

THE EALING PWWER OF CHEM STRY

October 15-21 | 2023 #NationalChemistryWeek





National Chemistry Week 2023 See pages 9 & 10





THIS MONTH IN CHEMICAL HISTORY

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

I am constantly amazed at the treasures one can find by exploring the internet. A favorite pastime of mine is trolling for used books about chemistry – especially older books. A few months ago I bought, for a remarkably reasonable price, a battered but complete and serviceable copy of "Philosophie Chimique" or, to use its English title "Chemical Philosophy, or the fundamental truths of modern chemistry designed to serve as fundamentals for the study of that science". The author is none other than A. F. Fourcroy, associate and friend of Lavoisier who revolutionized chemistry through his understanding of the role of oxygen in combustion. The book I purchased is the third edition, published in 1806. The first edition of Fourcroy's text was published in 1792. A word of explanation about the title; Philosophy can best be taken to mean theory in this context.

The book is over 360 pages long. The pages are dense with almost completely unrelieved text. You have to reach page 205 to arrive at the book's only Table – two pages dedicated to the properties of acids. Somewhat surprising to me is the lack of a Table of the Elements; something that featured prominently in Lavoisier's "Textbook of Elementary Chemistry" published in the 1770s.

I believe my copy of this book was misbound; Fourcroy's preface is oddly placed between pages 16 and 17 of the Introduction. The preface is interesting. I will quote extensively from it. (The translation from the French is mine.) "When a science has made great progress, when it has appropriate methods to perfect its advance, general truths multiply and join up naturally: such is today's chemistry. The principles of this science were created only 20 years ago [by Lavoisier; HG] but it is already rich in corollaries and general results that reinforce the whole scheme...It is 14 years from the first publication of "Chemical Philosophy. This third edition includes many corrections and important additions. The book has been translated into German, Swedish, Danish, English, Spanish, Portuguese, Italian, and modern Greek. I think it may be included among classic books [!]... Teaching experience of more than 25 years leads me to hope that my efforts will not be unsuccessful. Paris, August 1805."

Obviously in a single column I cannot summarize and explain this "classic" work. An examination of one subject will have to suffice. I start with the section on the action of caloric. Lavoisier's Table of the Elements included both light and caloric. Here's Fourcroy's definition of caloric: "What people call heat is a sensation produced by a body that modern chemists call caloric." Notice the use of the word body. Caloric is a substance. "Caloric penetrates everything: it separates molecules by lodging between them; it diminishes their attraction; it dilates materials; it melts solids; and rarefies liquids sufficiently to make them invisible giving them the form of an air or the gaseous state." Fourcroy emphasizes that caloric is a particular substance with the ability to diminish the attraction between molecules of the same kind thus facilitating their combination with molecules of a different kind. Consequently, the addition of caloric speeds up chemical reactions. He attributes to Laplace the invention of the calorimeter, "one of the greatest contributions to chemistry". My own reading of chemical history suggests that Lavoisier's name should be included with that of Laplace.

The applications of caloric are manifold: thermometers; fusion; sublimation; volatilization; artificial refrigeration; incandescence; space heating; fusion etc.

1806 is, of course, just before Dalton's atomic theory; and long before Berzelius' introduction of modern chemical symbolism. Lavoisier wrote the first chemical equation in the 1770s but that was in words, not symbols. It would be anachronistic to criticize Fourcroy for his presentation of chemistry purely in words. Once again, the perusal of a textbook gives us a penetrating insight into the state of chemistry at a particular time. More from Fourcroy in a later column.

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Indicator

http://www.theindicator.org/

The monthly newsletter of the New York & North Jersey Local Sections of the American Chemical Society. Published jointly by the two sections and distributed to their 6,200 members.

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EDITORIAL DEADLINES

November 2023	October 16, 2023
December 2023	November 16, 2023
January 2024	December 16, 2023
February 2024	January 16, 2024

The Indicator (ISSN 0019-6924) is published on-line monthly except July and August by the New York and North Jersey Local Sections of the American Chemical Society, Office of Publication.

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Address advertising correspondence to <u>Advertising Manager</u>. Other correspondence to the <u>Editor</u>.

October Calendar

NORTH JERSEY SECTION

Thursday, October 12, 2023

NJACS Chromatography Topical Group *See page 8*

Thursday, October 19, 2023

NJACS NMR Topical Group *See page 6*

Saturday, October 21, 2023

ChemExpo 2023 See page 9

Monday, October 23, 2023

NJACS Executive Committee Meeting *See page 5*

Thursday, November 16, 2023

NJACS Organic Topical Group See page 6

NEW YORK SECTION

Thursday, October 5, 2023

Long Island Subsection See page 11

Sunday, October 15, 2023

National Chemistry Week *See page 10*

Thursday, October 26, 2023

Hudson-Bergen Subsection *See page 13*

Thursday, November 9, 2023

Westchester Chemical Society *See page 12*

Saturday, November 18, 2023

Frances S. Sterrett Environmental Symposium See page 14



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Click here for our <u>rates</u> and fill out our online <u>order form</u>. Advertisements are due by the 16th of the month. For questions, please contact the <u>Advertising Manager</u>.

