

# THE Indicator

JANUARY 2016

Vol. 97 • No. 1

ISSN0019-6924

## Dr. Alison Hyslop 2016 New York Chair



*See Chair's Message on page 5.*

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## THIS MONTH IN CHEMICAL HISTORY

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

In recent columns I have discussed material drawn from a new book entitled “The Matter Factory” by Peter T. J. Morris (Reaktion Books, London, 2015- in association with the Science Museum, London). The author is Keeper of Research Projects at the Science Museum, London, and is an authority on the history of science. This is the first book-length examination of the history of the chemical laboratory. In this final installment I revert to an examination of later innovations in laboratory equipment and design.

Robert Bunsen had a first hand acquaintance with the dangers that may be encountered in the pursuit of experimental chemistry. While he was working on the chemistry of Cadet’s liquid, a complex fuming material first described in 1760 and obtained by heating a mixture of arsenic (III) oxide and potassium acetate, he isolated a material he believed to be a “free” radical, that he named cacodyl. We would call cacodyl the dimethyl arsino radical; Bunsen had isolated its dimer, tetramethyldiarsine. During an attempted combustion analysis of this compound the equipment exploded. Bunsen lost the sight of one eye in this disaster. He decided that safer laboratory enclosures were needed to protect experimenters and introduced improved fume cupboards or fume hoods into his laboratory.

The names used to describe this innovation have changed over time. Morris ascribes the term fume cupboard to as late as 1860. Fume hood, fume closet, and draft enclosure were all used in earlier times. In a previous column I mentioned Liebig’s fume hoods, which relied on the draft produced by a furnace. Liebig also introduced glass doors in front of his hoods, and Bunsen eventually followed suit. In 1880 Edmond Fremy, in Paris, substituted gas jets, which were much more convenient than furnaces or stoves, to provide the hot air updraft in his hoods. Gas jets were in wide use for this purpose until early in the twentieth century when they were replaced by electric fans. Thus the modern fume hood came into being.

In my own chemical training, both at high school and university (I refer to England in the 40s and 50s of the twentieth century) much emphasis was laid in my laboratory work on what was called Group Analysis, that is the determination of the presence of certain metal cations with an occasional nod to anions in solution. The metal ions were divided into Groups by the application of reagents that included, for Group I, hydrochloric acid; for Group II hydrogen sulfide (a very toxic gas!) in acidic solution; and so on. Group Analysis seems to have been introduced into chemical training in the late 19th. or early 20th. century when the numbers of chemistry students were growing rapidly, and teachers believed that repetitive drills, the core of Group Analysis, were the best way to instill laboratory skills into a large group of students. The mephitic odor of hydrogen sulfide pervaded those laboratories; I speak from experience – an experience that I am sure that a number of my older readers will have shared. In “my” laboratories the hydrogen sulfide was produced in Kipp’s generators, an elegant and ingenious piece of equipment that often features in re-creations of laboratories of the period. Group Analysis was based on serious discussions of the reactions involved by its earliest proponents, analytical chemists of the mid-19th. century, Rose and Fresenius. Liebig’s successor at Giessen, Heinrich Will, produced a summary of their work in 1846 which eventually evolved into a set of tables giving rote procedures, with little attention to the underlying chemistry. It was in that form that I became acquainted with the procedures in my own training, and I believed then, as I do now, that other than facility in manipulation I learned very little chemistry from my years of Group Analysis.

In a bow to the season and to Group Analysis I recall part of a parody in song, to the tune of “A Partridge in a Pear Tree”:

The first time I took it up the demy\* said to me

There’s one metal more in Group 3!

The second time I took it up the demy said to me

Chloride isn’t there and there’s one metal more in Group 3.

And so on. Anyone out there remember any more? Happy Holidays.

\*Demy short for Demonstrator: a lab. assistant, often a graduate student.

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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 2016	December 20, 2015
March	January 20, 2016
April	February 20
May	March 20
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October	August 20
November	September 20
December	October 20
January 2017	November 20, 2016

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*The Indicator* (ISSN0019-6924) is published on-line monthly except July and August by the New York and North Jersey Sections of the American Chemical Society, Office of Publication, 1 Milbark Court, Homosassa, FL 34446.

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

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

## January Calendar

### NEW YORK SECTION

**Thursday, January 7, 2016**

Chemical Marketing & Economics Group  
See page 11.

