

THE Indicator

JANUARY 2018

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Dr. Joseph M. Serafin **2018 New York Section Chair**



See Chair's Message on page 5.

www.theindicator.org
www.njacs.org www.newyorkacs.org

THIS MONTH IN CHEMICAL HISTORY

Harold Goldwhite, California State University, Los Angeles • hgoldwh@calstatela.edu

Among the women scientists who were overlooked or ignored for a Nobel Prize (C&EN Sept. 11, 2017) is the French chemist Marguerite Perey. The following account of Perey and her contributions is based substantially on a Wikipedia article.

Perey was born in October 1909 in Villemomble which is a small commune of about 25,000 inhabitants some 12 km east of the center of Paris. When Perey was in her teens, and was looking forward to a career in medicine, her father died and the family became financially challenged. Consequently Marguerite had to seek employment and she was hired at the Curie Institute to work with Marie Curie on radioactivity. The Institute was originally founded in 1909 following the award of the Nobel Prize to the Curies and Becquerel for their pioneering work on radioactivity. By 1928, when Perey joined, the Institute was already a world leader in research on radioactivity and on radiation treatments for cancer.

Although Perey had no university degree she was clearly a promising scientist and Marie Curie became her mentor. The radioactivity of fractions of the uranium ore from which polonium and radium had been isolated nearly two decades earlier still showed evidence of other active elements. Perey, guided by Curie, spent many years isolating actinium that Curie studied in depth. But there was another unexplained activity in the actinium samples. Perey's perseverance then led to the isolation in 1939 of yet another new element, the heaviest of the alkali metals, which she called francium, honoring her native land. Francium is produced in a rare (1%) branching decay of actinium; its abundance has been estimated at about 15g in the top 1 km of the earth's crust! (Incidentally there are two elements named for France, the other being gallium. As a former Brit. I am chagrined to admit that there is not one element named for the United Kingdom.)

Eventually, after achieving these impressive successes in radiochemistry, Perey was given a grant to continue her studies, and she received her doctorate from the Sorbonne in 1946. She was soon appointed head of the Department of Nuclear Chemistry at the University of Strasbourg where she continued to work on francium. From 1950 to 1963 she was a member of the International Atomic Weights Commission, and in 1962 she became the first woman to be elected to the French Academy of Sciences – an honor that had been denied to her mentor, Marie Curie.

Sadly Perey's beloved element, francium, contributed to her death. It is carcinogenic and in her efforts to use it to diagnose cancer she was exposed to too much radiation, contracted bone cancer, and died of cancer in May 1975. Perey was nominated a number of times for a Nobel Prize, but never received one.



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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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EDITORIAL DEADLINES

February 2018	December 28, 2017
March	January 28, 2018
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Visit Uswww.TheIndicator.org

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

January Calendar

NEW YORK SECTION

Wednesday, January 10, 2018

Chemical Marketing and Economics Group
See page 7-9.

Saturday, January 20, 2018

NY Sectionwide Conference
See page 6.

Tuesday, January 30, 2018

Chemical Marketing and Economics Group
See page 7, 8-9.

also

Thursday, February 15, 2018

Westchester Chemical Society
See page 10.

**Wednesdays, February 21, April 25,
and May 23, 2018**

NY/NJ Society for Applied Spectroscopy
See pages 7 and 12-13.

Wednesday, March 14, 2018

Westchester Chemical Society
See pages 10-11.

Saturday, May 5, 2018

Undergraduate Research Symposium
See page .

Tuesday, June 19, 2018

Chemical Marketing and Economics Group
See page 7.

NORTH JERSEY SECTION

Monday, January 22, 2018

NoJ Executive Committee Meeting
See page 24.

also

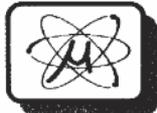
**Wednesdays, February 21, April 25,
and May 23, 2018**

NY/NJ Society for Applied Spectroscopy
See pages 24 and 12-13.

**The Indicator is posted to the web around the
15th of the previous month at
www.TheIndicator.org**

**Deadline for items to be included in the
February 2018 issue of *The Indicator* is**

December 28, 2017



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2018 New York Section Chair's Message

Dear Members:

I would like to express my gratitude to the New York Section of the American Chemical Society for electing me as the 2018 Chair. I am deeply honored and humbled to be given a chance to serve in this capacity. On behalf of the New York Section of the American Chemical Society, we would like to say thank you for your service! As a volunteer organization, we are only as strong as our volunteers make us, and only as successful as we allow our volunteers to be. I am always amazed at the energy and time our busy members devote to the advancement of scholarly activities and public outreach, and I am constantly reminded of the quote by Elizabeth Andrew that "Volunteers do not necessarily have the time; they just have the heart."

Some of the premier events by the New York Section for 2018 include:

- January 20th – Sectionwide Conference at Pace University (NYC). There will be a keynote presentation by Dr. Robert Engel, and committees will hold planning sessions for the year. Those interested in volunteering are encouraged to attend.
- April 13th – William H. Nichol's Distinguished Symposium (White Plains, NY). The 2018 medalist is Dr. Debra R. Rolison, and the theme is "The Future of Energy Science . . . Without Chemists? Unachievable!"

In addition, there will continue to be a wide variety of truly amazing events sponsored by the various Topic Groups, Subsections or Committees such as Chemists Celebrate Earth Day's walk, Chemagination, High School Teachers' "Demo Derby", Chemical Marketing and Economics' Leadership Awards, or the Inorganic and Organometallic Topical Group's Frontiers of Inorganic and Organometallic Chemistry's lecture Symposium to name just a few of the events.

I encourage our members to regularly visit the New York Section website (<http://www.newyorkacs.org/>) for information about upcoming events, add the New York Section to your Facebook account to receive regular updates as well as multimedia presentations of past events, and continue to read the Indicator for more information about the Section. Please consider attending a meeting of a Topical Group, Subsection, or Committee or at least review their activities in the annual reports to see if you may be interested in what they do or if you can offer a new perspective. We have some new groups, like the Microwave Topical Group and the Younger Chemists Committee, that may not have been around the last time you looked. I would also challenge you to think about ways the New York Section can better serve you. Let us know if you see a need, and, even better, if you are willing to work on addressing that need!

I have two main goals for 2018: First, increasing membership and participation of chemists from industry. Second, I am interested in finding ways to increase the collaboration and coordination between college chemistry groups so that the Section can better provide services such as leadership training to this future generation.

Please feel free to contact me at Serafinj@stjohns.edu with any thoughts, ideas, or suggestions for the Section or if you are looking for service opportunities.

Sincerely,

Joseph M. Serafin

2018 Chair of the New York Section

AMERICAN CHEMICAL SOCIETY'S NEW YORK SECTION 2018 SECTION-WIDE CONFERENCE

PLEASE REGISTER AT

<http://www.newyorkacs.org/meetings/sectionwide/sectionwide2018.php>

Date: SATURDAY, JANUARY 20, 2018

Times: 10:30 AM – 2:00 PM

Place: PACE UNIVERSITY, NYC Campus – Bianco Room

Enter Through Schimmel Theatre Entrance

Directions to Pace University - <https://studentit.pace.edu/about-us/directions-to-all-campuses/nyc-campus>

Directions to Schimmel Theatre - <http://schimmelcenter.org/directions>

Cost: FREE TO ALL

✿ PROGRAM ✿

- 10:30 AM ARRIVAL AND REFRESHMENTS.
- 11:00 AM GREETINGS FROM THE ACS NEW YORK SECTION 2018 CHAIR. Dr. Joseph M. Serafin
St. John's University
- 11:10 AM AWARD PRESENTATIONS. Dr. Brian R. Gibney
Service Plaque and Pin to the 2017 New York Brooklyn College and
Section Chair Graduate Center of CUNY
- New York Section Outstanding Service Award for 2017 Dr. JaimeLee I. Rizzo
Pace University
- Nichols Foundation H.S. Chemistry Teacher Award for 2017 Ms. Carol E. Conti
Briarcliff High School
- 11:30 AM PRESENTATION OF CANDIDATES FOR THE 2018 ELECTIONS. Dr. Joseph M. Serafin
2018 Chair ACS New York Section
- 11:45 AM KEYNOTE SPEAKER: DR. ROBERT ENGEL
PROFESSOR, QUEENS COLLEGE, CUNY

“ADVENTURES IN CHEMICAL ARCHITECTURE”

For some years our laboratory has been engaged in the investigation of the syntheses and characteristics of polycationic organic species. These have included quaternary phosphonium and quaternary ammonium salts, which bear both intriguing structural and practical aspects. This presentation is a summary of this work with indications of future directions of practical significance, including medical applications.

