

# THE Indicator

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## **Professor Sara Skrabalak North Jersey Section's 2015 Baekeland Awardee**



*See article and pictures on pages 20-21.*

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## **THIS MONTH IN CHEMICAL HISTORY**

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

A long established practice in chemistry is the publication of abstracts; some of the earliest appeared in the French journal *Annales de Chimie* as early as 1789. Among the significant contributions made to chemistry by the great Swedish chemist Berzelius were his splendid series of annual reports, called *Jahresberichte*, which he compiled from 1822 to 1855. Originally published in German, a number of these were translated into French. In these volumes Berzelius not only compiled each year all articles and books that he regarded as significant contributions to chemistry, but also scrutinized them critically.

By the start of the twentieth century such a summary of a whole year's chemistry was obviously too much for one chemist, but the Chemical Society of London (now the Royal Society of Chemistry) took up the challenge and began issuing its Annual Reports beginning in 1904 reviewing the work of chemists in 1903. As a mark of a new year, and in homage to the Chemical Society, I will devote some columns to Annual Reports Volume XIII covering 1916, just a century ago. You will recall that at this time Great Britain (though not yet the United States) and her allies was engaged in a bitter war with Germany and her allies. Consequently this is one of the slimmer volumes in the series.

The introduction to *General and Physical Chemistry* by H.M.Dawson makes really interesting reading to the chemical historian. One striking fact is the many references to work published in 1916 in German scientific journals by such luminaries as Paneth and von Hevesy. To quote from the introduction: "The discovery of radioactive disintegration, isotopy, and the simple linear relation between the frequency of the characteristic lines in the X-ray spectra of the elements and the atomic number [work of Moseley; killed at Gallipoli in 1915; HG] has brought to light a series of facts which are incompatible with the signification attached to the terms element and atom for about a hundred years." Dawson goes on to argue that isotopes can no longer be viewed as different elements; chemists have to accept that many elements are mixtures of isotopes that behave in a chemically identical manner.

In 1911 Nicholson suggested that the nuclei of heavier elements were assemblages of nuclei of lighter elements. Now Harkins and Hall have extended this idea by suggesting that differences in atomic masses of elements in the same Group of the Periodic Table can be explained by differences in the numbers of helium nuclei present in their nuclei. Experiments on X-ray scattering indicate that the number of electrons in different atoms is proportional to their atomic weights, and so the actual number of electrons in an atom equals half the atomic weight (!)

Now here's an experiment involving models for you to try. This is a suggestion made by Nobel Laureate William Ramsay, the noble gas discoverer. To simulate some mechanisms of chemical change he constructed spherical atoms made of ping-pong balls for the nucleus supported so they were free to rotate about a vertical axis through the ball's poles. The revolving electrons of this atom were represented by a current passing through a copper coil attached to the ball's equator. The coil's diameter could be adjusted, and the current flow could be reversed. Use of models of this type led Ramsay to find the conditions of stability in a number of molecules including hydrogen, oxygen, ozone, hydrogen chloride and ammonia. For full details you can consult the original articles which appeared in the *Proceedings of the Royal Society Series A* for 1916.

To be continued: So far I have only reached page 4 of a 284 page book!

**THE INDICATOR****Manager / Editor** - LINDA ATKINS

3137 Hemlock Hill Road

Pocono Pines, PA 18350

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[indicator.linda@gmail.com](mailto:indicator.linda@gmail.com)**Advertising Manager** - VINCENT GALE

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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, Queens, NY 11439

718-990-5221

[njespersn@stjohns.edu](mailto:njespersn@stjohns.edu)**North Jersey Section Rep.****JACQUELINE ERICKSON**

GSK, 1500 Littleton Road, Parsippany, NJ 07054

973-889-2368

[jacqueline.a.erickson@gsk.com](mailto:jacqueline.a.erickson@gsk.com)**Web Masters**

NY Section - DR. BRIAN R. GIBNEY

[postmaster@newyorkacs.org](mailto:postmaster@newyorkacs.org)

NoJ Section - PAUL TUKEY

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Department of Chemistry, St. John's University

8000 Utopia Parkway, Queens, NY 11439

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Dept. of Chemistry, CUNY, Brooklyn College

2900 Bedford Avenue, Brooklyn, NY 11210-2889

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Dept. of Chemistry, St. John's University

8000 Utopia Parkway, Queens, NY 11439

718-990-5226 • [serafinj@stjohns.edu](mailto:serafinj@stjohns.edu)**Section Office**

St. John's University, Chemistry Dept.

8000 Utopia Parkway, Queens, 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. LUCIANO MUELLER**

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Discovery and Optimization, Bristol-Myers Squibb

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7 Beehive Lane, Flemington, NJ 08822

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49 Pippins Way, Morris Township, NJ 07960

973-822-2575 • [chemphun@gmail.com](mailto:chemphun@gmail.com)**Section Office**

49 Pippins Way, Morris Township, NJ 07960

973-822-2575 • [chemphun@gmail.com](mailto:chemphun@gmail.com)**THE Indicator** 

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

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## February Calendar

### NEW YORK SECTION

**Tuesday, February 2, 2016**  
New York Nanoscience Discussion Group  
*See page 8.*

**Thursday, February 4, 2016**  
Long Island Subsection  
*See page 9.*

**Thursday, February 4, 2016**  
Westchester Chemical Society  
*See pages 9-10.*

**Saturday, February 6, 2016**  
21st Annual HS Poster Contest  
*See pages 5, 10.*

**Wednesday, February 24, 2016**  
MetroWomen Chemists  
*See page 11.*

**Friday, February 26, 2016**  
High School Teachers Topical Group  
*See page 11.*

*also*

**Tentatively Wednesday, March 9, 2016  
and Thursday, April 7, 2016**  
Westchester Chemical Society  
*See page 12.*

**Friday, March 4, 2016**  
Nichols Symposium  
*See pages 6-7.*

**Fridays, March 18, 2016, and April 15,  
2016**  
High School Teachers Topical Group  
*See page 12.*

**Tuesday, April 19, 2016**  
New York Nanoscience Discussion Group  
*See page 8.*

**Saturday, May 7, 2016**  
Undergraduate Research Symposium  
*See page 14.*

**Thursday-Sunday, June 9-12, 2016**  
MARM 2016  
*See pages 15-17.*

### NORTH JERSEY SECTION

**Monday, February 8, 2016**  
Careers in Transition  
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**Wednesday, February 17, 2016**  
NMR Topical Group  
*See page 19.*

**Monday, February 22, 2016**  
North Jersey Executive Committee Meeting  
*See page 18.*

**Wednesday, February 24, 2016**  
MetroWomen Chemists  
*See under NY meetings page 11.*

*also*

**Thursday, April 14, 2016**  
Drug Metabolism Discussion Group  
*See pages 19.*

**Deadline for items to  
be included in the  
March 2016 issue of  
*The Indicator* is  
January 20, 2016**

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



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The New York Section of the American Chemical Society  
and St. Joseph's College present  
**The 21<sup>st</sup> Annual High School Research Poster Session**  
at St. Joseph's College, Brooklyn NY  
on Saturday, February 6<sup>th</sup>, 2016  
from 9 a.m. to 1 p.m.

The annual poster session provides an opportunity for talented high school students from the metropolitan area to compete and be recognized for their research accomplishments.

The program includes:

- Judging of posters by scientists working in industry and academia.
- Guest speaker
- Certificates to all participants
- Prizes to the four winning presenters.

High school students, professionals willing to be a judge, and guests can now register online.

For more information or to register visit: [www.sjcnv.edu/postersession](http://www.sjcnv.edu/postersession).

