012.**

**Times: 8:00 AM - 3:00 PM**

**Place: SUNY College at Old Westbury  
 Old Westbury, NY**

**Cost:** FREE Registration for student members of the National ACS, faculty mentors who register in advance and sponsors. For non-ACS members and guests, the registration is \$35 in advance. All on-site registration is \$45 for faculty, staff and guests. Breakfast, luncheon and award reception included.

Sign up as an attendee at  
<http://www.newyorkacs.org/meetings/urs/urs.php>

Checks for the registration fee should be made out to: "NY ACS URS" and sent to: Prof. Justyna Widera, Adelphi University, Department of Chemistry, 1 South Avenue, Garden City, NY 11530.

In order to receive the advanced registration benefits, checks need to be **received by April 21, 2012. Early registration fee (Deadline April 11th).**

If you have any questions please contact:  
[nyacsurs2012@gmail.com](mailto:nyacsurs2012@gmail.com) or  
[widera@adelphi.edu](mailto:widera@adelphi.edu), (516) 877 4135.

**SIGNIFICANT DATES FOR 60TH URS**  
 Notification of the abstract acceptance will be announced by April 4, 2012.

**Deadline for Symposium Advanced Registration - April 11, 2012**

E-mail questions to:  
[nyacsurs2012@gmail.com](mailto:nyacsurs2012@gmail.com)



## WESTCHESTER CHEMICAL SOCIETY

The Westchester Chemical Society met February 6, 2012 to hear a presentation by Dongbiao Ge, a doctoral candidate (thesis defense scheduled in March) at the Polytechnic Institute of NYU. Mr. Ge's talk, entitled "Electrochemical Detection of Surface Hybridization Based on Thermostable DNA Monolayers," centered on the development, synthesis and thermal and electrochemical properties of ferrocene-conjugated nucleic acid probes and their use on polysiloxane-treated microarrays. We enjoyed Mr. Ge's interesting talk and the discussion that followed.



**Peter Corfield, Jody Reifenberg, Rolande Hodel, Dongbiao Ge and Paul Dillon at the Westchester Chemical Society, February 6, 2012.**

*(Photo courtesy of Paul Dillon)*

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## North Jersey Meetings

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<http://www.njacs.org>

### NORTH JERSEY EXECUTIVE COMMITTEE MEETING

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

**Date:** Monday, April 16, 2012

**Time:** 6:00 PM

**Place:** Fairleigh Dickinson University  
Hartman Lounge, The Mansion  
285 Madison Ave  
Madison, NJ

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

Directions can be found using map quest and the address above. A map of the campus can be found at <http://www.fdu.edu/fm.html>.

Parking is available in the Mansion Lot.

Reservations: call (732) 463-7271 or email [njacsoffice@aol.com](mailto:njacsoffice@aol.com) prior to Wednesday, April 11, 2012.

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 MEETINGS

#### Job Hunting??

Are you aware that the North Jersey Section holds bi-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
- Conducting an effective job search
- Networking to discover hidden jobs

**Dates:** Mondays, April 9 & 23, 2012

**Times:** Meeting 5:30 - 9:00 PM

Pizza snack and soda 6:30 PM

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

**Cost:** \$5.00

**Reservations:** at [njacs.org/careers.html](http://njacs.org/careers.html)

A job board and networking assistance will be offered at all topical groups meetings. Confirm at [billssuits@earthlink.net](mailto:billssuits@earthlink.net) (908) 875-9069 to meet 1 hr. before.

See [http://njacs.org/jobs\\_ifr.html](http://njacs.org/jobs_ifr.html) for local jobs and career assistance blogs.



### METRO WOMEN CHEMISTS COMMITTEE

#### Gift of Mentoring Event

The Metro Women Chemists Committee is giving out the 2012 Mentorship Award at our Gift of Mentoring Meeting and Award Ceremony on **Thursday, April 12, 2012**, at the Rutgers Busch Campus. This meeting will be co-sponsored by AWIS ([www.awisnj.org](http://www.awisnj.org)) and details of the event can be found on our website <http://njacs.org/metrowomen.html>.



### NORTH JERSEY CHROMATOGRAPHY GROUP

**Date:** Wednesday, April 18, 2012

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



### NoJ SECTION'S 64th ANNUAL UNDERGRADUATE RESEARCH CONFERENCE

*Hosted by:* The FDU Chemistry Club

The Sixty-Fourth Annual Undergraduate Research Conference provides an opportunity for talented undergraduate students in the North Jersey Section to give an oral presentation on their research results. All undergraduate students in the North Jersey Section are invited to participate in this very rewarding event. The research presentations will be judged by local chemists working in industry or academia and the student giving the best presentation will be given the 2012 Jean Asell Duranna Award. In addition the top three presenters will be awarded

cash prizes. The student award winners and their advisors will then be invited to attend the North Jersey Section's Annual Awards Dinner held on Monday, May 14, 2012 in Lenfell Hall on the Fairleigh Dickinson University campus in Madison, NJ.