- 12:45 PM COFFEE BREAK. There will be poster presentations by the New York Section Project SEED Students.

1:00 PM ACS, NEW YORK SECTION COMMITTEE PLANNING SESSIONS FOR 2018.

Educational Activities: (Chemagination, Chemists Celebrate Earth Day, Continuing Education, High School Chemistry 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, Speaker's Bureau)

Chair: Dr. Robert P. Nolan

1:45 PM REPORTS FROM THE CHAIRS OF THE COMMITTEE PLANNING SESSIONS.

2:00 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

New York Meetings

www.newyorkacs.org

ACS, NEW YORK SECTION BOARD OF DIRECTORS

MEETING DATES FOR 2018

The dates for the Board of Directors Meetings of the ACS New York Section for 2018 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 or by calling the Section office at (516) 883-7510.

The 2018 Board Meetings will be held at St. John's University, 8000 Utopia Parkway, Queens, NY except for the January 20 Section-wide Conference and April 13 Nichols Symposium. The meeting room will be posted on the New York Section website at www.NewYorkACS.org. Dr. Joseph Serafin will chair all meetings. Refreshments will be available starting at 6:00 PM and the board meeting will start at exactly 6:30 PM.

The Board Meetings dates for 2018 are:

Friday, February 16, 2018 – Electronic Meeting

Friday, March 9, 2018

Friday, June 8, 2018

Friday, September 14, 2018

Friday, November 16, 2018

Saturday, January 20, 2018 - Sectionwide Conference, Pace University, 3 Spruce Street, New York, NY. Please see NY Section website.

Friday, April 13, 2018 - William H. Nichols Distinguished Symposium and Medal Award Banquet, Crowne Plaza Hotel, 66 Hale Avenue, White Plains, NY.

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

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CHEMICAL MARKETING AND ECONOMICS GROUP

Digital Meets Chemical: Innovate or Evaporate

Speakers: Ezra Greenberg, PhD
Soenke Lehmitz, PhD
Sam Samdani, PhD

Date: Wednesday January 10, 2018

Times: Registration an Networking
11:15 AM - 12:00 Noon
Luncheon 12:00 Noon - 1:00 PM
Talk - Webcast 1:00 PM - 2:00 PM

Place: Penn Club
30 West 44th Street
New York, NY

Further information www.cmeacs.org and see flyers on pages 8 and 9.

Mark your Calendars:

Dates: Tuesday, January 30, 2018
Tuesday, June 19, 2018

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

Place: New York University
Dept. of Chemistry, Room 1003
(10th Floor) Silver Center
31 Washington Place (between
Washington Sq. East & Green St.)
New York, NY



NEW YORK/NEW JERSEY SOCIETY FOR APPLIED SPECTROSCOPY

CALENDAR 2018

“Spectroscopic Hyperspectral Chemical Imaging”

Speaker: Emil W. Ciurczak
Doramaxx Consulting

Date: Wednesday, February 21, 2018
(See article on pages 12-13.)

“Laser-induced Breakdown Spectroscopy (LIBS) Addition to Microscopic Analyses and Raman and IR of Particles”

Speaker: Dr. Markus Lankers
Rapid GmbH

Date: Wednesday, April 25, 2018*

“Application of FTIR in Understanding the Changes in Protein Secondary Structure as a Result of Stress”

Speaker: Dr. John Wasylyk
Bristol-Myers Squibb

Date: Wednesday, May 23, 2018

For more information, visit our website at www.NYSAS.org.

ACS NY Section
CME**DIGITAL MEETS CHEMICAL: INNOVATE
OR EVAPORATE**

CME ACS NY Luncheon/Webcast • Wed. January 10, 2018 • Penn Club

Abstract

At a time when the post-Cold War progress fueled by competitive markets, globalization, and innovation has lost some luster, global growth is shifting, disruption is accelerating, and societal tensions are rising. Confronting these dynamics will also help you craft a better strategy and forge a brighter future.

While the globalization of digital products and services is surging, traditional trade and financial flows have stalled, moving us beyond globalization. Digitization, machine learning, and the life sciences are advancing to redefine what companies do and where industry boundaries lie. We're not just being invaded by a few technologies but experiencing a combinatorial technology explosion. Ensuring alignment between a company's digital and its corporate strategy is one of the factors differentiating winners and losers – a reminder that leading today requires tough choices about big, disruptive forces.

What are the major opportunities from digital in chemicals, and what must leaders do to capture them? Digitization is enabling competition that pressures revenue and profit growth. It also is creating ways to improve performance through supply-chain, product, process, and service improvements. Digitization could improve EBITDA margins 8–13 percentage points and thus create as much as a trillion dollars in value for the chemical makers worldwide.

Companies can use advanced analytics to extract management-relevant information from the large amounts of unstructured data that they generate. This information can then be used to improve how plants are run and to make better-informed and speedier decisions across the full range of a chemical company's business processes. In the wider world, the chemical industry is an essential supplier to myriad of other industries, and so digital change is in turn translating to opportunities and challenges for chemical companies.

Join us for a discussion on digital and the chemical-industry value chain dynamics and the patterns in its end markets, how digital could affect business processes, and the innovative business models that industry leaders must adopt to not just survive but thrive in this fast-changing environment.



McKinsey & Company

Speaker: Ezra Greenberg, PhD, is a Senior Expert in McKinsey's Center for Advanced Analytics in Strategy, Corporate Finance, and Macroeconomics. Ezra helps clients build a deep understanding of the macroeconomic forces driving the global economy and translate these insights into actionable business and investment strategies. He was a Senior Fellow at the McKinsey Global Institute, and helped create in 2008 the Center for Managing Uncertainty where he led the development of strategies for the global crisis. Ezra worked for three years at the world's largest hedge fund, Bridgewater Associates. Prior to joining McKinsey & Company in 2000, he was a Principal Economist at IHS Global Insight (then Standard & Poor's DRI). Ezra holds a BA in economics from McGill University and a PhD in macroeconomics at University of Maryland, College Park.

**Event Schedule**

Location:
Penn Club
30 W 44th Street, NYC

Event Times: (ET)
11:15 am - 12:00 noon
Registration and
Networking
12 noon - 1 pm Luncheon
1 pm - 2 pm Talk - Webcast

Luncheon Fees
\$120 for non-members
\$90 for members
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Webcast: \$30. Free webcast recording for ACS members

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ACS NY Section
CME**DIGITAL MEETS CHEMICAL**

CME ACS NY Luncheon/Webcast • Wed. January 10, 2018 • Penn Club



McKinsey&Company

Speaker: Soenke Lehmitz, PhD, is a Senior Partner with McKinsey where he uses his extensive expertise in business-to-business (B2B) marketing and sales to advise chemicals clients on all topics related to pricing, sales and channel management, sales-force organization, capability building, and strategy. Some of his recent client projects include supporting several specialty-chemicals players on holistic commercial-transformation programs that addressed the full spectrum of marketing and sales levers, including strategic marketing, pricing, sales-force excellence, and customer management. In addition to his client work, Soenke helped develop Periscope, McKinsey's B2B sales performance-management tool. Prior to joining McKinsey, he worked with Goldman Sachs in M&A general advisory and with BP in their civil engineering division. Soenke has a background in Industrial Engineering (Dipl.-Ing., Technical University Berlin) and International Management (Dipl.-Kfm., ESCP-EAP, Paris, Oxford, Berlin); and he holds a PhD (Dr. Ing.) from Technical University, Berlin.