NORTH JERSEY SECTION MEETINGS

https://www.njacs.org/

2023 NORTH JERSEY ACS EXECUTIVE COMMITTEE MEETINGS

2023 North Jersey ACS Chair Justyna Sikorska and the Executive Council welcome you to our monthly NJACS meetings. Meetings will be held either virtually or in hybrid mode (virtually with an in-person option at the Merck Kenilworth site). The meetings are normally held on **Mondays from 7 pm to 9 pm once per month.** All members are welcome to attend and become more involved in section activities.

For any additional information including a link to virtual meetings and RSVP deadline for in-person meetings, please <u>click here to email our Communications Chair.</u>

October 23 (virtual) November 13 (virtual) December - TBD

NORTH JERSEY ACS ELECTIONS VOTE NOW FOR YOUR CHAIR-ELECT, SECRETARY, AND COUNCILORS

It's that time of year again!

- •First, our NJACS elections have started (ballot from <u>Vote Now</u>, slate below; check your Inbox!)
- •Then the <u>ACS National elections!</u>

Note the dates for the elections are similar but the National voting ends slightly earlier than our North Jersey section voting!

The Executive Council has several open positions for dedicated volunteers to work to make our Section better in 2024. You can vote by email or by phone using the info on your ballot. Biographies of the candidates are available on the voting website accessible from your ballot. The North Jersey Section ACS 2024 election is open NOW and will end on **October 27, 2023**. Ballots were sent out by email from ACS-NJ Elections via **Vote-Now.com**. *Please check your Spam folder if you cannot find your ballot*.

All current North Jersey ACS members should have received ballots on or about September 18th. As a reminder, here is our candidate slate for the 2024 offices of Chair-elect and Secretary, as well as the multiple Councilor/Alternate Councilor positions available.

Vote for one	Vote for one	Vote for three
Chair-elect: Robert Menger	Secretary Elizabeth (Bettyann) Howson	Councilor/Alternate Councilor* Alan Cooper Sandra Keyser Jasmine (Yingchun) Lu Amanda Peterson Mann Cecilia Marzabadi Justyna Sikorska

(*The three Councilor/Alternate Councilor candidates receiving the highest votes will be Councilors, the remaining three candidates will be Alternate Councilors, for the 3-year term from 2024 – 2026.)

NORTH JERSEY ACS NMR TOPICAL GROUP ANNUAL NMR SYMPOSIUM





NORTH JERSEY ACS ORGANIC TOPICAL GROUP FALL SYMPOSIUM 2023 CALL FOR ABSTRACTS (DUE OCTOBER 15th) AND REGISTRATION

Registration is now open! To register, scan the QR code, or visit our website. Last year's event was a great success! We had over a hundred attendees and over twenty posters to celebrate Nobel Laureate Prof. Carolyn Bertozzi, Stanford, who was recognized as the 2022 Creativity in Molecular Design and Synthesis awardee. See next page for the Call for Abstracts due October 15th and click here to see full event information.







NORTH JERSEY ORGANIC TROPICAL GROUP FALL SYMPOSIUM 2023

NJACS ORGANIC TOPICAL GROUP FALL SYMPOSIUM 2023

NEW INNOVATIONS IN SYNTHESIS AND CATALYSIS

BIOCATALYSIS PHOTOCATALYSIS TOTAL SYNTHESIS RADIO LABELING AND MORE!

CALL FOR ABSTRACTS

Local graduate students, undergraduate students, and post-docs in organic chemistry are encouraged to submit an abstract to be considered for a poster session, to be held during the symposium's coffee breaks. Registration is free for student/postdoc presenters; free transportation will be arranged if needed.

ABSTRACT GUIDELINES: <300 words. Include Name, PI, Institution & Graduate Level

SUBJECT LINE: **NJACS Poster Abstract EMAIL TO:** joseph.badillo@shu.edu **ABSTRACT DEADLINE:** October 15, 2023 **ACCEPTANCE:** October 22, 2023

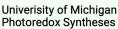
SPEAKERS



Dr. Yichen Tan **BMS**



Prof. Corey Stephenson





Dr.Yuhua Huang Merck



Dr. Sumei Ren

Merck Radio Labeling



Prof. Marvin **Parasram**

Photocatalysis



Prof. Erik Sorensen

Princeton University Total Synthesis

Featuring a tribute to Merck Cardiovascular Pioneer: Art Patchett



NORTH JERSEY ACS CHROMATOGRAPHY TOPICAL GROUP ANNUAL SYMPOSIUM

NJCG is hosting its annual symposium on **Thursday, October 12th, 2023**, focused on **"The Role of Chromatography in Upholding Pharmaceutical Quality"** at **Double Tree by Hilton, Mirabelle Room, 200 Atrium Dr, Somerset, NJ 08873**.

Join the symposium's poster session! Bring your printed posters to participate.

Please feel free to register using the link below and pass along the information to your colleagues who might also be interested.

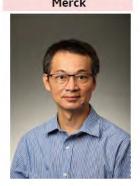
Register at <u>www.njcg.org/register-for-symposium-here.html</u> Registration is free!