**Featured Keynote Speaker**

"How to Make a Difference with Your Research"

Dr. Tina Zottoli is an Assistant Professor of Psychology at Montclair State University and a NYS licensed clinical psychologist, who provides psychological assessment, expert testimony and consultation in civil and criminal court cases. Dr. Zottoli's expertise is in adolescent neurocognitive development and decision-making, especially as applied to legal contexts. She maintains an active research program centered on questions relevant to criminal and juvenile justice policy and her main focus is currently on the decision making of youth who are offered plea deals in criminal (adult) court.



*Sponsored by The New York Section of the American Chemical Society  
and St. Joseph's College, 245 Clinton Avenue, Brooklyn, NY 11205-3688.*



**2016 WILLIAM H. NICHOLS MEDAL  
DISTINGUISHED SYMPOSIUM AND AWARD DINNER**



**Symposium: THE DEVELOPMENT AND APPLICATIONS OF MODERN METHODS  
IN ORGANIC SYNTHESIS**

*Award Recipient:* **PROFESSOR STEPHEN L. BUCHWALD**  
Massachusetts Institute of Technology

**Date:** Friday, March 4, 2016

**Time:** 12:30 PM Registration 1:00 PM – 5:30 PM Symposium  
5:45 PM Reception 6:45 PM Award Dinner

**Place:** Crowne Plaza Hotel, White Plains, NY

**PROGRAM**

- 1:00 PM Welcome Professor Alison G. Hyslop  
2016 Chair, ACS, New York Section  
St. John's University
- 1:05 PM Opening of the Distinguished Symposium Professor Brian R. Gibney  
2016 Chair-elect, ACS, New York Section  
CUNY - Brooklyn College
- 1:15-2:05 PM Multistep Continuous Flow Synthesis Professor Timothy F. Jamison  
Massachusetts Institute of Technology

Flow chemistry has the potential to revolutionize the synthesis of organic molecules - operationally and conceptually. Flow systems can reduce reaction times, increase efficiency, and obviate problems often encountered in scaling up. In addition to these important practical advantages, flow chemistry expands the "toolbox" of organic reactions available to scientists engaged in the synthesis of molecules - from small-scale experiments to large-scale production. These benefits are a direct result of several features of flow synthesis that batch synthesis typically cannot achieve, for example, the ability to control fluid flow precisely, the access to temperature and pressure regimes not usually considered to be practical, and the enhanced safety characteristics of flow chemical systems. In this lecture we will discuss some of our investigations in this area in the form of case studies, wherein a specific target or family of organic molecules has served as an inspiration for the development of new methods of organic synthesis in flow.

- 2:10- 2:50 PM The Functionalization of C—H Bonds Professor M. Christina White  
University of Illinois Urbana-Champaign

Among the frontier challenges in chemistry in the 21st century are the interconnected goals of increasing control of chemical reactivity while synthesizing and diversifying complex molecules with higher efficiency. Traditional organic methods for installing oxidized functionality rely heavily on reactions that require extensive functional group manipulations (FGMs). In contrast, nature routinely uses allylic and aliphatic C—H oxidation methods, generally mediated by heme and non-heme iron monooxygenase enzymes, to directly install oxidized functionality into the preformed hydrocarbon framework of complex molecules. Due to their ubiquity in complex molecules and inertness to most organic transformations, C—H bonds have typically been ignored in the context of methods development for total synthesis. The exceptions to this rely on substrate directing groups to facilitate site-selectivity and reactivity. The discovery and development of highly selective oxidation methods for the direct installation of oxygen, nitrogen and carbon into allylic and aliphatic C—H bonds of complex molecules and their intermediates are discussed. Unlike Nature which uses elaborate shape or functional group recognition active sites, this chemistry harnesses the subtle electronic, steric, and stereoelectronic interactions between C—H bonds and small molecule transition metal complexes to achieve high regio-, chemo-, stereo- and site-selectivities with high substrate generality- and without the requirement for directing groups. Our current understanding of these interactions gained through empirical and mechanistic studies will be discussed. A user-friendly catalyst reactivity model that calculates and even predicts the major site of oxidation as well as the magnitude and direction of the site-selectivity in complex substrates as a function of catalyst will be delineated. Novel strategies for streamlining the process of complex molecule synthesis and diversification enabled by these methods will be presented.

3:00 PM Coffee Break

- 3:30-4:20 PM Drug Discovery Innovation: The Evolving Role of Medicinal Chemistry Dr. Joel C. Barrish

The Pharmaceutical Industry is facing significant challenges: a regulatory environment that has become more restrictive and where the safety bar is higher; substantial cost increases at the same time that R&D success rates have decreased and identifying highly validated targets has become even more difficult; and a system of payers worldwide trying to reduce costs and demanding more accountability. Medicinal chemists within the Industry have been particularly affected by changes made in response to these challenges. Despite the headwinds, there is reason for optimism - not only because drug therapies will

continue to be important for an aging population, but especially given considerable scientific advancements within Drug Discovery. For the medicinal chemist, the ability to rapidly evolve and adapt to new approaches and strategies will be key. This presentation will be a personal view of the key innovations where Chemistry has the opportunity for greatest impact and will also highlight the attributes and capabilities needed by the future medicinal chemist.

4:30-5:30 PM Palladium-Catalyzed Carbon-Heteroatom Bond-Forming Reactions

Professor Stephen L. Buchwald  
NICHOLS MEDALIST

Cross-coupling methodology is an indispensable part of the everyday repertoire of synthetic organic chemists. Crucial to our success in the development of new and more generally applicable methods has been our discovery and use of monodentate biaryl phosphine ligands. More recently, the invention of precatalysts based on these ligands has further increased their activity and utility. This lecture will detail our progress in formation of carbon-heteroatom bonds. Included will be: 1) An introduction to palladium-catalyzed carbon-heteroatom bond-forming reactions; 2) A description of ligand and catalyst development employing involving biarylphosphines. 3) Applications of these catalysts to the functionalization of heterocycles and the preparation of compounds of interest to medicinal chemists. 4) Application of these catalysts in PET imaging. 5) Applications of these catalysts to problems in bioconjugation. This section will describe our work on the functionalization of peptides, proteins and antibodies as well as the preparation of stapled peptides.

5:45 PM Social Hour

6:45 PM William H. Nichols Medal Award Dinner

Professor David W. C. MacMillan (Princeton University) will introduce the Medalist

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

Tickets may be reserved using the following form, or preferably through the New York Section website that accepts credit cards or Paypal. <http://www.NewYorkACS.org>.

\*\*\*\*\* RESERVATION FORM \*\*\*\*\*

**2016 WILLIAM H. NICHOLS DISTINGUISHED SYMPOSIUM & MEDAL AWARD BANQUET in honor of Professor Stephen L. Buchwald**

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

- Please reserve \_\_\_\_\_ places for the symposium & banquet at \$120/person
- ACS member \_\_\_\_\_ places for the symposium only at \$40/person
- \_\_\_\_\_ places for the banquet only at \$110/person
- Non-member \_\_\_\_\_ places for the symposium & banquet at \$150/person
- \_\_\_\_\_ places for the symposium only at \$60/person
- \_\_\_\_\_ places for the banquet only at \$120/person
- \_\_\_\_\_ places for the symposium only at \$25/person, Students, Unemployed
- \_\_\_\_\_ places for the symposium only complimentary for 50 year + ACS members

(For table reservations of 8 or more, use the ACS member \$120/person rate for combination tickets)

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**BANQUET RESERVATION DEADLINE: FEBRUARY 19, 2016**

Please make checks payable to: ACS, NEW YORK SECTION Check for \$\_\_\_\_\_ enclosed

## New York Meetings

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

### NEW YORK SECTION BOARD MEETING DATES FOR 2016

The dates for the Board Meetings of the ACS New York Section for 2016 have been selected and approved. The meetings are open to all – everybody is welcome. All non-board members who would like to attend any of the meetings ought to inform the New York Section office by emailing Mrs. Marilyn Jespersen at [njesper1@optonline.net](mailto:njesper1@optonline.net) or by calling the Section office at (516) 883-7510.