**Saturday, January 16, 2016**

NY Sectionwide Conference  
See page 10.

**Friday, January 29, 2016**

High School Teachers Topical Group  
See page 11.

*also*

**Tuesdays, February 2 and April 19, 2016**

New York Nanoscience Discussion Group  
See page 12.

**Thursday, February 4, 2016**

Long Island Subsection  
See page 12.

**Tentatively Thursday, February 4, 2016  
and Thursday, April 7, 2016**

Westchester Chemical Society  
See pages 12-14.

**Fridays, February 26, 2016, March 18,  
2016, and April 15, 2016**

High School Teachers Topical Group  
See page 14 .

**Saturday, February 6, 2016**

21st Annual HS Poster Contest  
See pages 14 and 16.

**Friday, March 4, 2016**

Nichols Symposium  
See pages 8-9.

**Saturday, May 7, 2016**

Undergraduate Research Symposium  
See page 17 .

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

MARM 2016  
See pages 18-20.

### NORTH JERSEY SECTION

**Monday, January 25, 2016**

North Jersey Executive Committee Meeting  
See page 6.

**Monday, January 22, 2016**

Careers in Transition  
See page 6.

*also*

**Thursday, April 14, 2016**

Drug Metabolism Discussion Group  
See pages 6-7.

**Date to be determined**

NMR Topical Group - 4th Annual NMR  
Symposium  
See page 7.

**Deadline for items to  
be included in the  
February 2016 issue  
of *The Indicator* is  
December 20, 2015**

***The Indicator* is  
posted to the web on  
the 15th of the  
previous month at  
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## 2016 New York Chair's Message

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### Alison Hyslop

In 1891 the New York Section of the American Chemical Society was chartered, and in 2016, we will be celebrating our 125th anniversary. New York has been and will continue to be a leading section in the ACS. It is an honor to serve you as the Chair of the New York Section for 2016.

In the past 125 years, the NY Section has developed excellent programs through the William H. Nichols Medal Symposium, the Undergraduate Research Symposium, Chemists Celebrate Earth Day with a walk across the Brooklyn Bridge, and National Chemistry Week at the New York Hall of Science. The subsections continue to engage chemists in their local area through the Brooklyn Frontiers in Chemistry talks, High School Poster Sessions, the Westchester Awards, Science Cafés, monthly subsection talks, and the Long Island Chemistry Challenges. The New York Section also involves chemists through the topical discussion groups: the Biochemical group collaborates with the New York Academy of Sciences to sponsor a number of symposia each year, Analytical, Nanotechnology, and Inorganic groups host a number of seminars and symposia, High School Teachers meet to discuss and share innovative teaching, Chemical Marketing and Economics group hosts a series of high-level talks focused on the chemical industry throughout the year. A new topical group on Microwave Chemistry is being formed. The committees also contribute to the vibrancy of our Section through Chemagination, a competition for high school students to envision how chemistry will influence our lives in the future, US National Chemistry Olympiad for high school students to compete for the US team, the History of the NY Section committee, and Project Seed, a program that provides for high school students to conduct research in local laboratories.

At events throughout this coming year, the New York Section will celebrate our anniversary starting with the Sectionwide conference on January 16th with Dr. John P. Sharkey reflecting on the past 125 years of the Section. We are hosting the Middle Atlantic Regional Meeting at the College of Mount Saint Vincent on June 9 – 12 with the theme Chemistry: Past, Present and Future. The Nichols Award Symposium will be held on March 4th at the Crowne Plaza Hotel in White Plains and will honor Prof. Stephen Buchwald of the Massachusetts Institute of Technology.

This year, I would like to focus on re-activating the subsections that have played an important role in the past in the New York Section. I am asking for your help to work with the Rockland and Staten Island subsections. If you are interested, please volunteer. In addition, the Younger Chemists, the Education, and the History of the NY Section are looking for volunteers to work with these topical groups and committees.

All of this work is done through the excellent work of the volunteers of the New York Section. The previous chairs and executive committee members have set a high standard for service and dedication. The work done by the chairs of the committees, subsections, and topical groups have continued to make our Section one of the leading sections in the ACS. I am looking forward to an eventful year for our Section and I encourage your active participation in NYACS sponsored events. As we go into the next 125 years, let us continue the excellent work that we have done together.