Time: 12:00 PM - 6:00 PM EST

<u>Download Flyer here</u>

Speakers

Dr. Jinjian Zheng Sr. Principal Scientist



Dr. Marian Twohig Principal Scientist Waters Corporation



Dr. Kennneth C. Waterman President FreeThink Technologies



Dr. Dujuan Lu Manager-E&L SGS Health Science



Dr. Yijun Lu Associate Director Ethicon, J&J





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NORTH JERSEY ACS CHEMEXPO 2023: CALL FOR VOLUNTEERS

CHEMEXPO 2023

THE EALING PWWER OF CHEMISTRY

October 21, 2023 | 12 pm - 4 pm

Liberty Science Center Jennifer Chalsty Center

NJACS needs your help to make ChemExpo a success. If you or your organization would like to volunteer as a participant, run a demonstration, or volunteer as a general participant, visit bit.ly/NJACSExpo





NEW YORK ACS NATIONAL CHEMISTRY WEEK 2023: CALL FOR VOLUNTEERS



THE EALING PWER OF CHEM STRY

October 15th | 2023 | #NationalChemistryWeek

@ New York Hall of Science - 10:00 AM - 4:00 PM







Join ACS NY & PepsiCo with our partners at New York Hall of Science as we celebrate National Chemistry Week 2023

We are looking for volunteers/Sponsors to perform or support Chemistry Demonstrations for NCW. General volunteers to support the event are also welcome.

CLICK HERE TO REGISTER







NEW YORK SECTION MEETINGS

http://www.newyorkacs.online

BOARD MEETING DATES FOR 2023

The remaining board meeting for 2023 is on **Monday, November 20, 2023**. This hybrid meeting is open to all, but we kindly request an RSVP for in-person attendance. Mary Virginia Orna, Ph.D. will Chair the meeting which will start at exactly 6:30 PM.

Please note that there will also be an in person meeting of the Finance Committee on Wednesday, **November 15, 2023**.

More information will be posted in future monthly issues of *The Indicator* and on the New York ACS website.



LONG ISLAND SUBSECTION

Powering Sustainable Organic Synthesis: Unlocking Potential through Visible Light-Induced Photocatalysis and Synthetic Electrochemistry



Speaker: Yalan Xing, Ph.D.

Department of Chemistry

Hofstra University

Date: Thursday, October 5, 2023
Place: Via Zoom (Registration is free)

Time: 6:45 PM

Download Flyer here

Abstract: The increasing emphasis on green and sustainable organic synthesis has driven the exploration of highly efficient catalytic processes. Our research is driven by both a fundamental interest in novel synthetic transformations and the practical need for more efficient and environmentally friendly technologies. endeavors focus on the development of a green, energy-efficient, and atom-economic approach to organic synthesis, employing visible-light induced photocatalysis and synthetic electrochemistry. Specifically, we have harnessed visible-light induced photocatalysis for the efficient benzylic hydroperoxidation and oxidative degradation of Additionally, polystyrene. we have utilized electrochemical oxidation to generate stable benzylic carbocations through the mesolytic TEMPO-derived cleavage of alkoxyamines, enabling the formation of new C-O and C-C bonds.

WESTCHESTER CHEMICAL SOCIETY

Cutting And Pasting With DNA: Genome Editing



Speaker: Evan Merkhofer, Ph.D.

Division of Natural Sciences Mount Saint Mary College

Date: Thursday, November 9, 2023
Place: Westchester Community College

Gateway Center, Room 110

Gateway Center, Room 11 75 Grasslands Road

Valhalla, NY 10595
Email for Zoom link

Time: 5:30 PM Coffee Hour

6:00 PM Speaker

<u>Download flyer here</u>

Abstract: Humans have long attempted to shape the world around them; in the field of biology this Through agriculture and is no different. domestication, humans have harnessed aspects of biology for their advantage. With rapidly evolving molecular biology tools and the post-genomic era of genetic information, the ability to manipulate DNA sequences has opened up a new world of potential implications in research, medicine, ecology, and many more fields. The CRISPR/Cas9 system of genome editing allows modifications of DNA far superior to previous methods. The potential uses for this technology include somatic and germ cell therapy, gene drives, genetically modified crops, and much more. However, these applications are not without biological and societal implications. This presentation will address the uses and paradigm-shifting consequences of this breakthroughs technology, including recent utilizing CRISPR.



NEW YORK ACS MEMBERS HONORED WITH NATIONAL AWARDS



Congratulations to Rachel Narehood Austin (Barnard College, left) & Stephen A. Koch (Stony Brook University, right) on their selection as ACS National Awardees. Both New York ACS members and are accomplished bioinorganic chemists. Prof. Austin is being recognized with the ACS Award for Research at an Undergraduate Institution and Prof. Koch is being recognized with the ACS Award for Distinguished Service in the Advancement of Inorganic Chemistry.

Read about all the Awardees 2025 Award Nominations due November 1

The deadline for submitting material for the November issue of The Indicator is October 16th

http://www.theindicator.org/

HUDSON-BERGEN SUBSECTION

Synthetic Design of Chromophore/ Semiconductor Interfaces for Solar Energy Applications

Speaker: Elena Galoppini, Ph.D.

Date:

Place:

Department of Chemistry Rutgers University – Newark

Thursday, October 26, 2023Dickinson Hall Room 4468

Fairleigh Dickinson University

Teaneck, NJ 07666

Time: 5:00 PM Pizza and refreshments

6:00 PM Lecture

RSVP: Email by October 20th by email before 10/20

Download Flyer here



Abstract: For the design of new photocatalysis and solar devices, and a better understanding of relevant photophysical processes, it is necessary to achieve molecular-level control over molecule/inorganic interfaces. This remains a significant and evolving challenge because of the heterogeneity and complexities associated with surfaces of nanostructured semiconductor materials and electrodes. Chromophore-bridge-anchor molecules are employed to carry out these studies and to prepare devices, and our group is interested in emerging concepts in the use of the linker, that is the bridge-anchor moiety. The talk will focus on this area, particularly the use of "functionally active linkers", focusing on our recent work perylene-bridge-anchor compounds with one or two linker units. A combination of photophysical characterization and computational analysis in solution and on semiconductor surfaces were used to probe the influence of the number of linkers (one vs. two), their structure (conjugated, saturated) and their substitution position (ortho vs. peri). This study shows that small conformational changes differ between each linker and can have significant influence on interfacial charge transfer. The talk will also address other aspects of molecular design that our group has studied over the years, specifically the influence of interfacial dipoles. Our approaches have demonstrated that it is possible to predictably shift the energy alignment at the chromophore/semiconductor interfaces using linkers with a large and highly oriented molecular dipole.