All 2016 Board Meetings will be held on the following dates at St. John's University, 8000 Utopia Parkway, Jamaica, NY. Dr. Alison Hyslop will chair all meetings. Refreshments will be available starting at 6:00 PM while the actual meeting will start at exactly 6:30 PM. Please check Marilyn Jespersen for the exact building and room number. You may also be added in the mailing list if you so desire.

The board meetings dates for 2016 will be **Saturday, January 16, 2016** — January Sectionwide Conference at St. John's Univ.

#### Friday, February 19, 2016

March 4, 2016 — William H. Nichols Symposium and Medal Award Dinner at the Crowne Plaza Hotel, White Plains, NY

Friday, April 15, 2016

Friday, June 3, 2016

Friday, September 16, 2016

Friday, November 18, 2016

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

## NEW YORK NANOSCIENCE DISCUSSION GROUP

### 2015-2016 Sessions

Hosted by the New York University  
Department of Chemistry

Speakers to be announced.

The NYNDG is an ACS Topical Group that meets in the New York University Department of Chemistry. Sessions feature three 30-minute presentations on nanoscience, one each with strong orientation in biology, chemistry, and physics/applied mathematics. Presentations will be focused on discussion of recent work, although speakers will place the work in a context understandable to a broad audience.

**Date:** Tuesday, February 2, 2016

Times: Refreshments — 7:00 PM  
Science — 7:30 PM

Place: NYU Silver Center  
Room 1003 (10th floor)  
31 Washington Place (between  
Washington Square East and  
Greene Street)  
New York, NY

For more information, contact: James  
Canary ([james.canary@nyu.edu](mailto:james.canary@nyu.edu))

Topical Group History:  
<http://www.nyu.edu/projects/nanoscience>

\*\*\*\*\*

#### Future Meeting:

**Date:** Tuesday, April 19, 2016

Times and Place: same as above



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## LONG ISLAND SUBSECTION

### Antimicrobial Surfaces

*Speaker:* Robert Engel, PhD  
Department of Chemistry and  
Biochemistry  
Queens College

Efforts of our laboratory have been directed toward the development of environmental surfaces that kill bacteria and fungi on contact without the use of antibiotics that can lead to the development of resistant strains. We describe our approach toward this end that utilizes cationic lipids for the rapid and complete destruction of a wide range of bacteria (Gram negative and Gram positive) as well as fungi, without being consumed in the process. Thus, an initial application to the surface remains active throughout the normal lifetime of the surface. Such surfaces serve for the prevention of transmission of pathogens and as such are prophylactic. We describe most recent advances in the application of these techniques toward the destruction of viral species, as well as approaches toward the development of materials that have the potential for use as pharmaceutical agents instead of prophylactic agents.

**Date:** Thursday, February 4, 2016

Times: Social – 5:30 pm  
Seminar – 6:00 pm

Place: CUNY Queensborough  
Community College  
Science Building, S-112

Directions: <http://www.qcc.cuny.edu/about/driving.html>



## WESTCHESTER CHEMICAL SOCIETY

### Special Seminar – “Isolation and Characterization of Hyaluronan from Tissue Samples”

*Speaker:* Han Yuan, PhD  
Biomatrix Research Center  
New York University  
New York, NY

Hyaluronan (Hyaluronic Acid, HA) is a ubiquitous polysaccharide present in almost all tissues of vertebrates. Its molecular weight (MW) can range from several up to 25000 disaccharide repeating units, corresponding to several kilo-Daltons (kDa) to 10 Million-Daltons (MDa). HA regulates cell activity by interacting with cell surface receptor pro-

teins, which causes signaling of a number of responses in an MW dependent manner. HA in human milk is known to mediate host responses to microbial infection via TLR4- and CD44-dependent signaling. Signaling by HA is generally size specific. Because pure low MW HA (average 35 kDa) can elicit a protective response in intestinal epithelial cells, it has been proposed that human milk HA may have a bioactive low-MW component. However, the current methods for determining the exact content and size distribution of low MW HA in actual biological tissues/fluids are under-developed, mainly because of low sample amount and isolation difficulty. This talk addresses the issues of limited sample amount and purification difficulty, and the importance of analyzing both high- and low-MW HA simultaneously. Methods for HA isolation and quantification are discussed. A method using size-dependent fractionation of HA by anion exchange on a spin column and quantification of HA in the fractions using a competitive ELISA is developed. HA size analyses for human milk samples are then conducted by this method and the results are discussed. This HA analysis method has also been performed on mammary tissues.

Han Yuan graduated from Wuhan University of Technology and Wuhan University in Hubei, China with BSs in Materials Chemistry and Biological Science, respectively, in June 2009. He came to the Polytechnic School of Engineering of New York University to pursue graduate studies. He obtained his Ph.D. in Materials Chemistry under the guidance of Professor Mary Cowman (winning the Best PhD dissertation Award) in May 2015. He has continued his research as a postdoctoral research fellow in Dr. Cowman's lab. His research focuses on sensitive assay development for analyzing Hyaluronan from various biological tissues/fluids. His longer-range interests lie in developing novel diagnostic assays, devices and biomedical materials.

**Date:** Thursday, February 4, 2016

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

(continued on page 10)

## WESTCHESTER CHEMICAL SOCIETY

(continued from page 9)

For more information, contact:

Paul Dillon (914) 393-6940

E-Mail [PaulWDillon2@hotmail.com](mailto:PaulWDillon2@hotmail.com)

Or:

Anthony Durante (718) 289-5542 or 5569

E-Mail: [anthony.durante@bcc.cuny.edu](mailto:anthony.durante@bcc.cuny.edu)

### Note: Inclement Weather: Cancellation

#### Due to Inclement Weather — Should

Westchester Community College's Valhalla campus close due to inclement weather (or has delayed opening or closes early) the meeting will be cancelled. Decisions about delay/closure are made around 6:00 AM for day courses and 3:00 PM for evening courses. The college will communicate delays, closings or early dismissals on their website ([www.sunywcc.edu](http://www.sunywcc.edu)), Facebook, Twitter, and the (914) 606-6900 phone line.

## 21ST ANNUAL HIGH SCHOOL POSTER SESSION

Sponsored by The New York Section of the American Chemical Society and St. Joseph's College, 245 Clinton Avenue, Brooklyn, NY

The annual poster session provides an opportunity for talented high school students from the metropolitan area to compete and be recognized for their research accomplishments.

The program includes:

- Judging of posters by scientists working in industry and academia.
- Guest speaker
- Certificates to all participants
- Prizes to the four winning presenters.

Professionals willing to be a judge, please contact Rhomesia Ramkellowan (Event Coordinator) at [hspostersession@sjcny.edu](mailto:hspostersession@sjcny.edu).

**Date:** Saturday, February 6, 2016

**Times:** 9:00 AM - 1:00 PM

**Place:** St. Joseph's College  
Brooklyn NY

*See flyer on page 5  
and ad below.*

# THE 21<sup>st</sup> ANNUAL HIGH SCHOOL POSTER SESSION



**Saturday, February 6, 2016**  
**9 a.m. to 1 p.m.**

 Presented by the New York Section of the  
American Chemical Society and St. Joseph's College

## METRO WOMEN CHEMISTS

### Selenocysteine Redox Fundamentals and Biosensing Applications

*Speaker:* Dr. Marisa Buzzeo  
Assistant Professor of Chemistry  
Barnard College  
New York, NY

Selenium is an essential trace element for humans, found primarily as the amino acid, selenocysteine. Proteins containing selenocysteine in their active site play an integral role in physiological processes. Several questions exist regarding the unique chemistry achieved by selenocysteine in the cellular context. Using a combination of electrochemical and spectroscopic techniques, we have examined the selenocysteine / selenocystine redox couple under physiological conditions at gold surfaces. The potential use of selenium-modified substrates in biosensing applications will be discussed.