McKinsey&Company

Speaker: Sam Samdani, PhD, is a Senior Expert at McKinsey's Chemicals & Agriculture Practice where his responsibilities include leading the specialty chemicals service line in the Americas and bringing thought leadership across a range of complex knowledge domains to clients active in the various segments of advanced materials and downstream/specialty chemicals markets. He also enjoys the privilege of helping clients reset their all-too-human intuitions about value curation – not just value creation – opportunities by combining a select few disruptive technologies at the intersections of the worlds of bits and atoms, e.g., 3D printing, internet of things, nanostructured materials, next-gen genomics, and data-driven advanced analytics and algorithms for machine learning. Prior to joining McKinsey in 1995, Sam worked at McGraw-Hill as an Associate Editor with Chemical Engineering, a monthly technical publication covering developments in chemical and allied process technologies and government regulatory affairs. He received his BS in chemical engineering from Yale University, and his PhD in chemical engineering from the University of Rochester.

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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.

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



WESTCHESTER CHEMICAL SOCIETY

FUTURE MEETINGS

SCIENCE CAFÉ — Seminar/Discussion – “Climate Change”

Speaker and Discussion Leader:
David Mendenhall, PhD
President
Eastern Sources, Inc.

Talk Summary:

The global increase in CO₂ concentrations can be offset by a concerted effort to sequester carbonaceous material in an amount equal to that burned as fossil fuel. This simple approach, which does not require new technology or punitive taxes, is generally ignored by articles on global warming.

Biography:

HDavid Mendenhall has his BS degree from the University of Michigan, and his PhD from Harvard University. After postdoctoral studies with K.U. Ingold at the National Research Council of Canada, he worked with S.W. Benson at the Stanford Research Laboratories on the kinetics of atmospheric chemical reactions. Following employment at Battelle Laboratories in Columbus, OH, developing chemiluminescence for materials characterization, he joined Michigan Technological University in Houghton, MI, serving as professor for 19

years. After retirement in 1999 he started his own company, Eastern Sources, Inc., specializing in custom synthesis and consulting.

Tentative

Date: Thursday, February 15, 2018

Times: Lecture and Discussion 5:30 PM (Snacks, coffee, tea, cold drinks freely available as well as a Cash Bar)

Option to Order Dinner 7:00 PM

Place: The Briar's Restaurant
512 N. State Road
Briarcliff Manor, NY 10510

Cost: Students \$3.00
All others \$5.00

For further information:
contact Peter Corfield
E-Mail pcorfield@fordham.edu
Phone 1-914-762-4468

Special Seminar – “Achieving Global Sustainability: Huge Challenges and Opportunities”

Speaker: Rita K. Upmacis, PhD, FRSC
Associate Professor
Department of Chemistry &
Physical Sciences
Pace University
New York, NY

Abstract:

Future generations of chemists and innovators are charged with the responsibility of developing new chemical processes and products that not only meet the needs of energy, clean water and food to sustain our growing population, but also protect human health and the environment. While some of the early industrial developments contributed to a downfall in the overall perception of chemistry, there is an ever-increasing need, and also, opportunity for chemists to solve these issues. Solutions to some of these challenges can be achieved by using Green Chemistry, which is the “utilization of a set of principles that reduces or eliminates the use or generation of hazardous substances in the design, manufacture, and application of chemical products” (P.T. Anastas and J.C. Warner, “Green Chemistry Theory and Practice,” Oxford University Press, 1998). In this presentation, I will examine some of the challenges that we

face today, as well as some examples of innovative solutions that have been introduced.

Biography:

Dr. Rita Upmacis obtained her B.Sc. in Chemistry and Ph.D. in Inorganic Chemistry from the University of Nottingham, U.K. Her Ph.D. research involved the spectroscopic characterization of catalytic intermediates in liquid xenon, including early examples of metal-dihydrogen compounds. She moved to the U.S. as a postdoctoral fellow (California Institute of Technology), where she learned how to modify proteins and measure electron-transfer processes using laser spectroscopy. She was recruited by Rohm & Haas Company (now the Dow Chemical Company, PA) as a Senior Chemist, and worked on the acrylic acid process, developing polymerization inhibitors and improving the quality of acrylic acid, which resulted in 9 patents being awarded. After 6 years in industry, she returned to academia and became an Associate Research Professor (Department

of Pathology & Laboratory Medicine, Weill Cornell Medical College, NY), studying how specific fatty acids and certain forms of reactive oxygen and nitrogen species are involved in inflammatory and disease processes, such as atherosclerosis. Since 2010, she has been at Pace University, where she introduced Green Chemistry as an undergraduate course. Teaching this course has sparked her interest in monitoring the global challenges and opportunities that face mankind in achieving sustainability.

Tentative

Date: Wednesday, March 14, 2018

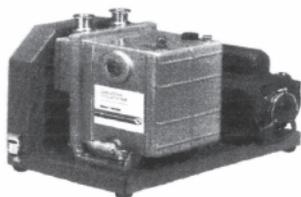
Times: Refreshments: 5:30 PM

Lecture: 6:00 PM

Place: Westchester Community College
Gateway Building Room 110
75 Grasslands Road
Valhalla, NY 10595

Cost: Free and Opened to the Public

For further information: contact Paul Dillon
E-Mail PaulWDillon2@hotmail.com
Phone 1-914-393-6940



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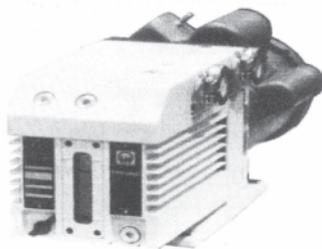
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NY/NJ SOCIETY FOR APPLIED SPECTROSCOPY

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Department of Chemistry &
Pharmaceutical Science with its Student
Affiliates of the American Chemical
Society, and the Gamma Sigma Epsilon
Chemistry Honor Society***

“Spectroscopic Hyperspectral Chemical Imaging”

Speaker: Emil W. Ciurczak
Doramaxx Consulting

The original practice of spectroscopy involved destroying a sample to analyze it: we grind, mix with a solvent, extract the analyte, bring the (filtered) solution to a known volume, then place it in a cuvette for scanning. This may show the amount(s) of analyte(s) in a single sample, but the vast majority of information has been lost: hardness, distribution of analyte(s), particle size(s) of analytes, polymorphic form(s) of the analytes, and so forth.

When reflection near-infrared spectroscopy was developed, solid samples (e.g., tablets, capsules, foodstuffs, etc.) were able to be examined. Without destroying sample and using Chemometrics, we could now analyze (predict) individual chemical entities and macro-parameters (hardness, density) as well as discovering the potential changes in crystallinity and morphology of the chemicals of interest. But, we are still seeing the average values and still have no idea of distribution of actives.

With chemical imaging, we generate a 3-D “hypercube” of data. That is we have a 2-D portrait of the sample (displayed as thousands or tens of thousands of pixels), with each pixel also containing a full spectrum (NIR, IR, Raman, or fluorescence) of the material in that pixel. This allows the analyst to show where each component is located: how much, size of clusters, morphology of EACH CRYSTAL, and much more.