2023 Organic Syntheses Lectureship





Professor Jeff Aubé

Distinguished Professor, Center for Integrative Chemical Biology and Drug Discovery Professor, Department of Chemistry, University of North Carolina at Chapel Hill

> "Collaborative Medicinal and Organic Chemistry"

Dr. Michael Clift

Principal Research Scientist I, AbbVie, North Chicago, IL

"Enabling Chemistry at the Interface of Late Discovery and Early Development"



Wednesday, November 1st, 2023 - 11:30 a.m.

Life Science Center II Room 130 225 University Ave., Newark, NJ Seminar Information

Hosted by: Professor Michal Szostak Department of Chemistry Wednesday, November 1st, 2023 – 2:30 p.m.

Life Science Center II Room 130 225 University Ave., Newark, NJ

2023 FRANCES S. STERRETT ENVIRONMENTAL CHEMISTRY SYMPOSIUM

2023 Frances S. Sterrett Environmental Chemistry Symposium What is the Future of Electric Vehicles?

Saturday, November 18, 2023

Berliner Hall Room 117, Hofstra University, Hempstead, N.Y. 11549-1000 http://newyorkacs.online/sterrett/

The Frances S. Sterrett Environmental Chemistry Symposium is committed to delivering current and accurate scientific insights on environmental subjects to the public. Co-hosted by the Long Island Subsection and the New York Section of the American Chemical Society (ACS), this event is made possible with support from the ACS LS-MEET Grant, and Hofstra University's Chemistry Department. We invite you to join us and gain invaluable insights from field experts as they illuminate the path forward for electric vehicles (EVs), exploring the evolution of EV batteries and beyond.

Dr. Hao Liu

Assistant Professor Chemistry Department Binghamton University Multi-electron Redox for Na-ion Battery

Dr. Muhammad Mominur Rahman

Chemistry Research Associate Chemistry Division Brookhaven National Laboratory Electrolyte Additives & Solvent Development for Li-Metal Batteries

Dr. Paris Svoronos

Professor, Retired
Outstanding CC Professor-CASE/Carnegie
CUNY-Queensborough Community College
Nikola Tesla: Life & Contributions to
AC Theory & Modern Technologies

Dr. Priyanka Bhattacharya

Senior Manager
Battery R&D
Blue Current INC
Prospects of Solid-State Batteries for
Electric Vehicles and Beyond

Dr. Linda L. Gaines

Transportation Systems Analyst Argonne National Laboratory Lithium-ion Battery Materials Consideration Beyond Performance

Dr. Esther Takeuchi

SUNY Distinguished Professor Knapp Chair in Energy & Environment Stony Brook University Impact of Repeated Fast Charge on Electric Vehicle Batteries

Dr. Kenneth Takeuchi

Distinguished Teaching Professor Chemistry Department Stony Brook University New Materials Concepts for Next Generation Electric Vehicle Batteries

Dr. Steve Greenbaum

CUNY Distinguished Professor Physics Department CUNY-Hunter College Structural & Dynamical Insights of Novel Li⁺ Battery Solid Electrolytes via NMR

Dr. Brian Gibney

Professor and Chair Department of Chemistry & Biochemistry Brooklyn College From Gasoline to Green: Adventures in Old-Fashioned and Electric Car Driving

Dr. Amy Marschilok

Energy Storage/System Division Manager Brookhaven National Laboratory Future Electric Vehicle Batteries: Challenges and Opportunities



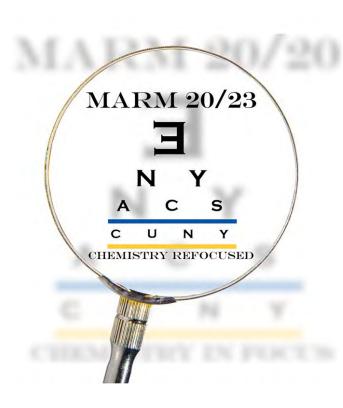
Registration (free): using the link <u>2023 LIACS-ECS</u>
Contact: <u>Dr. Paris Svoronos</u> – Symposium Chairperson

MEETING REPORTS

MIDDLE ATLANTIC REGIONAL MEETING - MARM 2023

Contributed by Joseph M. Serafin and Rita Upmacis

The New York ACS along with its partners at the Graduate Center of the City University of New York and St. John's University hosted the 2023 Middle Atlantic Regional Meeting on June 9-10, 2023. With 393 attendees, this mini-MARM had the theme of 'Chemistry Refocused' and included technical sessions, poster sessions, an exposition, employment programming including a resume review workshop, a graduate study fair, a social media social, a Women's Chemists Committee workshop on Promotion to Full Professor, a 50/60/70-year member luncheon, and an awards banquet. Both days were great successes for all parties involved.