#### Abstract Information:

Clearly indicate the title of the presentation and all authors. Abstracts must be no more than 200 words and need to be submitted as a word document attached to an email with – **URC-abstract** in the subject line.

**Abstracts deadline is April 20, 2012.**

**Date: Friday, April 27, 2012**

Times: Noon until 5:00 pm

Place: Fairleigh Dickinson University  
285 Madison Avenue  
Hartman Lounge, The Mansion  
Madison, NJ.

For more information about this event contact Amber Charlebois at [charleb@fd.edu](mailto:charleb@fd.edu)

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

### ChemTAG MEETING

#### Using the TI-Nspire in the Science Classroom

Activities will include:

- Collecting data from Vernier Sensor Probes
- Collecting student data and answers using Navigator wireless system
- Examples of Chemistry Lab
  - Temperature data collection
  - Boyle's Law
  - Radioactive decay
- Examples of Physics Lab
  - Conservation of Momentum
  - Static Friction Vs. Kinetic Friction
  - Freefall/Air Resistance

**Date: Thursday, May 3, 2012**

Times: Refreshments 4:00 PM  
Meeting 4:30 PM – 6:30 PM

Place: Morristown High School  
3rd floor science wing  
50 Early Street  
Morristown, NJ

For more information please contact:  
Barbara McNally, Email: [barbara.mcnelly@morristownhighschool.org](mailto:barbara.mcnelly@morristownhighschool.org)

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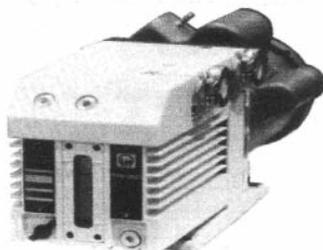
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## METRO WOMEN CHEMISTS COMMITTEE

### February Meeting: "The Chemistry of Chocolate"

By Sarah Carberry and Fatma Tat (MWCC co-chairs)

On February 8th the ACS Metro Women's Chemist Committee (MWCC) held their winter meeting at Fairleigh Dickinson University in Madison, NJ. There were 13 women present from a variety of scientific backgrounds. The speaker and owner of The Chocolate Path, Susan Fine, gave us an in-depth history of chocolate and she mentioned the health benefits of dark chocolate. Fine explained that cacao is one of the world's most nutrient-rich and complex foods which contain over 1200 active compounds and there is 4 fold less caffeine in an average chocolate bar than there is in a cup of coffee. She also said that recent studies have found that dark chocolate is high in antioxidants which help minimize bad cholesterol and lower the risk of heart disease, and may have compounds that can act as edible sunscreen.

As we learned about the history and health benefits of chocolate, we saw a replica of a cocoa pod and tested several varieties of chocolate. We then took a tour around the chocolate world, going from the Ecuador to Madagascar to Granada, and finally we tried a 77 % dark chocolate, made from Philippines' cacao beans, with flavor accompanied by berry undertones. We ended with Kakawa Beans prepared by the best beans and chocolates made from the fine-flavor Criollo/Trinitario beans. Kakawa Beans are whole roasted cocoa beans coated in layers of white, milk and dark chocolates, then coated in cocoa powder. Finally, three fine chocolates were given away as a delightful door prize gift. We had our favorite chocolates and learned how bitter cacao beans turned into one of our delicious foods.

If you would like more information about the Metro Women's Chemist Committee, please check out the website <http://www.njacs.org/metrowomen.html>.

Some photos from the night appear on the facing page.

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Susan Fine talks about “bean to bar” chocolates.



Networking after the chocolate tasting.

(Photos courtesy of S. Carberry)

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

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## NORTH JERSEY ACS EXECUTIVE COMMITTEE MEETING



At the January 23rd North Jersey ACS Executive Committee Meeting, Jiwen Chen, 2011 Chair, passes the gavel to Amber Charlebois, 2012 Chair.

*(Photos courtesy of Diane Krone)*



Bettyann Howson, secretary, presented Jiwen Chen, 2011 Chair, with the Past Chair Pin at the January 23rd North Jersey ACS Executive Committee Meeting at Fairleigh Dickinson University.

### NORTH JERSEY CHROMATOGRAPHY GROUP

Please mark your calendars for our upcoming NJCG events for 2012:

#### Thursday, May 17th

All-day Symposium (w/Vendor Show/ Exhibit)

#### Wednesday, September 19th

Evening Seminar at the Crown Plaza, in Somerset, NJ

#### Wednesday, October 17th

Evening Seminar in conjunction with CPSCA, in PA

#### Monday, November 12th

Evening Seminar at the Crown Plaza, in Somerset, NJ (EAS week)

Please check our website: [www.NJCG.org](http://www.NJCG.org) for more information on specific events.