We will look at the hardware and software available for these measurements and examine a number of applications, showing the wealth of data available as well as seeing how many uses spectroscopy can have in both end uses and in-process controls. The applications in medicine, drug development, food, and so on will be discussed.

Brief Biography for Emil W. Ciurczak

Emil W. Ciurczak has advanced degrees in Chemistry from Rutgers and Seton Hall Universities, has been in the pharmaceutical industry since 1970, performing method development on most types of analytical equipment. In 1983, he introduced NIR spectroscopy to pharmaceutical applications. He also consults for numerous instrument companies. His research is largely pharmaceutical applications of NIR where he has published over five dozen articles in refereed journals, over 250 magazine columns, and presented over 200 technical papers.

Since 2005, Emil has been Contributing Editor for Pharmaceutical Manufacturing magazine (wrote a column for Spectroscopy; 1987-2007) and for Contract Pharma magazine since 2013. He has written and edited several texts and chapters: “Handbook of NIR Analysis” (1st, 2nd, and 3rd editions, 4th in progress), “Pharmaceutical and Medical Applications of NIRS” (1st & 2nd editions), “Molecular Spectroscopy Workbench,” and chapters on NIR applications to life sciences. Emil sits on several magazine editorial boards, is active in SAS, is a founder of the Council for NIRS, and was the 2002 chair for IDRC (Chambersburg Conference).

He has been teaching (college adjunct) since 1979: Stevens Tech, College of St. Elizabeth, Hood College, and Mount St. Mary’s College; as well as short courses (in NIR, Raman, and PAT/QbD) for the ACS, CfPA (US and Europe), PTI, SPIE, ASSA, and other organizations.

Emil is a consultant in the field of NIR (lab and process applications) and holds more than a dozen patents for NIR-based devices and software. He consults with various pharmaceutical companies, instrument manufacturers, and the FDA. He was a member of the PAT sub-committee (Validation) for the FDA and member of the PAT Expert Committee for the USP. He was the 2004 recipient of the EAS Achievements in NIR Award.

Date: Wednesday, February 21, 2018

Time: Networking 6:00-6:30 and

7:30--8:00 PM

Talk 6:30-7:30 PM

Place; Science Building Room S-11
Fairleigh Dickinson University
175 Park Avenue
Florham Park, NJ 07932

<http://view2.fdu.edu/campuses-and-centers/florham-campus/florham-campus-index/directions-to-the-campus/>. In case of snow, the university posts the closings for inclement weather on the website.

See www.nysas.org for more information about our society and future meetings.



2017: AN AWARD-WINNING 125TH ANNIVERSARY YEAR FOR THE NEW YORK LOCAL SECTION

The New York Local Section celebrated its 125th Anniversary Year in 2017 with award-winning service to its members, the wider scientific community and the greater community. The Section was awarded an Innovative Project Grant (IPG) entitled 'Increasing Member Engagement via Social Media' and a Member Engagement Through Technology (METT) grant entitled 'Livestreaming Virtual Seminars from the New York Section'. The IPG and METT funds are targeted at engaging members and showing them the value of the New York ACS. This value was clearly present at the Middle Atlantic Regional Meeting in June where the New York Local Section members received three regional awards.

JaimeLee Rizzo (second from left), 2012 Section Chair and current Councilor, was selected as the 2017 recipient of the E. Ann Nalley Middle Atlantic Region Award for Volunteer Service. JaimeLee's dedicated service to the Section membership and to the community through her efforts in organizing our local Chemists Celebrate Earth Day event are inspirations to us all. She

was also selected as an ACS Fellow this year, along with Peter W.R. Corfield and Nicole S. Sampson from the New York Local Section.

The partnership between the New York Local Section of the American Chemical Society and the New York Hall of Science which is responsible for our local National Chemistry Week celebration was recognized with the 2017 Partners for Progress and Prosperity Regional Award. Donald Clarke, 1977-1978 Chair (left), and Frank Romano, 2010 Chair, (second from right) accepted the award on behalf of all the current organizers Ping Furlan, Scott Lefurgy and Erin Thelen, and event sponsors including PepsiCo, Maruzen, Pearson, International Fragrances and Flavors and all our participating colleges and universities for their hard work and dedication to the community. This long-term partnership has allowed over 25,000 children experience chemical demonstrations first-hand and is the New York Local Sections preeminent outreach activity.

2017 Chair Brian Gibney (right) accepted the 2017 Stanley C. Israel Regional Award for Advancing Diversity in the Chemical Sciences for the Middle Atlantic Region on behalf of The PhD Program in Chemistry, The Graduate Center of the City University of New York. The Committee on Minority Affairs (CMA) bestowed this honor on the CUNY PhD Program in Chemistry for their efforts to increase the participation of scientists from under-represented minorities. At present, the percentage of female (34%) and African American / Hispanic / Latino (8%) members on the CUNY doctoral faculty in chemistry is about double the national averages (19%/4%) and offers inspiration to a diverse spectrum of chemistry students.



(Photo courtesy of Brian Gibney)

INORGANIC AND ORGANOMETALLIC TOPICAL GROUP

2017 Frontiers of Inorganic and Organometallic Chemistry Lecture Symposium and ION Poster Session Presented by the Inorganic and Organometallic Topical Group

The Inorganic and Organometallic Topical Group hosted the 6th annual Frontiers of Inorganic and Organometallic Chemistry lecture symposium and the ION (Inorganic, Organometallic, Nanoscience) Poster Session on Friday, October 27, 2017 on the campus of Columbia University. The event attracted an audience of more than 70 chemists, including graduate and undergraduate students, to share their latest work in the field of inorganic chemistry.

Symposium presenters from the NY ACS Local Section included Brian Gibney (Brooklyn College), Tianning Diao (NYU),

and Tom Ravis (Columbia University). Prof. Cathy Murphy (University of Illinois Urbana-Champaign) delivered the keynote address entitled "Growth, Form and Reactivity of Anisotropic Gold Nanostructures". The session was chaired by the NY ACS Inorganic Topical Group co-chairs James Camara and Kathleen Kristian. Following the symposium, attendees enjoyed the 4th annual ION Poster Session, which featured 13 poster presentations by graduate and undergraduate students from institutions within the NY Local Section.

The Inorganic and Organometallic Topical Group is committed to supporting the mission of NY-ACS by providing programming to encourage the formation of a strong scientific community through lectures, symposia, and other events on all topics related to Inorganic and Organometallic Chemistry. If you would like to be involved, or have questions, comments or suggestions, please visit the NY ACS web site and contact the chairs.



Speakers at the 2017 Frontiers of Inorganic and Organometallic Chemistry Lecture Symposium. Left to right: Brian Gibney, Cathy Murphy, Tianning Diao, Tom Ravis.

Prof. Cathy Murphy of University of Illinois Urban-Champaign delivers the keynote address about gold nanostructures at the 2017 Frontiers Symposium.



Poster presentations at the 2017 ION Poster Session sponsored by the Inorganic and Organometallic Topical Group.

(All photos courtesy of Kathleen Kristian and James Camara)

NEW YORK HALL OF SCIENCE NATIONAL CHEMISTRY WEEK PROGRAM WON 2017 ACS MIDDLE ATLANTIC REGIONAL P3 AWARD

*Dr. Ping Furlan, Dr. Scott Lefurgy, Mrs. Erin Wasserman, and Dr. Shivnath Mazumder
National Chemistry Week Project Leaders
New York Local Section*

For its longevity and strong collaboration with New York Hall of Science (NYSCI) and its nearly twenty affiliated organizations in successfully achieving the common goal of improving the public appreciation for chemistry and exciting the community youth about a career in science and engineering, the New York Local Section's National Chemistry Week (NCW)-NYSCI program won the prestigious 2017 Middle Atlantic Regional Partners for Progress and Prosperity (P3) Award.