Leadership Team

General Co-Chairs were Alison Hyslop and Joe Serafin. Brian Gibney was the Program Chair and Webmaster. Jill K. Rehmann was the Treasurer. Ping Furlan was the Exposition Chair. C. Eric Cotton was the Awards Chair. Mary Virginia Orna is the New York Section Chair. Charnita Short was the Coordinator from the ACS Office on Regional Planning. In addition, Judith C. Giordan, the ACS President, and Teri Quinn Gray, the ACS District III Director, attended and met many of the participants and were involved with many of the activities.

Technical and Poster Sessions

The MARM 2023 Program had the following six main areas of focus:

Chemistry of Life Sciences

This symposium described a dynamic range of recent chemistry-based advances, from fundamental synthetic chemistry studies of chemical reactions to target-oriented synthesis up to chemical biology and translational research. This session was chaired by Stacey Brenner-Moyer and featured the following speakers: Tania Lupoli - New York University, Neel Shah - Columbia University, Enver Izgu - Rutgers University - New Brunswick, Derek Tan - Memorial Sloan Kettering Cancer Center, Ryan Murelli - Brooklyn College – CUNY, Joseph Badillo - Seton Hall University, and Mary Watson - University of Delaware.



Cosmetic Chemistry Symposium, Giorgio Dell'Acqua

Cosmetic Chemistry

The New York Local Section of the ACS and the New York Society of Cosmetic Chemists (https://nyscc.org/) offered a morning symposium focused on cosmetic chemistry coupled with a panel discussion on careers in the cosmetics industry. The speakers in this symposium covered topics ranging from sustainable approaches to sourcing cosmetic ingredients, decoding ingredient labels, hair care chemistry, sunscreen formulations and textile technology in cosmetic formulations. This technical session was capped off with a Q&A about the cosmetics industry. This session was chaired by Giorgio Dell'Acqua (shown above) and featured the speakers: Amber Evans – Moroccanoil, Giorgio Dell'Acqua – Nutrafol, Hani Fares - Ashland Specialty Ingredients, Stacey House – Coty, Sue Feng - E.T. Browne's Global Research and Innovation.

Environmental Chemistry

This symposium covered a variety of aspects of environmental chemistry including battery technology and the impact of chemicals in the environment on fish and humans. This session was chaired by Yosra Badiei (shown below with her students) and featured the following speakers: Stafford W. Sheehan, Air Company Holdings, Inc., Yuanchunyu Lin, Columbia University, Kenneth J. Takeuchi, Stony Brook University, Sai Puneet Desai, Brookhaven National Laboratory, Jared Paul, Villanova University, Marie F. Thomas, Fordham University, Abd Ur Rehman, Clarkson University, Y.Y. Tong, Georgetown University, Tamasgen Fikadu F. Yadeta, National Taiwan University of Science and Technology, and Wanlu Li, St. Peter's University.



Prof. Yosra Badiei with her students

Flavor and Fragrance Chemistry

This symposium covered the full spectrum of the Flavors and Fragrances field. Fundamental research was described, as was product development. The speakers discussed lab work and career development from the wide range of fields in which the Flavors and Fragrances chemist has the privilege in which to work. This session was chaired by Peter de Rege and Cecil Sigamoney and was sponsored by dsm-firmenich and Symrise and featured the following speakers: Prof. Kevin Ryan, City College of New York – CUNY, Mr. Randy Arroyave, dsm-firmenich, Inc., Prof. Pamela Dalton, Monell Chemical Sciences Institute, Dr. Gary Womack, dsm-firmenich, Inc., Mr. John Wright, johnrwright.com, Mr. Jingyu Feng, dsm-firmenich, Inc., Ms. Amanda Declet, Symrise, Inc., Dr. Deirdre Forrester, PepsiCo, and Dr. Tamara Hopkins, International Flavors & Fragrances, Inc.

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Materials Chemistry

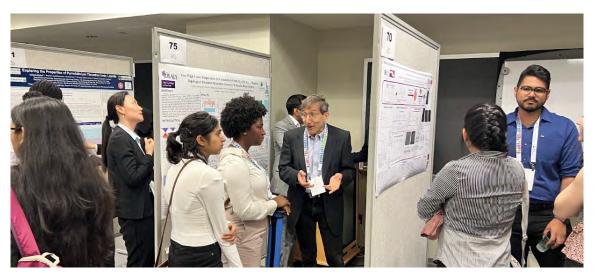
This symposium explored the latest research in the design and synthesis of materials with interesting physical properties. Examples include hydrogels, ionic liquid-based biomaterials, superoleophobic materials, and doped-TiO2 for applications ranging from electrocatalysis to plasmonics to anti-bacterials. This session was chaired by Donna McGregor and featured the following speakers: Dorthe Eisele, City College of New York – CUNY, Miguel Modestino, New York University, Devan Solanki, Yale University, Anthony Hall, Johns Hopkins University, Evan Jahrman, National Institutes of Standards and Technology Materials Measurement Laboratory, Jin Monclare, New York University, Naphtali O'Connor, Lehman College – CUNY, Timothy Vadent, Rowan University, Hao Jing, George Mason University, and Arpita Shome, University of Georgia.