Alison Hyslop

2016 Chair, New York Section ACS

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## North Jersey Meetings

<http://www.njacs.org>

### NORTH JERSEY EXECUTIVE COMMITTEE MEETING

Section officers, councilors, committee chairs, topical group chairs, and section event organizers meet regularly at the Executive Committee Meeting to discuss topics of importance to running the section and representing the membership.

All ACS members are welcome to attend this meeting and to become more involved in section activities.

**Date:** Monday, January 25, 2016

**Time:** 6:00 PM

**Place:** To be determined

(Please consult NJACS section website <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, January 11, 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 [billherits@earthlink.net](mailto:billherits@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.



### 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



**NMR TOPICAL GROUP – JOINT MEETING WITH PRINCETON ACS SECTION**

**4th Annual NMR Symposium**

**Speakers and Topics:**

*Speaker:* Mei Hong  
Massachusetts Institute of Technology

**Topic:** Solid-state NMR of Membrane Proteins

*Speaker:* Robert Powers  
University of Nebraska - Lincoln

**Topic:** Metabolomics

*Speaker:* Hashim Al-Hashimi  
Institution: Duke University

**Topic:** RNA and DNA Dynamics

*Speaker:* Kevin Gardner  
City University of New York

**Topic:** Protein-protein Interactions

*Speaker:* Mark McCoy  
Merck Research Labs

**Topic:** Structure-based Drug Discovery

*Speaker:* Peter Caravan  
MGH/Harvard, Boston

**Topic:** Imaging Probes

More details and registration will be available in mid September: <http://www.njacs.org/nmr-spectroscopy-topical-group>

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*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
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Epigenetics	Kinase Inhibitors
Fragment-based Drug Design	Ion Channels
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**2016 WILLIAM H. NICHOLS MEDAL  
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**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 Palladium-Catalyzed Carbon-Heteroatom Dr. Joel C. Barrish  
Bristol-Myers Squibb

Protein kinases are critical players in intracellular signal transduction pathways and the etiology of many human diseases. Over the last three decades, our understanding of this biological target class has grown such that there are now ca. 25 kinase inhibitors on the market, predominantly for the treatment of cancer. This presentation will describe the evolution of kinase drug discovery and development using several clinical candidate case histories to highlight key past milestones and future challenges.



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>.

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- \_\_\_\_\_ 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
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## NEW YORK SECTION — 2016 SECTION-WIDE CONFERENCE

Please register at: <http://www.newyorkacs.org/meetings/sectionwide/sectionwide2016.php>

**Date:** Saturday, January 16, 2016

**Times:** 9:30AM – 1:00PM

**Place:** St. John's University, 8000 Utopia Parkway, Queens, NY 11439  
Marillac Terrace

**Cost:** FREE TO ALL

### PROGRAM

9:30 AM **Arrival and Refreshments**

10:00 AM **Greetings from the New York ACS 2016 Chair**

Dr. Alison G. Hyslop

10:10 AM **Award Presentations**

Service Plaque and Pin to the 2015 New York Section Chair

Dr. Paris Svoronos

New York Section Outstanding Service Award for 2015

Mr. George Rodriguez

Nichols Foundation H.S. Chemistry Teacher Award for 2015

Ms. Yolette Wright  
Roosevelt High School  
Roosevelt, NY

10:30 AM **Presentation of Candidates for the 2016 Elections**

Dr. Brian R. Gibney  
2016 Chair-elect  
ACS New York Section

10:45 AM **Keynote Speaker**

Dr. John P. Sharkey

### Title: The ACS New York Section at 125 Years: A Celebration

John Sharkey is Professor Emeritus of Chemistry at Pace University in New York City. He received his Ph.D. (1970) from New York University under Seymour Lewin. At Pace he served as department chair, associate dean, and associate provost. He was elected a Fellow of Dyson College in 1985 and received the Keenan Award for Teaching Excellence in 1988. He became Emeritus in 2011 after forty-two years at Pace. He has been a member of the ACS since 1969 and has served on the Committee on Nominations and Elections, the Society Committee on Education, the Board of Trustees for Member Insurance Plans, Local Section Activities, the National Historic Chemical Landmarks Committee, and Councilor from the New York Section. He currently serves on the Board Standing Committee on Audits and as one of two ACS representatives on the Heritage Council of the Chemical Heritage Foundation. At CHF he is also the "chief bibliophile" of the Bolton Society. Sharkey has been a long-time member of HJST, and is currently serving as the Division's Archivist. He also serves as Historian and Archivist for the ACS New York Section, and was Chair of the Section in 1987. Sharkey's research interests are in the history of chemistry. He was elected a Fellow of the American Chemical Society in 2011.