"The New York Local Section has partnered the New York Hall of Science for thirteen years in celebrating National Chemistry Week", said Dr. Brian Gibney, the Section Chair. "This event has grown to serve over thousand K-12 students each year. Hundreds student members of the ACS and their faulty advisors provide child friendly chemistry demos at the NYSCI along with corporate demos from Corporations such as PepsiCo", Gibney continued.

The program has been well favored, well participated, and well evaluated by all who are involved. "This is an excellent program reaching out to college students who have an interest in careers within the chemistry field, as well as creating an exciting and engaging environment for younger children to help grow their interest and excitement with science and chemistry. This program is an essential outreach initiative for the ACS New York Section and it enables a broader community between ACS and other companies in the area", added Mr. Joseph Wiener, the Coordinator of PepsiCo. "The level of involvement among partner organizations is extensive. Each organization comes well prepared to make this event successful every year", said Mr. Wiener.

The program has effectively promoted communication and interaction among industrial chemists, college faculty, college students, NYSCI staff, K-12 students and their parents, allowing them to get to know each other and to learn about what each other does and cares about. "Chemistry Day gives kids and families a fun, positive, hands-on experience with chemistry. Participants get to meet people working and studying in the field of chemistry. Through hands-on activities and conversations

participants make connections between chemistry and their day-to-day lives, often in unexpected ways. NYSCI Staff also benefits from taking part in the experience. Explainers, Science Career Ladder students who work on our exhibit floor, often talk with volunteers and get advice on different fields of study and what universities or colleges might be the best fit for them. NYSCI staff also gets ideas about how to get people excited about chemistry and new activities to do", said Ms. Erin Thelen, the Public Programs Manager of NYSCI.

This year, the NCW Celebration took place on Saturday, October 14, 2017. Once again, nearly 300 faculty, students, and chemists from nineteen area universities, industries, and non-profit organizations joined the Section at the NYSCI from 9 a.m. to 4 p.m., and put on an amazing interactive hand-on chemistry presentation that showed the public that "Chemistry Rocks!". Inside the Hall of Science on the event day, 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. In keeping with this year's theme, "Chemistry Rocks!", a large-screen slideshow with images and animations was created to celebrate the chemistry and the spectacular properties of rocks, minerals, crystals, and gemstones, and to highlight the Section's people and community events. The presentation also included over 60 safe, action-containing, and theme-inspired activities for the visitors, especially students in K-12, to observe and to try. Examples were "Glowing Rocks", "Floating Rocks", "Reactive Rocks", "Radioactive Rocks", "Magnetic Rocks", "Writing with Carbon: Graphite and Diamond", "Geode Eggs", "Rock Candy", "Ghost Crystals", "Volcanic Rocks", "Volcano Eruption", "Rock Cycle", "Rock Painting", "Rock Collection", "Rock Pendulum", "Calcite Birefringence", "Oscillation Clock Reaction", and "Making Magic Sand". Throughout the day, the activity stations displayed on 35 tables inside and outside the Viscusi Gallery were crowded with inquisitive youngsters who obviously loved the chance to interact with their "role-models". Visitors of all ages cherished their experiences and the many scientific experiments that were displayed, as shown by 100% positive exit evaluations by the hundreds of the Hall visitors. To recognize the student chapters and their advisors for promoting their students' creativity and involvement with chemistry, the Section gave out the winner and runner-up awards, as

(continued on page 16)

NEW YORK HALL OF SCIENCE

(continued from page 15)

selected by the NYSCI visitors, NYACS members, and NCW Committee, in two categories this year:

The Best Theme-Inspired Exhibit

Winner: The Student Chapter of Queensborough Community College

Runner-up: The Student Chapter of College of Mount Saint Vincent

The Most Popular Exhibit

Winner: The Student Chapter of United States Merchant Marine Academy

Runner-up: The Student Chapter of St. Joseph's College

Other fun awards included "Half-life Time Achievement Award", "Chapter Travel Award", "Best Dressed Award", "Nobelium Prize", "Overachiever Award", "Largest Team Award", and "Smallest Team Award".

All volunteers appreciated being part of the Program, meeting new and interesting people at the Program, and enjoyed some of the-most-fascinating chemistry and science exhibits at

the Hall of Science on the event day!

We are extremely grateful to the Middle Atlantic Regional Meeting Award committee for the honor it generously gives to our Program. We are also exceedingly thankful to our volunteers as well as our sponsoring colleges, universities, companies and non-profit organizations. Without their enthusiastic support, their strong leadership and community spirit, and their desire to help advance chemistry and science via education, the continued success of this largest chemical hands-on outreach event in the area would not have been possible.

Adelphi University, American Institute of Chemical Engineers, Bronx Community College, College of Mount Saint Vincent, Columbia University, Guttman Community College, Hofstra University, Maruzen International Co., Ltd. (Also Financial Sponsor at Bronze Level), New York University, Pace University, PepsiCo, Queensborough Community College, Roosevelt UFSD, St. Johns University, St. Joseph's College, Stony Brook University, Svorono's Potions Class, U.S. Merchant Marine Academy, and New York Hall of Science.



Watch how crystals grow into colorful flowers!

Photo by Dr. Jaimelee Rizzo

**MORE PHOTOS ON
NEXT 3 PAGES**



Dr. Brian Gibney, the Section Chair, joined Dr. Ping Furlan, the NCW Committee Chair, and Dr. Scott Lefurgy, the NCW Committee Co-Chair, in recognizing Student Chapters and their Advisors for promoting their students' creativity and involvement with chemistry via National Chemistry Week Program.

(Photo by Dr. Mike Melcer)



Visitors of all ages cherished their experiences and the many scientific experiments that were displayed on Oct. 14, 2017 at NY Hall of Science.

(Photo by Dr. Mike Melcer)

Pet Rocks painted by grade school students on Oct. 14, 2017 at NY Hall of Science.

(Photo by Dr. Neil Jespersen)



“This carbon pen writes on glass!” A student got to practice writing using the “hardest” pen on October 14, 2017 at New York Hall of Science.

(Photo by Dr. Tirandai Hemraj-Benny)

“Wow, this rock attracts metal!” Everyone loved the magnetic attraction of the magnetite rock on October 14, 2017 at New York Hall of Science.

(Photo by Dr. Tirandai Hemraj-Benny)



**Additional Photos of New York Local Section Celebrating 2017
National Chemistry Week at New York Hall of Science
October 14, 2017**