Marisa Buzzeo is an Assistant Professor of Chemistry at Barnard College. Prior to her faculty position, Buzzeo was a visiting research scientist at Columbia University's nanocenter and a postdoctoral scholar at the California Institute of Technology in the laboratory of Prof. Jacqueline K. Barton. Marisa completed her graduate studies in physical chemistry at the University of Oxford, under the supervision of Prof. Richard G. Compton. Her research program at Barnard is focused on the use of electrochemical methods to study naturally redox-active biological systems.

**Date:** Wednesday, February 24, 2016

**Time:** 12:15 PM – 1:15 PM

**Place:** Pace University  
Lecture Hall North (2nd Floor)  
One Pace Plaza  
New York, NY

Please contact Dr. Rita K. Upmacis (Chair of the Metro Women Chemists' Committee ([rupmacis@pace.edu](mailto:rupmacis@pace.edu))) if you plan to attend.



## HIGH SCHOOL TEACHERS TOPICAL GROUP

### Making Biofuels from the Wind or Rocks

*Speaker:* Professor Scott Banta  
Dept. of Chemical Engineering  
Columbia University

There is a great need to create liquid transportation fuels from resources other than geological carbon. The use of photosynthetic organisms is attractive but there are many challenges with this approach including land and water usage as well as competition with food agriculture. Chemolithoautotrophic bacteria are attractive as they obtain

energy from the oxidation of inorganic materials and they can fix CO<sub>2</sub> into reduced carbon compounds. We have been working to genetically modify the acidophilic bacterium *Acidithiobacillus ferrooxidans* which oxidizes iron and sulfur compounds and is found in mining environments. The engineered cells can produce chemicals and fuels from CO<sub>2</sub> and they can be powered by renewable energy (such as wind or solar) by reducing the iron that they need to grow in a coupled reactor configuration. The cells are also employed in mining environments where they facilitate copper bioleaching operations. Therefore we are also exploring the use of the cells to co-produce fuels and chemicals during copper mining operations. This would result in the exploitation of a previously unexplored terrestrial energy resource – the oxidation of reduced metals in the Earth's crust.

**Date:** Friday, February 26, 2016

**Time:** Social and Dinner — 5:45 PM

**Place:** Social and Dinner — TBD

**Time:** Meeting — 7:15 PM

**Place:** Meeting — New York University  
Silver Center Room 207  
32 Waverly Place (South-east  
corner Washington Sq. East)  
New York, NY 10003

**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 9:00 AM and 2:00 PM to verify that meeting is still on; (516) 385-4698 for other info.**

Note: On street parking is free after 6:00 PM.



## 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

### Future Meetings

**Special Seminar – Topic to be announced.**

*Speaker:* Soosairaj Therese, PhD  
Bronx Community College  
Bronx, NY

**Tentative Date: Wednesday, March 9, 2016**

(Times, Place, Cost, Other Information, see under February meeting, pages 9-10.)

\*\*\*\*\*

**Special Seminar – “Making Green by Being Green – Life Cycle Assessment”**

*Speaker:* Joseph C. Bush, PhD  
Executive Director  
The Institute for Energy and Sustainability

**Tentative Date: Thursday, April 7, 2016**

(Times, Place, Cost, Other Information, see under February meeting, pages 9-10.)



## HIGH SCHOOL TEACHERS TOPICAL GROUP

### Future Meetings

**A Soupçon of Science: Culinary Pedagogy**

*Speakers:* Professor Kent Kirshenbaum  
Department of Chemistry, and  
Director of Graduate Studies  
New York University  
and

Disan Davis  
Chemistry Teacher  
Hunter College High School

**Date: Friday, March 18, 2016**

\*\*\*\*\*

**“Demo Derby”** — an evening of non-stop demonstrations by the attendees. (5-8 minutes max.)

**Date: Friday, April 15, 2016**

## Call for Volunteers

### OPPORTUNITY FOR ACS MEMBERS TO AID STUDENTS 2 SCIENCE IN A HYBRID VIRTUAL LAB PROGRAM

Can you spare a few hours of your time? Do you like working with students and would you like the opportunity to share your science knowledge in a classroom? Students 2 Science is seeking volunteers to aid in our Virtual Lab program. We have a series of elementary, middle, and high school experiments that we will be running in various schools across New Jersey. Members are especially needed to help with the North Jersey section's IPG funded project to bring hands-on science to South Jersey. We need professionals to help in the classroom with the students. It's great fun, a wonderful way to give back, and only requires a few hours of your time. Opportunities begin in November. For more information, contact Fran Nelson, [frannelson@students2science.org](mailto:frannelson@students2science.org) and visit our website at [Students2Science.org](http://Students2Science.org)



### MARM 2016

The New York Section will be hosting MARM 2016, **June 9-12, 2016** at the College of Mount Saint Vincent, Riverdale, NY 10471. The section will be celebrating its 125th Anniversary during its event. The theme is Chemistry: Past, Present, and Future. The General Chairs for this meeting are Dr. Pamela Kerrigan and Dr. Daniel Amarante from the College of Mount Saint Vincent's Division of Natural Sciences. To volunteer in planning and/or for further information, please contact them at the following emails:

[Pamela.kerrigan@mounthoodvincent.edu](mailto:Pamela.kerrigan@mounthoodvincent.edu)

or

[Daniel.amarante@mounthoodvincent.edu](mailto:Daniel.amarante@mounthoodvincent.edu)

## WESTCHESTER CHEMICAL SOCIETY

On December 9, 2015 Dr. Sunej Hans, an Assistant Professor in The Department of Chemistry and Chemical Technology at Bronx Community College of the City University of New York, Bronx, NY and a visiting faculty at Brookhaven National Laboratory (BNL) through the office of science program spoke on "Chemistry in Neutrino Experiments." Neutrinos interact very weakly with matter, so liquid neutrino detectors use large amounts (multi-kilo-ton range) of fluids. Data are often collected over several years. To minimize interference from cosmic radiation, most experiments are located underground. Neutrino-initiated events are often detected by using many different kind of detectors, for example scintillator, Cherenkov, radiochemical, etc. The photo-multiplier tubes (PMTs) detect the photons as they travel through the detectors. The photons are generated from scintillators as the results of the neutrino initiation reactions with them. Wavelength shifters are typically used to match the wavelength of PMTs, which cover the sides

of the detector to detect the neutrino interaction with the liquid. Metal-loaded scintillators are often metal (e.g. gadolinium) complexed with an organic compound such as carboxylate complexes dissolved in linear alkyl (C12-C16) benzenes. Chemically, all the the reagents and materials must be ultra-pure and extremely transparent with attenuation lengths greater than about 10 meters. All the liquid immersed materials must be compatible with detector liquid. Because of the long-time duration of the experiments, the detector materials and liquid must be extremely stable (e.g., not degrade chemically, not lose transparency). Prototypes are often setup prior to the actual experiments for the stability check. Although neutrino experiments are part of particle physics, chemistry has been playing a major role in setting up the neutrino detectors. There were many interesting questions and answers with the audience during and after Dr. Hans' interesting and informative talk, given at the Westchester Community College in Valhalla, N.Y. The photo below is of Dr. Hans and the WCS board of directors who attended the meeting.



Anthony Durante, Joan Laredo-Liddell, Paul Dillon, Sunej Hans, Rolande Hodel, Peter Corfield and Jean Delfiner

*(Photo courtesy of Paul Dillon)*



# 64<sup>th</sup>

## ANNUAL UNDERGRADUATE RESEARCH SYMPOSIUM

### The Student Activities Committee of the New York Section of the American Chemical Society

**Saturday, May 7<sup>th</sup>, 2016 at Lehman College**

**8:00 am – 3:00 pm (breakfast, luncheon and award reception included)**

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

**Keynote Speaker: Dr. Scott D. Edmondson**  
Merck and Co. Inc



Dr. Scott Edmondson got his start in Chemistry at Cornell University where he attained an A.B. in Chemistry in 1991. He obtained his Ph.D. in Chemistry in 1996 from The Ohio State University where he worked with renowned organic chemist Professor Leo Paquette on the application of anionic oxy-Cope rearrangements to the synthesis of terpene natural products. Next, he was an NIH postdoctoral fellow with Professor Samuel J. Danishefsky at Columbia University where he worked on alkaloid natural product total syntheses.