11:45 AM **Coffee Break** — There will be poster presentations by the New York Section Project SEED Students.

12:00 PM **ACS, New York Section Committee Planning Sessions for 2016**

**Educational Activities:** (Chemagination, Chemists Celebrate Earth Day, Continuing Education, High School Olympiad, National Chemistry Week, Nichols Foundation Teacher Award, Project SEED, Student Membership)

*Chair:* Dr. Alison G. Hyslop

**Member Affairs:** (ACS Fellows, Awards, Employment and Professional Relations, History of the New York Section, *The Indicator*, Membership, Outstanding Service Award)

*Chair:* Dr. Ralph Stephani

**Program Review:** (Subsection and Topical Discussion Group Chairs)

*Chair:* Dr. Anne T. O'Brien

**Public Affairs:** (Academe and Industrial Relations, Environmental Chemistry, Fund Raising, Government Affairs, Information Technology, Public Relations, Speakers Bureau)

*Chair:* Dr. Robert P. Nolan

**MARM 2016 Planning:** (Co-Chairs: Dr. Pamela K. Kerrigan and Dr. Daniel Amarante). Volunteers Welcome.

12:45 PM **Reports from the Chairs of the Committee Planning Sessions**

1:00 PM **Conclusion of the Meeting.** Join with colleagues for lunch at a local restaurant.

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

## 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>.



### CHEMICAL MARKETING AND ECONOMICS GROUP

#### 2016 Economic Outlook

*Speakers:* Kevin Swift, PhD  
Managing Director and  
Chief Economist  
American Chemistry Council  
and

Robert Fry,  
Principal at  
Robert Fry Economics

**Date: Thursday, January 7, 2016**

Time: 11:00 AM - 2:00 PM

Place: Yale Club  
New York, NY



### HIGH SCHOOL TEACHERS TOPICAL GROUP

#### Is the Earth Warming or Cooling? Ice Ages and Climate Change

*Speaker:* Athanasios Koutavas,  
Dept. of Engineering and Physics  
College of Staten Island  
[athanasios.koutavas@csi.cuny.edu](mailto:athanasios.koutavas@csi.cuny.edu),

Earth's climate is incredibly dynamic. Over geologic time it has repeatedly gone in and out of major Ice Ages, which buried New York under kilometers of ice. The last Big Ice Age occurred twenty thousand years ago, and a smaller cold spell known as the Little Ice Age ended just 150 years ago. We are currently living within a brief and precarious warm period – an interglacial – that is part of the natural cycle of Ice Ages. At the same time humanity is now affecting climate in unprecedented ways by torching up large quantities of carbon fuels to power civilization. How will natural and human forces shape Earth's climate in the future? In this talk I will discuss what we can learn about our own climate from the geologic record of the Ice Ages.

**Date: Friday, January 29, 2016**

Time: Social and Dinner — 5:45 PM  
No reservations required

Place: Social and Dinner — George's  
89 Greenwich Street (at Rector  
Street, Southeast corner)  
New York, NY

Time: Meeting — 7:15 PM

Place: Meeting — United Federation of  
Teachers  
52 Broadway  
New York, NY

Check with security for room. This is just South of Exchange Place and the Wall Street Station on the #4 & #5 subway lines. It is a short walk from the several other subway stations.

**Security at UFT 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: Street parking is free after 7:00 PM. Off street, garage parking is available in the area. There is a "park and lock" garage on Greenwich Street at Edgar Street. Public transportation is strongly recommended.

## 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.



## 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.

**Dates:** Tuesday, February 2, 2016

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

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

\* \* \* \* \*

### Future Meeting:

**Dates:** Tuesday, April 19, 2016

Times and Place: same as above

## 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

### Future Meetings

\*\*\*\*

**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 proteins, 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.

**Tentative 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

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.

\*\*\*\*\*

*(continued on page 14)*



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## WESTCHESTER CHEMICAL SOCIETY

(continued from page 13)

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

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

**Tentative Date: Thursday, April 7, 2015, rescheduled from December 9, 2015)**  
(Times, Place, Cost, Other Information, see under February meeting, page 13.)