Younger Chemists Committee Symposium Organizers & Speakers

Younger Chemists Symposia

The speakers in the Younger Chemists Symposium were all junior scientists with bright futures ahead. An eclectic range of topics were covered, including analysis of esters in beer, recycling energy-relevant metals, and superhydrophobic surfaces, and oxygen transfer photochemistry. This session was chaired by Mary Okorie (at right in photo) and Tiffany Olivera (at left in photo) and featured the following speakers: Amanda Ooi, Columbia University, Angelle N. Montana, Hartwick College, Scott Ruppel, Stephens Institute of Technology, Hasanuwan Ihalagedara, The College of Staten Island & the PhD Program in Chemistry at the CUNY Graduate Center, Emma Gogarnoiu, New York University, and Suong Tran, Dickinson College.



Prof. Alan Lyons (College of Staten Island - CUNY) discussing his poster

Awards

In a year with a number of truly outstanding nominations, the following awardees were recognized at the 2023 MARM Dinner and Awards Presentation (download program here). Prof. Benny Chan of The College of New Jersey (shown at right) received the Stanley C. Israel Regional Award for Advancing Diversity in the Chemical Sciences for 2023. Roxanne Spencer received the ACS Division of Chemical Education (CHED) Middle Atlantic Region Award for Excellence in High School Teaching. As detailed in the September 20223 issue of The Indicator, Prof. Ipsita Banerjee received the E. Emmet Reid Award in Chemistry Teaching at Small Colleges in the ACS Middle Atlantic Region and Prof. Barbara R. Hillery received the E. Ann Nalley Middle Atlantic Region Award for Volunteer Service to the American Chemical Society.



Stanley Israel Awardee Dr. Benny Chan

Educational Program

The education programming was presented on Saturday, June 10th at St. John's University and included the Middle Atlantic Region High School Chemagination Contest and the Diversifying the Curriculum in High School Chemistry. For the latter event, Dr. Sibrina Collins Professor & Executive Director of STEM Education, Lawrence Technological University, presented on the importance of storytelling in STEM Education. She also presented a practical application which was a biochemistry laboratory experiment which was based on the research of Dr. Marie M. Daly (the first African American Woman to earn a PhD in Chemistry in the USA). There was a vigorous discussion after her presentation which was moderated by Maria Contel and Naphtali O'Connor.



50-, 60-,70-Year ACS Member Awardees at the Luncheon

Special Events

50-, 60-, and 70- Year Member Lunch

Members reaching their milestone in 2023 were invited to attend a complimentary awards luncheon at the CUNY Graduate Center, William Kelly Skylight Ballroom, New York City on Friday, June 9, 2023. Invitations were also extended to members reaching these milestones during the COVID era. The award luncheon was held in conjunction with the 2023 Middle Atlantic Region Meeting at CUNY Graduate Center. The awards were presented by Judy Giordan, President, American Chemical Society, Mary Virginia Orna, Chair, ACS New York Section, and Frank Romano, NYACS Membership Awards Chair. This venue gave a spectacular view of the Empire State Building through the skylight. In addition to the honorees, North Jersey Younger Chemist Committee members Ms. Tiffany Olivera and Dr. Mary Okorie also participated. Attendees really enjoyed this event and were glad they were able to attend. They are looking forward to their next 10-year anniversary milestone. This event was sponsored by the New York Section and a grant from the ACS Senior Chemists Committee to provide this event free of cost and was organized by Frank Romano, Member Awards Chair.

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North Jersey ACS YCC Members, Tiffany Olivera and Mary Okorie, at the Luncheon

WCC Workshop

A Promotion to Full Professor workshop was held on June 9th at MARM 2023 for those who have been associate professor for at least three years. The workshop was organized and led by Drs. Alison Hyslop, Sharon Lall-Ramnarine and Rita Upmacis. This event was sponsored by the NY ACS MetroWomen Chemists' Committee, which is a local section affiliate of the Women Chemists Committee (WCC).

Women play a key role in academia. In fact, the majority of nontenure-track lecturers and instructors across institutions are women. However, of all women faculty, only 44% are tenure-track and only 36% rise to the rank of full professors. There are many reasons why so few women are full professors including sexism, care-giving duties, lack of finances to hire additional help, and an unbalanced expectation for more committee service. Recognizing the fact that a disproportionate number of women spend longer at the rank of associate professor, and could benefit from peer mentoring and encouragement, we developed the workshop to provide associate professors guidance on applying for promotion to full professor. The workshop included sharing our own experiences going through the process and providing advice on how to build a compelling package that highlights teaching, research, and service accomplishments.

While the workshop was open to all, a goal was to encourage and support women who, in general, wait longer to go up for promotion. Prior to the event, the organizers actively contacted associate professors in the NYC metro area, advertised the workshop with flyers at the NY ACS Distinguished Nichols Medal symposium and banquet, which took place in April 2023, and promoted it on the MARM 2023 website.







WCC Workshop Organizers

WCC Workshop (contributed by Rita Upmacis, Ph.D.)

A Promotion to Full Professor workshop was held on June 9th at MARM 2023 for those who have been associate professor for at least three years. The workshop was organized and led by Drs. Alison Hyslop (St. John's University), Sharon Lall-Ramnarine (Queensborough Community College) and Rita Upmacis (Pace University), shown above. This event was sponsored by the NY ACS MetroWomen Chemists' Committee, which is a local section affiliate of the Women Chemists Committee (WCC).