 ACS Chemistry for Life®	66th	ANNUAL UNDERGRADUATE RESEARCH SYMPOSIUM	
<p>The New York Chemistry Students' Association Student Affiliate Committee – New York Section American Chemical Society</p> <p>Saturday, May 5th, 2018 at York College CUNY</p> <p>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</p>			
<p>Keynote Speaker</p> <p>Dr. Dhahib V. Chulhai Dept. of Chemistry, University of Minnesota, Minneapolis MN</p> <p>Dhahib Chulhai grew up in Guyana and began his studies in chemistry at the University of Guyana. He received his B.S. in Chemistry at York College of the City University of New York (CUNY) in 2011, where he worked with Prof. Ruel Desamero, and his Ph.D. in Chemistry from The Pennsylvania State University in 2016, working with Prof. Lasse Jensen. Since then, he has been working as a postdoctoral associate with Dr. Jason Goodpaster at the University of Minnesota. Dr. Chulhai was awarded the Eugene and Jane Apple Science Graduate Fellowship at Penn State University for his contributions to the National Science Foundation's (NSF), Center for Chemical Innovation (CCI) entitled Center for Chemistry at the Space-Time Limit (CaSTL). In CaSTL he worked with a team to develop and use theoretical methods to understand chemistry at the smallest possible length and time scales. He is currently a part of the Department of Energy's Nanoporous Materials Genome Center, where his research is focused on developing and using highly accurate quantum chemical methods to guide the discovery of novel materials.</p>			
<p>Keynote Address</p> <p>Understanding Chemistry Using Theoretical Embedding Methods</p> <p>Abstract: All of chemistry may be understood by solving the time-dependent Schrödinger equation for the relevant system, although exact solutions are often impossible or computationally too expensive. Theoretical and computational chemists seek to find and use shortcuts that are both accurate and computationally tractable to solve this equation. Luckily, most of chemistry often occurs in a small region of an otherwise complex environment. As such, we are interested in using embedding methods—where we use a highly accurate method to describe the small region of interest but describe the rest of the environment using less accurate methods—to model systems. Experiments are now able to observe chemistry happening one molecule at a time, using techniques like surface-enhanced and tip-enhanced Raman scattering. We will show how using these embedding methods allows us to gain insights into these experimental findings.</p>			
<p align="center">SIGNIFICANT DATES FOR 66th URS</p> <p align="center">Deadline for Abstract Submission - March 15, 2018 Abstract acceptance notification – March 26, 2018 Deadline for Symposium Advanced Registration – March 27, 2018</p>			
<p>2018 Co-chair Dr. Paul Sideris Queensborough Community College psideris@qcc.cuny.edu</p>	<p>2018 Co-chair Dr. Yolanda Small York College - CUNY ysmall@york.cuny.edu</p>	<p>2018 Co-chair Dr. Ipsita A. Banerjee Fordham University banerjee@fordham.edu</p>	<p>2018 Co-chair Dr. Naphtali O'Connor Lehman College - CUNY naphtali.oconnor@lehman.cuny.edu</p>
<p><small>FREE Registration for student members of the National ACS. Faculty members who register in advance and sponsors. For non-ACS members and guests, the registration is \$99 in advance. All on-site registration is \$45 for faculty, staff and guests. Checks for the registration fee should be made out to: "NY ACS URS" and sent to: Prof. Joseph Seratin, St. John's University, Department of Chemistry, 333 St. Albert Hall, Queens, NY 11439.</small></p>			

WESTCHESTER CHEMICAL SOCIETY

On November 10, 2017 Dr. Prabodhika Mallikaratchy spoke on “Ligand-Guided Selection (LIGS): A SELEX Variant to Identify Specific Aptamers Against Cell-surface Markers.” Dr. Mallikaratchy is an assistant professor of chemistry at the City University of New York, Lehman College. She spoke on nucleic acid aptamers, a class of artificial nucleic acid molecules, possibly including non-natural nucleotides that are “apt” for a particular job. Her research is directed toward identifying aptamers that efficiently tether immune cells to cancer cells mediating anti-cancer immunotherapy. Aptamers are selected using a screening method called Systematic Evolution of Ligands by EXponential enrichment (SELEX). Her research uses SELEX approaches to evolve aptamers against cell-surface membrane proteins as part of whole cells. She has developed a new variant of SELEX termed Ligand-Guided-Selection (LIGS) to identify highly specific aptamers against a predetermined epitope of a cell-surface target. The hallmark of LIGS is its ability to exploit the evolutionary selection step in SELEX as a strategy to evolve highly specific aptamers. The iterative process in conventional SELEX is designed to outcompete low-affinity binders through a competitive process whereby high affinity binders move on through the selection process. Using LIGS her group has selected aptamers against membrane bound IgM (mIgM) expressed on B-cells and Cluster of Differentiation 3 (CD3) expressed on T-cells. Using detailed validation studies with a LIGS-selected aptamer, they have shown that aptamers identified using LIGS can be optimized into higher affinity variants. Her talk concluded with a short discussion of

ongoing projects aimed at selecting DNA aptamers against CD3 molecules expressed on human T-cells at physiological temperatures. There was lively discussion during and following the talk, which was given at the Westchester Community College in Valhalla, NY.

Dr. Mallikaratchy obtained her undergraduate degree in chemistry from The Institute of Chemistry, Colombo, Sri Lanka (2000), her M.S. in organic chemistry from the University of Louisiana, Monroe (2003), and her Ph.D. in analytical biochemistry from the Center for Bio-Nano Interface, The University of Florida, Gainesville (2008). From 2008 to 2012, she was a research fellow at The Memorial Sloan-Kettering Cancer Center, in New York. In 2012, she was appointed as Assistant Professor in the Department of Chemistry, PhD program in Chemistry and Biochemistry, at the Graduate Center of the City University of New York. There, she has worked to lay the groundwork to establish a new method for aptamer selection, resulting in a patent application and two peer-reviewed publications. Concurrently, she established her lab in the Department of Chemistry at Lehman College (CUNY). She has received several awards (the 2008 Crow Stasch Awards for excellence in publications, University of Florida Recipient, the 2009 Lauri Strauss Leukemia Research Fellow award, the 2010-12 Lymphoma Research Foundation Research Fellow award, and the 2017 Junior Faculty Research Award-runner-up at CUNY). She is also a member of several professional associations.

After the talk Dr. Mallikaratchy and several of the attendees enjoyed a dinner together at a nearby restaurant. The photo below is of Dr. Lewis and the other WCS board members who attended the meeting.



Hossain Azam, Paul Dillon, Jody Reifenberg, Prabodhika Mallikaratchy, Rolande Hodel and Peter Corfield.

(Photo courtesy of Paul Dillon)

WESTCHESTER CHEMICAL SOCIETY

On November 16, 2017 the Westchester Chemical Society (WCS) hosted a tasting, tour and lecture at a craft brewery, The Broken Bow Brewery (BB) in Tuckahoe, NY. This had been put together through the efforts of WCS's co-chair and program director, Paul Dillon, and the Head of Broken Bow's Tasting Room, Michael Farkas. The tour and talk were given by Kasey LaMothe, Broken Bow's Head of Microbiology, a Brewer, and a part-owner. Those attending, who included several members of the WCS and ACS NY Section (NYACS) boards of

directors, gathered together for socializing and tasting Broken Bow's beers (which are excellent). Delicious hot hors d'oeuvres from The Quarry Restaurant, also in Tuckahoe, were enjoyed by all. After the tasting, we were given a tour of the working parts of the brewery – roasters, fermenters, etc. by Kasey LaMothe who gave a most interesting and informative discussion of the art and science of brewing beers and ales. All in all, everyone had a very enjoyable, as well as informative, evening. Photos (all courtesy of Paul Dillon) of those attending and of the tour and some of the equipment used follow.



Mike Anostario, Linda Kish, John Kish and Jane Dillon.



Anne O'Brian (NYACS) and Ron Tedesco



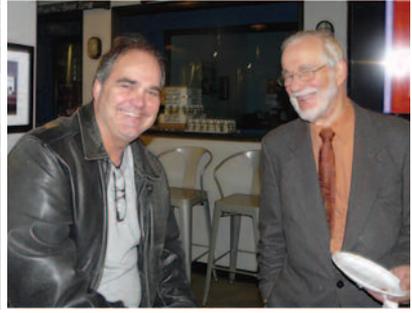
Ray Ferrara and Laurel Cardelichio



Ron Tedesco, Mike Farkas (BB), Joan Laredo-Liddell (WCS) and Sally Mitchell (WCS)



Mark Grossman, Joan Laredo-Liddell (WCS), Sally Mitchell (WCS) and Donald Clarke (NYACS)



James Williams and Peter Corfield (WCS)



Jane Dillon, Irene Neaman and Anne O'Brian (NYACS)



The Tour Showing Some of the Brewery Equipment



Kasey LaMothe (BB) Giving the Tour

Kasey LaMothe (BB) Giving the Tour and Paul Dillon (WCS, NYACS)

(All photos courtesy of Paul Dillon)



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 22, 2018

Time: 7:00 PM

Place: TBD

(See www.njacs.org for more details)



CAREERS IN TRANSITION MEETINGS

There will be no Careers in Transition Meetings until further notice.