## HIGH SCHOOL TEACHERS TOPICAL GROUP

### Future Meetings

#### Making Biofuels from the Wind or Rocks

*Speaker:* Professor Scott Banta  
Dept. of Chemical Engineering  
Columbia University  
<<http://www.columbia.edu/~sb2373>>

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 UFT 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.

\*\*\*\*\*

### 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**

The annual poster session offers an opportunity for talented high school students from the New York 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: Tina Zittel, Ph.D., Department of Psychology, Manhattan State University
- Certificates to all participants
- Prizes to the four winning presenters

For information or to register, visit [slmy.edu/posteression](http://slmy.edu/posteression). Professionals willing to be a judge, please contact: [Bonnie.Barkeloven@slmy.edu](mailto:Bonnie.Barkeloven@slmy.edu)

**Schedule**

9:00-9:30 a.m.	Arrival and setup
9:30-11:30 a.m.	Judging
11:30 a.m.-12:30 p.m.	Guest speaker
12:30-1 p.m.	Awards



334 Brooklyn  
242 Clinton Avenue  
Brooklyn, NY 11203



## WESTCHESTER CHEMICAL SOCIETY

On November 11, 2015 Dr. Marc Anton Walters, an Associate Professor in The Department of Chemistry at New York University, New York, NY spoke on "Hydrogen Bonding in Redox and Nanoparticle Construction." Specifically, Dr. Walters described the use of gadolinium as a contrast agent for MRI scans and attempts to enhance the contrast using silver nanoparticles. These however introduced other problems. As an alternative, Dr. Walters has researched the formation and characterization of nanocapsules and gels in reverse micelles. These form with the use of hydrogen bonding cationic surfactants that

are paired with anionic monomers. The monomers are polymerized to highly branched structures within the reverse micelle. These are cost effective to prepare and use and can also be adapted to transport, and slowly release, various molecular species (say, drugs) from, or protect within, the capsule (or gel in its interior). There were lively question and answer interactions with the audience during and after Dr. Walters' interesting and informative talk, given at the Westchester Community College in Valhalla, N.Y. This continued for several attendees and the speaker, as they enjoyed a dinner together at a nearby restaurant. The photo below is of Dr. Walters and the WCS board of directors who attended the meeting.



Paul Dillon, Joan Laredo-Liddell, Jody Reifenberg, Marc Walters, Rolande Hodel, Peter Corfield and Jean Delfiner.

*(Photo courtesy of Paul Dillon)*



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## 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 [hposteression@sjcny.edu](mailto:hposteression@sjcny.edu).

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

Times: 9:00 AM - 1:00 PM

Place: St. Joseph's College  
Brooklyn NY

**See announcement on page 14 and flyer below.**

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.sjcny.edu/postersession](http://www.sjcny.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.*



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
--	--	--

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.

## 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 25  
and more extensive information on  
pages 19 and 20. \_\_\_*

## 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!**

Category	Early Registration	Onsite Registration
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

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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

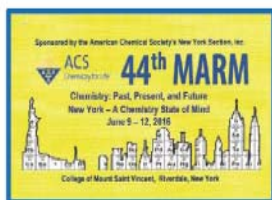
\*Early Bird by March 1, 2016; full payment by April 15, 2016 to ensure full benefits; reduced price for combined registration with 2016 NERM is available (please call for information).

## Advertisement

Categories*	Cost
Program ½ 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/>

Dear Potential Exhibitor/Sponsor:

**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)

**Daniel Amarante**  
[Daniel.amarante@Mountsaintvincent.edu](mailto:Daniel.amarante@Mountsaintvincent.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**  
[paul@tukey.org](mailto:paul@tukey.org)

**ACS Meeting  
 Planning Partner**  
**Kimberly Savage**  
[K.Savage@acs.org](mailto:K.Savage@acs.org)

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

## NEW YORK LOCAL SECTION CELEBRATES NATIONAL CHEMISTRY WEEK

By Dr. Ping Furlan, Dr. Zhaohua Dai, Mrs. Erin Wasserman, and Dr. Scott Lefurgy  
National Chemistry Week Project Leaders  
New York Local Section

On Sunday, October 16, 2015 from 11 AM to 4 pm, for the 11th consecutive year, around 260 volunteers from 20 area universities, nonprofit organizations, business centers and industries joined in the Local Section's effort and celebrated 2015 National Chemistry Week at the New York Hall of Science, located in Queens. Through 41 tables of 50 fun-filled hands-on activities, the program showcased the chemical principles relating to "Chemistry Colors Our World!" and demonstrated the values of chemistry in our everyday lives. This year, the section set a record for having the highest number of sponsoring organizations and the highest number of tables of activities. Admission to the New York Hall of Science was once again FREE on the event date from 10-11 AM, allowing the New York Local Section to effectively reach and engage over 1,000 museum visitors, especially students in grades K-8, with this highly interactive outreach program.