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When registering for MARM 2023, participants had the opportunity to sign up for the event, which was free to all. Those who had signed up, were contacted by the organizers, and asked to submit materials before the event:

- (1) the written promotion guidelines from their institutions and their idea of the unwritten guidelines,
- (2) their CV, and
- (3) three slides summarizing their accomplishments in the areas of teaching, scholarship, and service.

In this way, participants were guided to begin their process of assembling information for promotion.

WCC Workshop (continued)

During the workshop, participants were able to:

Review promotion guidelines from individual institutions.

Design a plan and timeline for their application process.

Develop narratives for promotions based on their accomplishments.

Receive feedback on promotion packages with an eye to their specific institution.

Review examples from successful promotion packages.

Ask questions and share stories of their challenges.

In this way, participants were able to begin summarizing their own accomplishments, develop their own narrative, ask questions, and receive feedback. Following the event, the organizers thanked the participants and sent, via email, a copy of the workshop materials (a summary of the slides and a handout with the workshop assignments). The organizers also reached out and sent the workshop materials to a few participants who had signed up for the event but could not attend.

References:

- 1. https://www.aauw.org/resources/article/fast-facts-academia/
- 2. https://www.chronicle.com/article/why-we-need-more-women-full-professors



Graduate School /Medical School Panel

A graduate student and medical student panel was held to encourage students to ask questions and help students plan for their future career. There were 4 graduate students (2MS and 2PhD students) and 2 recently graduated medical students serving on the panel.

Some prepared questions were posed by the session organizers, Phil Lukeman and Patricia Muisener, the floor was opened to questions from the audience which was primarily students.

Employer Round Table Discussion

A panel discussion was held with industry professionals. Initial discussion was based on prepared questions by the session moderators, Aaron Moment and Rich Rosso. After some discussion prompts from the session moderators, questions were invited from the audience. Individual resume review follow immediately after the event.



Employment Panel Presenters



Employment Panel Discussion

Resume Review

There was both a group resume discussion hosted by Mukund Chorghade titled "Marketing Your Brand: Writing of winning CVs and Resumes." In addition a number of individual resume review sessions were held by industry professionals such as Jean Tom, Executive Director at Bristol Myers Squibb, Yueer Shi, Associate Scientific Director at Bristol Myers Squibb, Laura Musumeci, R&D Senior Manager PepsiCo, Joseph Wiener, R&D Senior Manager Latin America, Global Away From Home, and Sodastream at Pepsi Lipton, Amber Evans, Senior Manager of Product Development at Moroccanoil, Giorgio Dell'Acqua, Chief Science Officer at Nutrafol, Sue Feng, CSO at ET Browne, and Mikki Wossencroft, Director of HR and DEI lead at COTY.

Graduate School Fair

A graduate school fair offered the opportunity for undergraduates and interested chemists to meet with representatives of chemistry graduate programs. Schools represented were the University of Pennsylvania, St. John's University, CUNY Graduate Center, Rowan University, New Jersey Institute of Technology, Columbia University - Chemical Engineering, and the University of Delaware The event was well attended and was adjacent to the Student/Early Career Programming (Employment Programming, Graduate School Panel, Medical School Panel) for convenience.



CUNY representatives at the Graduate School Fair, Prof. Yolanda Small (<u>Chemistry PhD Program</u>), Sebastien Poget (<u>Biochemistry PhD Program</u>), Ruth Stark (<u>City College of New York Biochemistry</u>, <u>Biophysics</u>, <u>Biodesign Program</u>)







CALL FOR NOMINATIONS

CALL FOR NOMINATIONS: OUTSTANDING COLLEGE CHEMISTRY TEACHING AWARDS

The New York Section is seeking nominations for the following three awards whose purpose is to recognize, encourage and stimulate high-quality teaching and research:

Outstanding Two-Year College Chemistry Teaching Award

Outstanding Four-Year Undergraduate
College and University Chemistry Faculty
Teaching Award

Outstanding Four-Year University with Graduate School Chemistry Faculty Teaching Award

Nominations are due October 15, 2023. Candidates need not be members of the ACS. Awardees will be recognized with a major award plaque at the Sectionwide Conference in January 2024 Prior nominations remain active for three years and updating is encouraged.

GRANT OPPORTUNITIES

SCIENCE CAFÉ MINIGRANTS

\$500 to facilitate discussions of current topics between scientists and non-scientists in a relaxed, open venue.

DUE OCTOBER 15, 2023 Learn more

LOCAL SECTION DIVERSITY, EQUITY, INCUSION AND RESPECT (DEIR) GRANT

Up to \$3,000 to foster inclusiveness and participation within local sections, and to support interactions with other local sections, divisions, committees and other professional associations or community groups.

DUE NOVEMBER 13, 2023

Learn more

LOCAL SECTION PRINCIPAL INVESTIGATOR DEVELOPMENT IN SUSTAINABILITY GRANT

\$50,000 for a mid-career investigator to spend 6-12 month in the laboratory of a private company, a national lab, or an academic lab at another institution to foster collaborations.