NEW YORK/NEW JERSEY SOCIETY FOR APPLIED SPECTROSCOPY

CALENDAR 2018

“Spectroscopic Hyperspectral Chemical Imaging”

Speaker: Emil W. Ciurczak
Doramax Consulting

Date: Wednesday, February 21, 2018

(See article on pages 12-13.)

“Laser-induced Breakdown Spectroscopy (LIBS) Addition to Microscopic Analyses and Raman and IR of Particles”

Speaker: Dr. Markus Lankers
RapID GmbH

Date: Wednesday, April 25, 2018*

“Application of FTIR in Understanding the Changes in Protein Secondary Structure as a Result of Stress”

Speaker: Dr. John Wasylyk
Bristol-Myers Squibb

Date: Wednesday, May 23, 2018

For more information, visit our website at www.NYSAS.org.



NORTH JERSEY SECTION HOSTS 23RD CHEM EXPO

NJACS successfully hosted the 23rd ChemExpo at Liberty Science Center, Jersey City, New Jersey on October 21st in celebration of National Chemistry Week.

More than 240 volunteers from middle and high schools, nine colleges and universities, and several businesses and organizations volunteered their time to educate children in geochemistry. The 400+ visitors experienced this year's theme, “Chemistry Rocks!”, through the use of Moh's hardness test, acid-base chemistry, UV fluorescence testing, density tests, hydration and dehydration of clay, rock candy and chalk chemistry, Epsom salt and sodium acetate crystallization, as well as a variety of other experiments.

The college and university chemistry chapters also competed in the Sister Marian José Smith Undergraduate Public Outreach Award. Drew University students were awarded first place for their engaging and animated demonstrations; children adopted pet rocks which were then tested for fluorescence, hardness, magnetism, and streaking. Ramapo College won second place for their demonstration in which children solved a mystery while also learning about the different types of rocks. Princeton University placed third for their experiments that involved fossils, chemical identification with acid and marble chips, and density.

Among the recognized volunteers were the students from J.P. Stevens High School from Edison for outstanding presentation; the seventh grade students from Elisabeth Morrow School in Englewood were distinguished as the youngest presenters at the event.

Judges Tomeka Saxon, Debra Hazard-Sweet, Luci O'Reilly, Mei Ping Yang, Keisha Stephen, and Mirlinda Biba selected the winners in the College/University competition, and Miriam Gulotta coordinated the judging during the event.

The event was enjoyed by the children as well as the volunteers. “It's wonderful to watch both children and parents have such a good time learning about chemistry,” said Miriam Gulotta. “As a teacher I learn a lot from the clever lessons designed by the

competing colleges and universities.”

Tyler Dorrity, president of the Drew University chemistry society, said, “Volunteering for ChemExpo is a great experience because I get to see that spark of curiosity in some of the kids, and seeing that spark grow is a wonderful sight.”

Financial support from the three corporate sponsors, Infineum USA L.P., SPEX CertiPrep, and BASF, made the event possible. The event was also successful due to the support of NJACS Executive Board members, retired chemists, chemistry teachers at the participating schools, representatives from various chemical companies, and the ChemExpo 2017 Steering Committee: Monica Sekharan, Mita Chaki, Marilyn Gorman, Miriam Gulotta, and Sandra Keyser.



Children manipulate a compass using ferromagnetic rocks, supervised by Ramapo College students.



The density of rocks is tested with Princeton University students.



Under the supervision of J. P. Stevens students, the siblings view the fluorescence of rocks.



Children write their Moh's hardness test observations in notebooks at Drew University's Adopt a Rock event.



Drew University – Winners of the Sister Marian Jose Smith award.

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 2Science (S2S) is seeking volunteers to support its V-Lab program. S2S has a series of elementary, middle, and high school experiments that run in various schools across New Jersey. Members are especially needed to mentor students in participating schools to help with experiments. It's great fun, a wonderful way to give back, and only requires 1-2 hours of your time. Experiments include CO₂ to the Rescue, Curious Crystals, Mystery of M&Ms, Thermochemistry: *Exothermic and Endothermic Chemical Reactions*, and *Glow it Up: The Chemistry of Luminol*. All are age-appropriate and volunteers are provided with instructions on how to support in the classroom prior to your scheduled volunteer day.

For more information, contact Cyndi Roberson, Director of Corporate Relations, at (973) 947-4880 ext. 516 or visit the website to register for the upcoming school year: www.students2science.org.



SEMINAR SPEAKERS WANTED

The New York Section of the ACS is in search of speakers that we can add to our Speakers Bureau database of interested local area speakers who are available for Section-wide seminars and symposia. If you have an area of research or interest that would provide an interesting talk appropriate for our Section members, and would like to be included in our Speakers Bureau, please contact the New York Section Office at (516) 883-7510 or send an email to njesper1@optonline.net with the following information that will be posted on the Section's website: your name, affiliation, a title, and 5-6 words briefly summarizing your area of specialty. We look forward to hearing from you about topics that you wish to share with our other members!

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

or from your school guidance office.

Return Application To

Freddie and Ada Brown Award, NJACS Section Office, 49 Pippens 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 or (908) 239-1515

Call for Applications

OPEN-NJ Scholarship Program Department of Chemistry and Biochemistry



MONTCLAIR STATE
UNIVERSITY

Receive one of the scholarships (\$10,000/year for 2 or 3 years) to enter one of the following programs at Montclair State University

- *Masters in Pharmaceutical Biochemistry*
- *Masters in Chemistry*
- *Masters in Chemistry with a Concentration in Biochemistry*

This program is open for the following majors: Biochemistry, Chemistry, Physics, Molecular Biology, Biology, Environmental Sciences, and related degrees (B.A., B.S.).

Summer Research Stipends available for highly qualified students.

Information: <https://www.montclair.edu/csam/open-nj/>

<https://www.montclair.edu/graduate/news/article.php?ArticleID=16127>

Requirements for Program

- Minimum overall 3.0 GPA (B.S. or B.A. degree)
- Completed General Chemistry I (with lab), General Chemistry II (with lab), Organic Chemistry I (with lab), Organic Chemistry II, Calculus I and II and a year of Physics.
- US citizen, national, admitted refugee or permanent resident
- Enrolling full time in an MSU Department of Chemistry and Biochemistry M.S. program
- Financial aid eligible as determined by the Office of Financial Aid.
- Committed to participating in all OPEN-NJ meetings including networking events.

Apply

Apply to the Graduate Program at Montclair State University (<http://www.montclair.edu/graduate/>) AND email Dr. Nina Goodey (goodeyn@mail.montclair.edu) to indicate interest in the OPEN-NJ Scholarship Program. The OPEN-NJ Selection Committee will use your graduate school application.

Questions?

Please, email Dr. Nina Goodey (goodeyn@mail.montclair.edu).