In keeping with this year's theme, a large-screen slideshow with images and animations was created to celebrate the chemistry of light and color, and to highlight the Section's people and community events. Theme-related activities included "cabbage chemistry", "traffic light oscillations", "making your favored colored drinks", "emulsification of milk", "rainbow in a glass", "grow-in-the-dark madness", "face painting", "building your own spectroscope", "art and creamy color", "how color ensures safe water" and "neon and on and on". The Section's executive officers, including the Chair, Dr. Paris Svoronos, and the Chair-Elect, Dr. Alison Hyslop, attended and volunteered at the event.

Inside the Hall of Science, NCW balloons and ACS banners were seen everywhere in the hallway and stairs leading to the Viscusi Gallery where the event took place. At the admission table in front of the Gallery entrance, volunteers welcomed the children and other participants with program brochures and ACS giveaways, ensured they had eye protection and answered questions. During the whole day, the activity tables were crowded and swamped with the enthusiastic museum visitors. Children, parents, and the presenters alike obviously enjoyed their time spent together learning

about and exploring the chemistry and science of dyes, rainbows, fireworks, and more. As the volunteers closed down the program, all were pleased with the day and felt gratified for being part of this terrific program. Many agreed – a year in advance – that they would be back for National Chemistry Week 2016!

We would like to extend our warmest thanks to our volunteers as well as the sponsoring colleges, universities, companies and nonprofit organizations. Their enthusiastic support, their strong leadership and community spirit have made the continued success of this largest chemical hands-on public educational event in the area possible:

1. Adelphi University
2. American Institute of Chemical Engineers
3. Barnard College
4. College of Mount Saint Vincent
5. Columbia University
6. Hofstra University
7. International Flavors & Fragrances
8. Maruzen International Co., Ltd.
9. New York University
10. Pace University
11. Pepsi
12. Queens College
13. Queensborough Community College
14. St. John's University
15. St. Joseph's College
16. Stern College for Women
17. Stony Brook University
18. The Cooper Union
19. U.S. Merchant Marine Academy
20. New York Hall of Science

*(continued on page 22)*



The youngsters enjoy the color, fun, and happy surprises chemistry brings to them during the New York Local Section's event at the New York Hall of Science.

*(Photo courtesy of Alison Hyslop)*

## NEW YORK LOCAL SECTION CELEBRATES NATIONAL CHEMISTRY WEEK

(continued from page 21)



The captive, enlightening and unforgettable moment.

(Photo courtesy of Alison Hyslop)



The sweetest smile on our youngest chemist brightens up the Chemistry Day.

(Photo courtesy of Erin Wasserman)



## Additional Photos from New York Section National Chemistry Week – New York Hall of Science Program





*(Photos courtesy of A. Hyslop, P. Furlan, J. Rizzo, R. Ramkellowan, B. Benson, and D. Fong)*

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## Call for Applications

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### 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 Phippen 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

### WILLIAM H. NICHOLS FELLOWSHIP

The New York Local Section of the American Chemical Society is proud to announce the continuation of a summer research opportunity for undergraduates, the William H. Nichols Fellowship.

The Nichols Fellowship is open to all college students majoring in chemistry (broadly defined) who will perform research over the summer before graduation at an institution in the NY Local Section geographic area.

Each Nichols Fellow receives a stipend of \$5,000 to support them as they perform their research, and is expected to submit a two-page written report at the end of the summer and present their work at the 2017 Undergraduate Research Symposium.

In addition, each Nichols Fellow and their mentor will be invited as honored guests to the 2017 William H. Nichols Award Banquet.

Applications are available online at [www.newyorkacs.org/NicholsFellowship](http://www.newyorkacs.org/NicholsFellowship) and are due **January 1, 2016**.