In 1998, Dr. Edmondson joined Merck and Co. where he has worked on a broad range of therapeutic areas including obesity, diabetes, urology, cardiovascular disease, and most recently infectious disease. He is a co-inventor of Januvia<sup>TM</sup>, a DPP-4 inhibitor currently used to treat patients with type 2 diabetes and he led a team of scientists to discover a compound currently in Phase 3 clinical trials for the treatment of overactive bladder. Dr. Edmondson is a co-author of more than 40 publications, 4 book chapters, and 40 patents/patent applications. Currently, he is Director of Discovery Chemistry at Merck in Kenilworth, NJ.

### Stories of Drug Discovery: Discovery of Januvia<sup>TM</sup> (Sitagliptin) For Diabetes And Vibegron For Overactive Bladder

Inhibition of dipeptidyl peptidase 4 (DPP-4) is now an established method for the treatment of type 2 diabetes. At Merck, the DPP-4 inhibitor program was initiated in 1999 and shortly thereafter the medicinal chemistry team began optimization of two distinct classes of inhibitors derived from either  $\alpha$ -amino amides or  $\beta$ -amino amides. Importantly, early research from our laboratories illustrated that the selection of DPP-4 inhibitors for clinical development should take into account selectivity over related enzymes DPP8 and DPP9 which have been associated with toxicity in preclinical species. Optimization of the  $\beta$ -amino amide series led to the discovery of JANUVIA<sup>TM</sup> (sitagliptin), the first DPP-4 inhibitor approved for the treatment of type 2 diabetes.

$\beta_3$  Adrenergic receptor (AR) agonists were studied in the 1990's as a treatment for obesity, but development of early compounds was terminated due to a lack of sustained efficacy in humans for obesity. Subsequent preclinical studies suggested that  $\beta_3$ -AR agonists could be repurposed as a treatment for overactive bladder (OAB), and the recent approval of mirabegron confirmed that  $\beta_3$ -AR agonists are effective in humans for this indication. Although an early  $\beta_3$ -AR agonist from Merck (MK-0634) was successful in the clinic for the treatment of OAB, further development of the compound was halted due to toxicities in preclinical species. A back-up program identified vibegron (MK-4618) as a potential best-in-class  $\beta_3$ -AR agonist that addresses many of the liabilities associated with MK-0634 and is currently in Phase 3 clinical trials for the treatment of OAB.

This presentation will describe biology, medicinal chemistry, and clinical development of JANUVIA<sup>TM</sup> (sitagliptin) and vibegron.

#### SIGNIFICANT DATES FOR 64<sup>th</sup> URS

Deadline for Abstract Submission - **March 18, 2016**      Abstract acceptance notification – April 4, 2016  
Deadline for Symposium Advanced Registration – April 8, 2016

2016 Co-chair <b>Dr. Ipsita A. Banerjee</b> Fordham University banerjee@fordham.edu	2016 Co-chair <b>Dr. Meredith Foley</b> St. John's University FoleyM1@stjohns.edu	2016 Co-chair <b>Dr. Paul Sideris</b> Queensborough CC - CUNY psideris@qcc.cuny.edu
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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. Checks should be made out to: "NY ACS URS" and sent to: Prof. Paul Sideris, Queensborough Community College, Department of Chemistry, Science Building S-445, 222-05 56<sup>th</sup> Avenue, Bayside, NY 11364.

*See Call for Papers on page*

## **NEW YORK SECTION — MIDDLE ATLANTIC REGIONAL MEETING 2016**

**Theme: “Chemistry: Past, Present,  
and Future”**

**New York – A Chemistry State of Mind**

*Sponsored by:* New York Section of the  
American Chemical Society

The 44th Middle Atlantic Regional Meeting (MARM 2016) of the American Chemical Society (ACS) will be hosted by the New York Section of the ACS and held at the College of Mount Saint Vincent in Riverdale New York from **Thursday, June 9 to Sunday, June 12, 2016**. MARM 2016 coincides with the 125th Anniversary of the American Chemical Society – NY Section.

For information regarding MARM 2016, please visit: <http://www.marmacs.org/2016>

- Questions regarding the event should be directed to the MARM 2016 General Co-Chairs:  
Pamela Kerrigan: [pamela.kerrigan@mountsaintvincent.edu](mailto:pamela.kerrigan@mountsaintvincent.edu)

Daniel Amarante: [daniel.amarante@mountsaintvincent.edu](mailto:daniel.amarante@mountsaintvincent.edu)

- Interested speakers or individuals seeking to become Session Chairs should contact the MARM 2016 Program Co-Chairs:

Paris Svoronos:

[PSvoronos@qcc.cuny.edu](mailto:PSvoronos@qcc.cuny.edu)

Sujun Wei: [SWei@qcc.cuny.edu](mailto:SWei@qcc.cuny.edu)

For a current list of sessions visit: <http://www.marmacs.org/2016/program.html>

- Potential exhibitors and sponsors may contact the MARM 2016 Exhibits and Sponsorship Co-Chairs:

Fitzgerald Bramwell: [jerry@empirescience.com](mailto:jerry@empirescience.com)

Ping Furlan: [furlanp@usmma.edu](mailto:furlanp@usmma.edu)

Urszula Golebiewska: [UGolebiewska@qcc.cuny.edu](mailto:UGolebiewska@qcc.cuny.edu)

**Dates: Thursday-Sunday,  
June 9-12, 2016**

**Place:** College of Mount Saint Vincent  
Riverdale, NY

***See Call for Volunteers on page \_\_  
and more extensive information on  
pages 16 and 17. \_\_***

## **NEW YORK SECTION — MARM 2016**

**Theme: “Chemistry: Past, Present, and Future: New York – A Chemistry State of Mind”**

**Date: Thursday, June 9 to Sunday, June 12, 2016**

**Place:** College of Mount Saint Vincent, Riverdale, NY

The 44th Middle Atlantic Regional Meeting (MARM 2016) of the American Chemical Society (ACS) coincides with the 125th Anniversary of the American Chemical Society – NY Section.

For information regarding MARM 2016, please visit: <http://www.marmacs.org/2016>

Potential exhibitors and sponsors, please visit: <http://marmacs.org/2016/advrtse.html>

- Early Registration Begins **January 2016!**

<b>Category</b>	<b>Early Registration</b>	<b>Onsite Registration</b>
ACS Member	\$150	\$180
Non-ACS Member	\$200	\$240
Undergraduate (ACS member)	\$40	\$50
Undergraduate (Non-member)	\$50	\$60
High School Student	\$10	\$15
Post Doc Student (ACS member)	\$80	\$95
Post Doc Student (Non-member)	\$100	\$120
Retired/Emeritus/Unemployed	\$0	\$0
K-12 Teachers (ACS member)	\$40	\$50
K-12 Teachers (Non-member)	\$60	\$70
Attendee Guests	\$25	\$25

## MIDDLE ATLANTIC REGIONAL MEETING 2016

# New York—A Chemistry State of Mind

## SPONSORSHIP AND EXHIBIT OPPORTUNITIES

COLLEGE OF MOUNT SAINT VINCENT, RIVERDALE, NY | JUNE 9-12, 2016

### Sponsor Categories

	Diamond Sponsor	Platinum Sponsor	Gold Sponsor	Silver Sponsor	Bronze Sponsor	Donor In Kind
Fee	\$3,000- \$10,000	\$2,000- \$2,999	\$1,000- \$1,999	\$500- \$999	\$250- \$499	Any
Sponsorship*	Session/Event /General	Session/Event /General	Session/Event /General	Session/Event /General	General	NA
Table at Expo	Yes	No	No	No	No	NA
Signage	All	All	Event Placard	Event Placard	No	NA
Meeting Program	Cover	Full Page	1/2 Page	1/4 Page	Logo	Appreciation
Website Logo/link	Yes	Yes	Yes	Yes	Yes	Appreciation
Email blasts	Logo	Logo	No	No	No	NA
Certificate	Diamond	Platinum	Gold	Silver	Bronze	Appreciation
Registration	4	2	2	1	1	NA

\* Events include but are not limited to workshops, luncheons, social events, coffee breaks, and raffle. Full payment by April 15, 2016 to ensure full benefits.