Others

FALL 2017 SEMINAR SERIES AT NJIT

Dates: Mondays

Time: 2:45 PM

Place: Cullimore Lecture Hall 3
New Jersey Institute of Technology
University Heights, Newark, NJ

Seminar schedule:

<http://chemicaleng.njit.edu/news/seminars.php>

For more information contact the seminar coordinator, Dr. Gennady Gor (973) 596-2944, gor@njit.edu <http://chemicaleng.njit.edu/people/gor.php> Jebrown@infionline.net

Call for Nominations

WESTCHESTER CHEMICAL SOCIETY DISTINGUISHED SCIENTIST AWARD 2018

The Westchester Chemical Society is accepting nominations for the "WCS Distinguished Scientist Award 2018". Scientists who live or work in Westchester or the Bronx qualify. The awardee is expected to attend the Awards Dinner (April/May timeframe) and to present aspects of his or her work. Self-nominations are acceptable. Nominations are not carried over from previous years. New and possibly updated nominations should be submitted. New this year, we will allow teams to be nominated. The team should include only those who have made substantial scientific contributions to its work. If a team is selected, then a single presentation of about an hour will be made by either a single team member or more than one; a choice to be made by the team. Please send a cover letter stating why your nominee should receive the award along with the nominee's resume (or all team members' resumes with an indication of team-specific contributions) **by January 31, 2018** to:

Dr. Paul Dillon at PaulWDillon2@hotmail.com or
67 Matthes Road, Briarcliff Manor, NY 10510

or to:

Dr. Peter Corfield at pwrc@earthlink.com.



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 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. Neil Jespersen, at jespersn@stjohns.edu



NY SECTION – SOCIETY FOR APPLIED SPECTROSCOPY

2018 GOLD MEDAL AWARD

Nominations are being sought for the 2018 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 2018 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 28, 2018**. Please email all materials to daniel.sanborn@tec5usa.com.

In the News

TUFTS DISCOVERY ON DIRECT METHANE CONVERSION

From Kalimah Knight

I wanted to bring your attention to new research on a breakthrough process for directly converting methane to methanol, published today in *Nature* and led by Tufts University researchers. The team of chemical engineers discovered a way for direct oxidation of methane—found in natural gas—into methanol at low temperatures using a heterogeneous catalyst and cheap molecular oxygen.

As you may know, the direct conversion of methane, simple and abundant chemical found in natural gas, into a usable fuel such as methanol has long been a goal of scientists seeking to secure America's energy supply. Until now, scientists have required expensive-to-generate high temperatures to convert methane gas to methanol.

The researchers found that they could use molecular oxygen and carbon monoxide for the direct conversion of methane to

methanol catalyzed by supported mononuclear rhodium dicarbonyl species, anchored on the internal pore walls of zeolites or on the surface of titanium dioxide supports that were suspended in water under mild pressure (20 to 30 bar) and temperature (110 to 150° C).

Please let me know if you'd like more info, or to connect with the corresponding author.

Thanks for reading this article.

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Medford, MA 02155
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617-947-8965 m
kalimah.knight@tufts.edu

National

LOCAL SECTION ANNOUNCEMENTS

Dear Local Section Officer:

Please see below for a few timely announcements and reminders:

2018 ACS Leadership Institute – January 19-21, 2018, Dallas TX

The 2018 ACS Leadership Institute, which will include local section and division officer training, is planned for January 19-21, 2018 in Dallas, Texas. The Institute will be held at the Dallas InterContinental Hotel beginning Friday at 1:30 p.m. and conclude at 11:00 a.m. on Sunday.

LSAC invites all of our new chair-elect to attend the Local Section Leadership Track at the 2018 Leadership Institute! In addition, Local sections are also welcome to send other officers or members to take advantage of this acclaimed training event.

Registration for the Leadership Institute will open on November 15. A registration fee of \$425 (covers meals, two nights lodging and conference materials) will be charged for your section's delegate. Your section may choose to send more than one delegate; however, the fee

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ResMed: Residential School on Medicinal Chemistry and Biology in Drug Discovery June 10-15, 2018 Drew University, Madison, NJ

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

Principles of Med Chem	DMPK
Cheminformatics	Toxicophores
Lead ID & Optimization	GPCRs
Epigenetics	Kinase Inhibitors
Fragment-based Drug Design	Ion Channels
Structure-based Drug Design	Enzyme Inhibitors
Drug-like Properties	Bioisosteres
Protein-Protein Interactions	Preclinical Toxicology
Molecular Modeling	Clinical Development
Antibody-Drug Conjugates	

Bill Greenlee, Vince Gullo & Ron Doll – Co-organizers

Attendees will be staying at the Madison Hotel

www.drew.edu/resmed
e-mail: resmed@drew.edu
phone: 973/408-3787; fax: 973/408-3504

NATIONAL

(continued from page 29)

for any additional delegates is \$800 per person. Delegates are responsible for their travel to the institute. LSAC will offer a limited number of travel stipends to help offset some of the cost of delegate travel. Additional details on travel stipends will follow.

The goal of the Leadership Institute is to provide the training you need to be a successful ACS officer and leader. This jam-packed weekend includes track time so you can understand the essential elements of being an effective local section leader, ACS Leadership Development System® courses and the opportunity to interact and exchange ideas with other local section and division officers, ACS governance leaders and staff. Details: www.acs.org/leadershipinstitute.

Local Section Elections

It's that time of year again when many local section elect new officers. Please take a moment to review your local section by-laws to ensure that you conduct elections in accordance established procedures. NOTE: Please do not use your eRosters list for your elections. An election-only list must be requested from ACS to ensure that only eligible ACS members are participating in elections. Request your election-only list at least 10 days prior to ballot distribution. Then save the form using your local section name and send it via email to olsa@acs.org. You will receive an acknowledgement message indicating that your request has been received and advising when you can expect to receive the list.

Mark O'Brien
Senior Manager, Component and Career Services
Membership and Society Services
American Chemical Society
1155 16th St., NW | Washington | DC 20036
T 202-776-8212 | 800-227-5558, ext. 8212
www.acs.org



ACS PROJECT SEED 50TH ANNIVERSARY CHALLENGE

Dear Local Section Chair,

In 2018 Project SEED will be celebrating its 50th Anniversary and we need your help to

make this celebration a very special one! Established in 1968, the program provides opportunities for students who historically lack exposure to scientific careers to spend a summer conducting hands-on research with a scientist in academic, industry, and government research laboratories. Students receive a fellowship award for their efforts and a chance to receive a SEED college scholarship. We are seeking your help in promoting this worthy program within your Local Section with the goal of recruiting junior and senior high school students, program coordinators, and researchers (mentors) to expand the program to 50 states (including Washington D.C. and Puerto Rico) to commemorate the 50th anniversary in 2018!

The Challenge

The Committee on Project SEED will recognize Local Sections that will:

establish a new Project SEED program within their territory

or

increase the number of student participants by 50%

or

match the fellowship stipends by 50%

The successful Local Sections will be invited to share their accomplishments with a poster presentation at the ACS National Meeting in Boston and will be highlighted during the 50th anniversary reception. Local Sections are encouraged also to complete and submit their self-nomination in FORMS for the opportunity to compete for the 2018 Project SEED ChemLuminary award. Criteria to measure the 2018 award will include the Challenge activities.

For more information on Project SEED please visit the Project SEED website at <https://www.acs.org/content/acs/en/education/students/highschool/seed.html>

The current application cycle is now open with a **January 31, 2018 deadline**.

Please contact Cecilia Hernandez at projectseed@acs.org or call 1-800-227-5558 ext. 4380 with questions on how to start or continue a Project SEED program.

Sincerely,
Anna Cavinato
Chair, ACS Committee on Project SEED

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numegalabs.com P- 858-793-6057

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- Companies for laboratory and management positions
- Universities & Colleges for teaching positions and laboratory personnel
- Hospitals for technical and research personnel

There are several web sites that may help you search for these open positions.

- www.mboservices.net
- <http://newyorkacs.org/jobs.html>
- <http://njacs.org/jobs.html>

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