**All applicants will be notified by March 1, 2016.**

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## Call for Nominations

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### 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 sup-



porting documentation, to the Chair of the Committee, Dr. John B. Sharkey, at [johnbsharkey@me.com](mailto:johnbsharkey@me.com).



## WESTCHESTER CHEMICAL SOCIETY DISTINGUISHED SCIENTIST AWARD 2016

The Westchester Chemical Society is accepting nominations for the "WCS Distinguished Scientist Award 2016". Scientists who live or work in Westchester or the Bronx qualify. The awardee is expected to attend the Awards Dinner (April/May time-frame) and to present aspects of his or her work. Self-nominations are acceptable. Please send a cover letter stating why your nominee should receive the award along with the nominee's resume **by January 16, 2016** to:

Dr. Paul Dillon at [PaulWDillon2@hotmail.com](mailto:PaulWDillon2@hotmail.com) or  
67 Matthes Road, Briarcliff Manor, NY 10510

or to: Dr. Peter Corfield at  
[pwrc@earthlink.com](mailto:pwrc@earthlink.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

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## Call for Volunteers

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### 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@mountholywell.edu](mailto:Pamela.kerrigan@mountholywell.edu)  
or  
[Daniel.amarante@mountholywell.edu](mailto:Daniel.amarante@mountholywell.edu)

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## Others

---

### PITTCON

The Registration Committee today announced that conferee registration <http://pittcon.org/register/> is now open for Pittcon 2016, the world's largest annual conference and exposition for laboratory science. The event will be held **March 6-10, 2016**, at the Georgia World Congress Center, Atlanta, Georgia..

The discounted registration fee of \$225 is available through February 12, 2016. (\$375 after 2/12). This affordable price includes unlimited week-long access to the exposition, technical sessions, Conferee Networking sessions, the Wallace H. Coulter Lecture, Employment Bureau, and all amenities of the event. Other discounts include group, student and short course discounts. Visit [www.pittcon.org](http://pittcon.org/register) <http://pittcon.org/register> to see complete information.

Registration Chairman Brian Strohmeier commented, "Pittcon continues to be an excellent return on investment for our conferees offering an unequaled instrumentation and scientific equipment exhibition plus a wide range of educational, networking, and social opportunities at an affordable cost.

PittconHousing.com, powered by OnPeak (formerly Travel Planners), is the official source for conference hotel reservations and is now open for booking reservations. Pittcon has negotiated a discounted rate for hotel rooms in an official block and will provide shuttle service to and from the convention center within these designated properties

Visit [www.pittcon.org](http://www.pittcon.org) or <http://pittcon.org/register> to get more information and to register.

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## National

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### 2016 LEADERSHIP CONFERENCE

Dear Local Section Officer,

The ACS Committee on Local Section Activities (LSAC) is hosting a Pre-Leadership Institute Webinar on **Wednesday, January 13, 2016, 2:00-3:00 PM** Eastern Standard Time. This webinar will focus on the nuts and bolts of being a local section chair, as well as insights on what to expect and what will be learned at the January 2016 Leadership Institute in Dallas, TX, **January 22-24**.

This webinar is open to all local section officers regardless of whether you plan to attend the institute or not. Please mark this date and time on your calendar, and instructions for accessing the webinar will be sent **one week prior to January 13**.

If you can join us, please email Cheryl Brown at [c.brown@acs.org](mailto:c.brown@acs.org) by December 20. Thank you.

\*\*\*\*\*

Dear Local Section Officer,

This is a reminder that if your local section has not yet identified a representative to attend the 2016 Leadership Conference, please encourage your Chair-Elect to register **by January 5, 2015**. The institute will take place in Dallas, TX, **January 22-24**. If your Chair-Elect is unable to attend, please extend the invitation to another 2016 officer. There is much information shared at this conference that will contribute to the success of your section.

Registration is \$425.00 and covers the hotel for Friday and Saturday nights, all meals and conference materials, and two Leadership Development courses. That amount will be invoiced to the local section treasurer upon completion of the conference. The first 80 local sections to register will receive a \$250.00 stipend. There are still spaces available.

If your section wishes to send a second delegate, the registration fee is \$800.00 per person and covers the same as listed above.

If you have questions, please contact me ([c.brown@acs.org](mailto:c.brown@acs.org)). We hope your section will be represented.

Cheryl H. Brown  
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