### Exhibit Categories

Entity	Size (feet)	Cost*		Included
		Early	Regular	
Commercial	8x10	\$800	\$1000	Power, 6-ft rectangular table, two chairs, two registrations, meeting attendee contact info, logo on website & program
Commercial	8x10	\$500	\$700	6-ft rectangular table, two chairs, two registrations, meeting attendee contact info, logo on website & program
Academic	8x10	\$350	\$450	6 ft rectangular table, two chairs, one registration, logo on website & program
Academic	Shared 8x10	\$150	\$200	½ 6-ft rectangular table, one chair, logo on website & program
Unattended	8x10	\$275	\$350	6-ft rectangular table, meeting attendee contact info, logo on website & program
Unattended	Shared 8x10	\$175	\$225	½ 6-ft rectangular table, meeting attendee contact info, logo on website & program

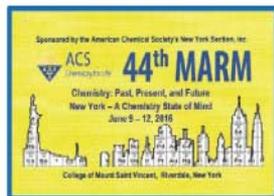
\*Early Bird by March 1, 2016; full payment by April 15, 2016 to ensure full benefits; reduced price for combined registration with 2016 NERM is available (please call for information).

### Advertisement

Categories*	Cost
Program ¼ page with web logo/link	\$500
Program ¼ page with web logo/link	\$300
Program business card with web logo/link	\$125
web logo/link	\$45

\* Full payment by April 15, 2016 to be included in the Program. Call for prices for other options





American Chemical Society's New York Section, Inc.  
Middle Atlantic Regional Meeting 2016  
<http://marmacs.org/2016/>

### Exhibits/Sponsorship

#### Chairs

Ping Furlan

(516) 726-5783

[pfurlan@usmma.edu](mailto:pfurlan@usmma.edu)

Urszula Golebiewska

(631) 252-2106

[UGolebiewska@qcc.cuny.edu](mailto:UGolebiewska@qcc.cuny.edu)

Fitzgerald Bramwell

(859) 338-7591

[jerry@empirescience.com](mailto:jerry@empirescience.com)

#### General Chairs

Pamela Kerrigan

[Pamela.kerrigan@Mountsaintvincent.edu](mailto:Pamela.kerrigan@Mountsaintvincent.edu)

[ncent.edu](mailto:ncent.edu)

Daniel Amarante

[Daniel.amarante@Mountsaintvincent.edu](mailto:Daniel.amarante@Mountsaintvincent.edu)

[ncent.edu](mailto:ncent.edu)

#### Program Chairs

Paris Svoronos

[PSvoronos@qcc.cuny.edu](mailto:PSvoronos@qcc.cuny.edu)

Sujun Wei

[SWei@qcc.cuny.edu](mailto:SWei@qcc.cuny.edu)

#### Treasurer

Frank Romano

[frank.romano@agilent.com](mailto:frank.romano@agilent.com)

#### Secretary

Marlon Moreno

[MMoreno@qcc.cuny.edu](mailto:MMoreno@qcc.cuny.edu)

#### Awards

Michael Castaldi

[mcastaldi@saintpeters.edu](mailto:mcastaldi@saintpeters.edu)

#### MARM Executive

Board Contact

Martha Hollomon

[Martha.Hollomon@comcast.net](mailto:Martha.Hollomon@comcast.net)

#### Website

Paul Sideris

[PSideris@qcc.cuny.edu](mailto:PSideris@qcc.cuny.edu)

Paul Tukey

[ptukey@tukey.org](mailto:ptukey@tukey.org)

#### ACS Meeting Planning Partner

Kimberly Savage

[K\\_Savage@acs.org](mailto:K_Savage@acs.org)

Dear Potential Exhibitor/Sponsor:

We invite your organization to take advantage of the many benefits of MARM 2016 as an Early Bird sponsor. There is the opportunity to connect with 30,000 chemists, biochemists and science educators in the Middle Atlantic Region (Washington DC to New York and of course all points in between). At MARM 2016, we anticipate 1,000 attendees from area industry, government labs, colleges and universities, public schools, and clinical labs. (Indeed, you are invited to review our program information at our website, <http://www.marmacs.org/>) MARM 2016 will run at the College of Mount Saint Vincent in Riverdale, NY on Thursday, June 9 through Sunday, June 12, 2016.

Your investment in the MARM 2016 Exposition as an Early Bird sponsor will maximize your interaction with attendees: either decision makers or prospective workforce employees. Among the incentives offered to Early Bird sponsors are:

- a special discount on exhibition space;
- targeted break (networking) sessions with industrial or academic decision makers;
- access to approved data bases for students; access to approved data bases for decision makers.

Here are some additional aspects of our plan that will assure the success and economy of your sponsorship:

- Early bird sponsors can rent exhibit space with or without power at a **significantly reduced rate.**
- Exhibit spaces available for Early Bird sponsors will be located in high traffic areas and include:
  - Standard power (120 V) is available along the walls.
  - 8 x 10-ft space including a 6-ft rectangular table, two chairs, and a trashcan.
  - No cost wireless internet access available throughout the College of Mount Saint Vincent.
- Complimentary registration fees.
- BBQ, Raffle Draw, and sponsored Coffee Breaks that target potential workforce employees, or decision makers will be set up in the exhibit areas.
- Complimentary hot link posting to your company on the MARM 2016 website.

MARM conference registration will be set up in the exhibit areas. Exhibit areas are located near the technical sessions and with the poster sessions. **Register before March 1, 2016 to take advantage of the Early Bird Rates, and register by April 15, 2016 to ensure full benefits.** Exhibit space is limited and spots will be reserved on a first come basis. In addition to benefiting your organization, your participation will help make this the best MARM meeting ever!

If you have any questions, please feel free to contact us.

Sincerely,

*Fitzgerald B. Bramwell*

*Urszula Golebiewska*

*Ping B. Furlan*

Dr. Fitzgerald Bramwell  
859 338-7591  
[jerry@empirescience.com](mailto:jerry@empirescience.com)

Dr. Urszula Golebiewska  
631 252-2106  
[UGolebiewska@qcc.cuny.edu](mailto:UGolebiewska@qcc.cuny.edu)

Dr. Ping Furlan  
516 726-5783  
[furlanp@usmma.edu](mailto:furlanp@usmma.edu)

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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, February 22, 2016

**Time:** 6:00 PM

**Place:** Seton Hall University  
400 South Orange Avenue  
South Orange, NJ

(Please consult NJACS section website for room number <http://www.njacs.org>)



### CAREERS IN TRANSITION MEETINGS

#### Job Hunting??

Resume & LinkedIn writing and key word search rules are changing. To be found, come and utilize our latest insights. Our ACS trained Career Consultants offer assistance at Students2Science to help members with their job search on the second Monday of each month. Topics at this free workshop are:

- Techniques to enhance resume effectiveness
- Interview practice along with responding to difficult questions
- Networking to find hidden jobs
- Planning a more effective job search

**Date:** Monday, February 8, 2016

New from now on is a second CIT meeting in East Windsor on the third Monday. Contact Bill for details.

**Times:** Meeting 2:30 - 5:00 PM

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

**Cost:** No charge

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

A job board and networking assistance is offered at most topical group meetings.