DUE NOVEMBER 15, 2023

Learn more

The Indicator is posted to the web 1ST of the month at

http://www.theindicator.org/



OPPORTUNITIES

For High School Students & Teachers

Society for Science – STEM Research Grant

Due October 10

ChemClub Community Activities Grant

Due November 1

James Bryant Conant Award in High School Chemistry

Due November 1

For Undergraduates

Joseph Breen Memorial Fellowship

Due November 15

For Graduate Students / Postdocs

Younger Chemists Leadership Institute Award

Due October 15

Max Planck - Weizmann Joint Postdoctoral Program

<u>Due November 1</u>

NRC Research Associateship Program

Due November 1

Joseph Breen Memorial Fellowship

Due November 15

For Professionals

Younger Chemists Leadership Institute Award

Due October 15

ACS National Awards

Due November 1

ACS Division of Analytical Chemistry Younger Chemists Conference Travel Grants

Due November 1

The Dreyfus Prize in the Chemical Sciences

Due December 1







SEMINAR SPEAKERS WANTED

The New York Section wants to add to add you to our Speakers Bureau database of local 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 send an email to Ms. Bernadette Taylor with the following information that will be posted on the Section's website: your name, affiliation, a seminar 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 your fellow members!

FROM OUR PARTNERS

Chemistry Teachers and Physics Clubs of New York

The School of Science at Manhattan College and the Chemistry Teachers and Physics Clubs of NY are proud to present a lecture entitled, as follows: Big Data from the Early Universe.

Speaker: Bart Horn, Ph.D.

Department of Physics and Astronomy

Manhattan College

Date: Saturday, October 14, 2023

Place: Hayden Hall 100

Manhattan College Riverdale, NY 10471

Time: 12:00 PM Lunch in Thomas Hall

1:30 PM Speaker



Download Flyer



Younger Chemists Committee





Wednesday, October 4th, 2023 | 2pm - 3pm ET

Meet the 2024 ACS President-Elect Candidates

Co-produced with the ACS Younger Chemists Committee

APPLYING FOR FACULTY POSITIONS AT PRIMARILY UNDERGRADUATE INSTITUTIONS

- Contributed by Associate Professor Sarah Shaner, Southeast Missouri State University

If you are on the academic job market this year or have just been looking at job postings in anticipation of applying soon, you have probably noticed that many faculty positions are at colleges or universities without large graduate programs or PhD students. These schools are primarily undergraduate institutions, PUIs for short. They can seem mysterious if most of your experience has been at R1 or research-intensive programs. However, these positions may be a great career fit for you, and you should consider applying. Here I provide a little information about PUIs, some tips for applying to these schools, and some resources that may be helpful along the way.

According to the NSF, PUIs are colleges or universities that award Associate's, Bachelor's, and/or Master's degrees in NSF-supported fields, but that have awarded 20 or fewer PhDs in those fields in the past two years. However, schools that fit this description are quite varied: PUIs may be public or private, 2-year or 4-year, large or small. For example, I have held faculty positions at a private small liberal arts institution and at a larger regional public university. Additionally, research expectations also vary. Some positions, such as those at 2-year colleges, might exclusively involve teaching, while many PUIs have an expectation that faculty do research with undergraduates, and some have high research and publication expectations. Despite these differences, there are some general commonalities. Faculty at PUIs typically spend a larger proportion of their time teaching than faculty at PhD-granting institutions, and there is an emphasis on mentoring undergraduates.

An application for a PUI usually requires a cover letter, CV, recommendation letters, a teaching statement, and a research plan. It is important to communicate your interest and understanding about the position in these documents. This can be done in several ways. Review the school's website to understand their mission and how they wish to present themselves and look at the department's website to identify instruments you could use, classes you could teach, and faculty with research synergies. In your teaching statement, be sure to highlight any teaching or mentoring experience you have. Did you fill in to teach a few classes for your PI? Did you mentor an undergrad in your lab? If so, mention it! (And if you are still a year or so out from applying, seek out these and other more intensive teaching opportunities.) For your research plan, it is important to calibrate your projects to a PUI. Lots of interesting research can be carried out at PUIs by undergrads. However, undergraduates (and faculty at PUIs) typically have hectic class schedules, which tend to fragment their time in the research lab. Keep this in mind when proposing projects. Break projects into smaller chunks, propose modular approaches, and realize that progress will likely be slower than at a PhD-granting school. Additionally, startup packages are generally quite a bit smaller than at R1 schools, but there are often resources (gloves, compressed gases, existing instruments and stockroom chemicals) that are available through the department and do not need to be included in your startup budget.

If you are interested in finding out more, here are some resources. For the past several years, the Virtual Inorganic Pedagogical Electronic Research (VIPEr) community has hosted a series of panel discussions about the PUI job search (click here, here and here). Additionally, The Council on Undergraduate Research is a good resource for connecting with faculty who prioritize engaging undergrads in research. More informally, talk to PUI faculty at conferences and ACS Local Section events. Most will be happy to chat with you about their positions and institutions.

JOB BOARD

Starting your career or looking for the next challenge? Review these and other postings at the New York ACS <u>Job Board</u>. Email your job postings to <u>Jobs@NewYorkACS.org</u> for inclusion.

Lecturer/Instrumentation Specialist: Chemistry - Union College

Apply here

Assistant Professor of Analytical Chemistry – Vassar

Apply here

Assistant Professor of Analytical Chemistry – Lehigh University

Apply here

Pre-Health Programs Advisor - SUNY Old Westbury

Apply here

Program Officer - ACS Office of Research Grants

Apply here

Assistant Professor, Bioorganic, Chemical Biology and Inorganic - New York University

Apply here

Research Specialist - Regeneron

Apply here

Senior Principal Scientist - Danone

Apply here

Method Verification Chemist - Astrix

Apply here

Chemist I - Integra LifeSciences

Apply here

Senior Scientist, Process Research - Boehringer Ingelheim

Apply here