### HIGH SCHOOL SENIOR FROM EDISON, NJ, SELECTED FOR WHITE HOUSE SCIENCE FAIR

**Elmer Huaihan Tan**, a senior at John P. Stevens High School in Edison, N.J., attended the second annual White House Science Fair on Tuesday, February 7. Tan is one of about 100 students nationwide who was invited to participate in this prestigious event. His name was put forward by the American Chemical Society (ACS), the world's largest scientific society, because he

was one of four students who represented the United States at the International Chemistry Olympiad in Turkey last summer, where he brought home a silver medal.

An accomplished science and math student, Tan won fifth place in the Princeton University Mathematics Competition in 2010 and first place in the N.J. Chemistry II League in 2011. He passed the American Mathematics Competition 12 in 2010 and 2011.

Enthusiasm for chemistry runs in the family. His parents hold degrees in chemistry from the University of Minnesota. His mother, Li Li, holds a master's degree and works at Bristol Myers Squibb. His father, Lushi Tan, holds a doctorate degree, and works at Merck.

"ACS is pleased that President Obama recognizes students for their success in science," said ACS President Bassam Z. Shakhshiri, Ph.D. "In our society we often celebrate outstanding athletes, and perhaps take for granted the academic achievers. But it's students like Elmer Tan who will drive innovation and solve the global challenges of this world, like providing clean water, an adequate food supply and life-saving medicines to all people on the planet."

"I am very grateful for the ACS, my teachers, and especially my parents for providing me so much moral support as I've worked on studying chemistry for the past three years," said Tan. "With their standing behind me, my hard work has paid off."

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## Call for Nominations

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### EDWARD J. MERRILL AWARD FOR OUTSTANDING HIGH SCHOOL CHEMISTRY TEACHER FOR 2012

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 2012.

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@optonline.net](mailto:chemphun@optonline.net).

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## Others

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### NJIT – DEPARTMENT OF CHEMICAL, BIOLOGICAL AND PHARMACEUTICAL ENGINEERING

#### Graduate Seminar Series – Spring 2012

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

#### April 9

“How Industry Handles Reactive Chemistry – It's Not What You Learned in Kinetics Class”

*Professor Daniel A. Crow*  
Department of Chemical Engineering  
Michigan Technological University  
Houghton, MI

#### April 23

“Dual Layer Monolith ATR of Model Compounds of Pyrolysis Oil”  
*Professor Adeniyi Lawal*  
Chemical Engineering & Materials Science  
Stevens Institute of Technology  
Hoboken, NJ

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

Place: NJIT, Room 117, Kupfrian Hall  
Newark, NJ

Cost: Free and Open to the Public

Seminar Coordinator: Professor Laurent Simon, (973) 596-5263,  
[laurent.simon@njit.edu](mailto:laurent.simon@njit.edu)

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## Outstanding Service Award

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Dr. Barbara Hillery is the recipient of the ACS New York Section's 2011 Outstanding Service Award. The award is presented annually, at the January Sectionwide Conference, to recognize the efforts of the members of the New York Section who provide their time, leadership skills and dedicated service to promote high quality programs that contribute to the excellence of the Section. Barbara's leadership continues to further the goals and ideals of the ACS New York Section. Her service spans a wide range of activities.

At the Section level, Barbara has served as chair, chair-elect, alternate councilor, and now is a councilor. Barbara has been a member of the New York Section's Finance, Nominating, and Chemagination Committees. Presently, she is a co-chair of the Student Activities Committee that organizes the annual Undergraduate Research Symposium and is serving as host in 2012 for the 60th URS at SUNY – Old Westbury College. She also heads the Chemists Celebrate Earth Day Committee, which in 2011 had a 1st place winner nationally in the 2011 Chemistry, Art, Poetry Contest (6-8th grade category).

Within the Long Island Subsection of the ACS New York Section, Barbara served as its Chair and Director at Large. She chaired the Environmental Committee that sponsors the Francis Sterrett Environmental Symposium and is an ongoing member of the Analytical, Education and Awards Committees. She, along with Dr. Paris Svoronos, initiated the successful LIACS Chem Challenge annual event and, also, helps organize the annual High School Awards dinner event.

Barbara is also very active on the Eastern Analytical Symposium Governing Board. She has served as the New York Section representative; then served as vice chair and chair of the Transportation, Workshops, Registration, Housing and now Seminars Committees.

The ACS New York Section deeply appreciates Dr. Barbara Hillery's continued dedication and efforts in all her work with the Section and extends a sincere thank you.

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