Appointments with Bill can be arranged for personal assistance at (908) 875-9069 or [billsuits@earthlink.net](mailto:bill suits@earthlink.net).

See [www.njacs.org](http://www.njacs.org) under the Career tab for Jobs hidden from sight and relevant blogs.



### NJACS PARTNERS WITH STUDENTS2SCIENCE

Members are encouraged to volunteer at their East Hanover facility and explore their website at [www.students2science.org](http://www.students2science.org) to learn more about this innovative program.

S2S continues to expand their exciting laboratory experience the disadvantaged children. Many of our members continue to volunteer as mentors. At their 2 million dollar analytical lab, every 40 kids are assisted by 16 professional volunteer mentors. The experiments performed really make chemistry and science come alive using state of the art analytical equipment working with students starting in 6th grade up to HS seniors. Each day is optimized for grade level and curriculum.

Now the program has further expanded with internet video and experiments performed in the classroom for 4th & 5th grades. Internet allows views of the lab in operation and relates to simpler experiments setups done in the classroom with their teacher and a partnering chemist.

North Jersey members who volunteered benefited in many ways. Those in transition expanded their network and received job finding assistance. Retired chemists met up with old friends and made many new friends. Those with jobs used the volunteer hours as part of the company outreach programs and team training. All feel great about making a difference in the lives of the youth who may have never met a scientist or considered a career in the sciences.

Please consider volunteering and discovering more about this innovative program. If you want to learn more, you can speak with Don Truss at (908) 334-8435.

## NMR TOPICAL GROUP

Our venue this year will be alternating between the Center for Advanced Biotechnology and Medicine (CABM) Rutgers University and The Frick Chemistry Laboratory at Princeton University. To register for these events and for more up-to-date information please visit our website:

<http://www.njacs.org/topical-groups/nmr-spectroscopy>

**Date:** Wednesday February 17, 2016

Times: Dinner at 6:00 PM  
Seminar at 7:00 PM

Cost: Dinner is \$15 employed.  
\$5 students, postdoc, retired, unemployed.  
No charge for seminar only.



## METRO WOMEN CHEMISTS

**Date:** Wednesday, February 24, 2016

(See under NY Meetings, page 11.)



## DRUG METABOLISM DISCUSSION GROUP

**Transforming Assessment of Drug Disposition with Novel Methodologies**

On April 14, 2016, the North Jersey Drug Metabolism Discussion Group will be holding their Fall Meeting. The meeting is centered upon "Transforming Assessment of Drug Disposition with Novel Methodologies". Five dynamic speakers from industry and academia have been selected to present their work. The meeting will be held at The Palace <http://palacesomersetpark.com> and chaired by Lauren Aleksunes, Rutgers University. For more information about the meeting or to learn more about the Discussion Group, please check out the Group's website <http://www.njacs.org/topical-groups/drug-metabolism> or email [aleksunes@ehsi.rutgers.edu](mailto:aleksunes@ehsi.rutgers.edu).

**"Application of Engineered Mouse Models for Xenobiotic Disposition Studies"**

*Speaker:* Xinxin Ding  
SUNY Polytechnic Institute

**"Challenges in Identifying Biomarkers for Transporter-Mediated Drug-Drug Interactions in Liver and Kidney"**

*Speaker:* Raymond Evers  
Merck & Co.

**"Microsampling in Nonclinical Studies: Where are We Now?"**

*Speaker:* Laura Patrone  
Bristol-Myers Squibb

**"MALDI Imaging MS: Seeing Drug ADME in Tissues at Last"**

*Speaker:* Stephen Castellino  
GlaxoSmithKline

**"Validation of an Integrated Series of Ligand Binding Assays for the Quantitative Determination of Antibody Drug Conjugates in Biological Matrices"**

*Speaker:* Heather Myler  
Bristol-Myers Squibb

**Date:** Thursday, April 14, 2016

Times: 8:00 AM - 4:00 PM

Place: The Palace at Somerset Park  
333 Davidson Avenue  
Somerset, NJ

Cost: Registration fee at the door is \$150 (Checks only)  
Registration fee is \$10 for students and postdocs and \$50 for faculty  
Registration is free for unemployed

*ResMed: Residential School on Medicinal Chemistry and Biology in Drug Discovery*  
June 5-10, 2016  
Wyndham, Florham Park, NJ

**This graduate level course concentrates on the fundamentals that are useful in drug discovery spanning initial target assay evaluation through clinical development. Several case histories of recent successful drug development programs will also be presented. The five-day program covers:**

Principles of Med Chem	DMPK
Chemoinformatics	Toxicophores
Lead ID & Optimization	GPCRs
Epigenetics	Kinase Inhibitors
Fragment-based Drug Design	Ion Channels
Structure-based Drug Design	Enzyme Inhibitors
Drug-like Properties	Bioisosteres
Plasma Protein Binding	Precinical Tox
Molecular Modeling	Clinical Dev
Protein-Protein Interactions	Case Histories

**W. Greenlee, V. Gullo and R. Doll –Co-organizers**

For more information and application forms:  
[www.drew.edu/resmed](http://www.drew.edu/resmed)  
e-mail: [resmed@drew.edu](mailto:resmed@drew.edu)  
phone: 973/408-3787; fax: 973/408-3504

## **NORTH JERSEY SECTION PRESENTS THE 2015 BAEKELAND AWARD AND SYMPOSIUM**

The 2015 Baekeland Award was presented to Professor Sara Skrabalak, James Ruddy Associate Professor of Chemistry at Indiana University at Bloomington, at a symposium held at the Fiber Optics Auditorium, Rutgers University in Piscataway, NJ on December 4, 2015. More than 60 industrial chemists, students, and faculty from North Jersey and surrounding sections attended. The North Jersey Section established the Baekeland Award in 1944 to commemorate the technical and industrial achievements of Leo Hendrik Baekeland, President of the American Chemical Society in 1924, and to encourage younger chemists to emulate his example.

Dr. Skrabalak was recognized for her initiative, creativeness, leadership, and perseverance in pure chemistry for the synthesis of new nanomaterial with desirable properties.

In her keynote address, Professor Skrabalak described her lab's cutting-edge research on architecturally controlled nanomaterials with variable properties and their use in chemical sensing. Other speakers included Professor Trevor Douglas, Earl Blough Professor of Chemistry at Indiana University at Bloomington, whose group has pioneered the use of viruses as supramolecular platforms for synthetic manipulation; Professor Christopher B. Murray, Richard Perry University Professor of Chemistry and Materials Science at the University of Pennsylvania, whose research focuses on the preparation, characterization and integration of nanomaterials; Professor Amy L.

Prieto, Colorado State University, whose research includes Li-ion batteries, nanoparticle inks for photovoltaics, light metal nanoparticles, and novel nanowire structures; and, Professor Kenneth S. Suslick, Marvin T. Schmidt Professor of Chemistry, Professor of Materials Science and Engineering, and Professor, Beckman Institute for Advanced Science and Technology at the University of Illinois at Urbana-Champaign, who introduced new technology in chemical sensing, specifically the use of colorimetric sensor arrays as an optoelectronic nose.

Dr. Luciano Mueller, Symposium Chair and Chair-elect of the North Jersey Section, welcomed the guests and described the award. Dr. Ron Kong, Section Chair presented the award plaque and award check of \$5000 to Professor Skrabalak. Dr. Les McQuire, NJ-ACS Awards Chair gave the closing remarks and invited attendees to send him names of individuals who deserve recognition for their scientific accomplishments and volunteerism. Visit the North Jersey Section's website, [www.njacs.org](http://www.njacs.org), for more details about its awards program.

The Symposium was augmented with the presentation of a video recording which was entitled "All Things Bakelite", courtesy of John Maher and Hugh Karraker, Dr. Baekeland's Great Grandson, during registration, intermission and the closing of the symposium. This lively video highlighted Dr. Leo Hendrick Baekeland: his personal life, his superbly creative mind and his scientific and entrepreneurial accomplishments.

NJACS is grateful to the sponsors of this event — Bristol-Myers Squibb, Dow Chemical, and Rutgers University.



**Trevor Douglas, Chris Murray, Ron Kong, Sara Skrabalak, Ken Suslick, Amy Prieto**



**Ron Kong, NJACS 2015 Chair, presents the 2015 Baekeland Award to Prof. Sara Skrabalak.**



**Sara Skrabalak, 2015 Baekeland Awardee, with her mentor and symposium speaker, Ken Suslick.**



**Les McQuire, Ron Kong, Diane Krone, Alan Cooper, Bettyann Howson, Trevor Douglas, Jackie Erickson, Chris Murray, Sara Skrabalak, Ken, Suslick, Amy Prieto, Bill Suits, Luciano Mueller.**



**Nancy Ortiz of Exxon Mobil, Sara Skrabalak, Amanda Peterson Mann, Merck Research Laboratories. Nancy and Amanda are former students.**

*(All photos courtesy of Tom Krone)*

## Call for Applications

### FREDDIE AND ADA BROWN AWARD

This Award recognizes and encourages high achieving middle- and high-school students, of African American and Native American heritage, to further develop their academic skills, with views on careers in the chemical sciences

#### Award Amounts

Middle School \$100.00 Check and \$50.00 gift certificate : High School \$200.00 Check and \$100.00 gift certificate

#### Who is Eligible

Middle School students enrolled in a science class : High School students who have completed a chemistry course

#### Grades

Middle School B Average or better in Science, B Average overall : High School B Average in Chemistry, B Average overall

#### Letter of Recommendation

Math or Science/Chemistry Teachers or Guidance Counselor

#### Statement

Middle School "Why I Like Science" : High School "Why I Like Chemistry"

#### Selection Criteria

Applicants must be African American (Black) or Native American (including Pacific Islander) or of mixed race.

#### Transcript

Official transcript required.

#### Financial Need

Not Required.

Applications available on the web: [www.njacs.org/freddieadabrown](http://www.njacs.org/freddieadabrown) or from your school guidance office.

#### Return Application To

Freddie and Ada Brown Award, NJACS Section Office, 49 Pippen Way, Morristown, NJ 07960

#### Due Date

Completed Applications must be post-marked no later than **March 31 Annually**

**Questions:** Contact Jeannette Brown [Jebrown@infionline.net](mailto:Jebrown@infionline.net) or (908) 239-1515

## Call for Nominations

### COMMITTEE ON THE HISTORY OF THE NEW YORK SECTION

Over the past twenty-three years the New York Section has participated in the designation of seven National Historic Chemical Landmarks and four New York Section Historic Chemical Landmarks. A brief description of these National and local section landmarks may be found on the NY Section Home Page at [newyorkacs.org](http://newyorkacs.org), under the Committee on the History of the NY Section. These landmark programs recognize achievements in the chemical sciences and related areas, in order to enhance public appreciation for the contributions of the chemical sciences to modern life.

Please consider making a nomination for an historic chemical landmark. The Committee on the History of the NY Section will consider all nominations. In addition to a particular achievement, an historic library, building or association may be worthy of this distinction.

Please send your nomination, with supporting documentation, to the Chair of the Committee, Dr. John B. Sharkey, at [johnbsharkey@me.com](mailto:johnbsharkey@me.com).



### 2016 GOLD MEDAL AWARD THE SOCIETY FOR APPLIED SPECTROSCOPY – NEW YORK SECTION

Nominations are being sought for the 2016 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 2016 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 10th, 2016. Please email all materials to [Debbie\\_Peru@colpal.com](mailto:Debbie_Peru@colpal.com) or mail to Deborah A. Peru, Colgate Palmolive Co.,

909 River Road, Piscataway, NJ 08855.

This announcement and contact information is also available on our website [www.nysas.org](http://www.nysas.org)

If you have any questions or require more information, you may contact Debbie Peru at (732) 878-7295.

Thank you for your consideration.

Sincerely,  
Viktor Dubovoy  
NYSAS Secretary



## ACS FELLOWS PROGRAM

Dear colleagues,

Happy Holidays – I hope you are all enjoying a few days off with family and friends

Which local ACS members have made significant contributions to the Society and in their professional lives and would thus be potential candidates to be ACS Fellows? We need to collect your ideas and suggestions now.

I am attaching the guidelines for the ACS Fellows program along with a listing of all of the current Fellows and a link to the Fellows site on the National ACS web-site (<http://www.acs.org/content/acs/en/funding-and-awards/fellows.html>). Nominees must have both a scientific/professional and volunteer track record, the latter within ACS sponsored activities. The application process is described in the attached document and requires a list of personal information, a 200 word synopsis and three letters of recommendation from ACS members, at

least one of which must come from outside their primary place of employment.

Please consider people in your committee or topical group as well as those others (co-workers, meeting attendees, educators, academic or other contacts/collaborators etc. etc.) who may meet the criteria for nomination. We would like to have list of candidates for review no later than early Feb as we need to have the nomination material in-hand **by mid-March** so it can be entered into the nomination system (a non-trivial process). Please send me the name and any information you may have collected about possible nominees.

Any ACS member can nominate another member as an ACS Fellow but the Section can make multiple nominations and is willing to anyone help anyone nominate a deserving chemist.

This is a great opportunity to recognize our colleagues, so please think carefully about whose contributions we can recognize.

Please distribute and share with other local ACS members and leaders.

Best regards and thanks,  
Les  
Cell: 908-334-5473

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## Call for Papers



**Call for Papers for the 64th ANNUAL UNDERGRADUATE RESEARCH SYMPOSIUM** sponsored by the Student Activities Committee of the New York Section of the American Chemical Society. The symposium provides an excellent opportunity for undergraduate chemistry students in the NY metropolitan area to present the results of their research. Abstracts should demonstrate appropriateness of topic for a chemistry symposium. The program includes a keynote address by Dr. Scott D. Edmondson, Merck and Co. Inc, presentation of student papers, and a luncheon.

**Date: Saturday, May 7th, 2015**

**Place: Lehman College, Bronx, NY**

To:

1. Submit an abstract on-line (1-2 student presenters max per abstract; use the online abstract template form and follow included instructions)
2. Print a flyer for posting - Click "Download Flyer" in the blue frame
3. Obtain directions to Lehman College

Go To: <http://www.newyorkacs.org/meetings/urs/urs.php>

### SIGNIFICANT DATES FOR 64th URS

Abstract submission and online registration opens - **February 1, 2016**

Deadline for abstract submission - **March 18, 2016**

Notification of the abstract acceptance – **April 4, 2016**

Deadline for early registration – **April 8, 2016**

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. Students can obtain a discounted 1-yr membership to the ACS for \$25 by visiting <http://undergrad.acs.org/>

Checks for the registration fee should be made out to: "NY ACS URS" and sent to:

Prof. Paul Sideris, Queensborough Community College, Department of Chemistry, Science Building S-445, 222-05 56th Avenue, Bayside, NY 11364

If you have any questions please contact: [nyacsurs2016@gmail.com](mailto:nyacsurs2016@gmail.com)

2016 Co-chair  
**Dr. Ipsita A. Banerjee**  
Fordham University  
[banerjee@fordham.edu](mailto:banerjee@fordham.edu)

2016 Co-chair  
**Dr. Meredith Foley**  
St. John's University  
[FoleyM1@stjohns.edu](mailto:FoleyM1@stjohns.edu)

2016 Co-chair  
**Dr. Paul Sideris**  
Queensborough CC - CUNY  
[psideris@qcc.cuny.edu](mailto:psideris@qcc.cuny.edu)

## National

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ACS Program-in-a-Box greatly acknowledges support from Dr. Diane Grob Schmidt, 2015 ACS President, and financial sponsorship from P&G.



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