



Eric P. Chang, Ph.D. 2025 New York ACS Chair See page 5

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# THIS MONTH IN CHEMICAL HISTORY

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

In this column I wish to discuss one of the most influential books published in the twentieth century affecting the history not just of chemistry but of all science, namely "The Structure of Scientific Revolutions" by Thomas S. Kuhn. I quote from the author's Preface. "The essay that follows is the first full published report on a project originally conceived almost fifteen years ago. At that time I was a graduate student in theoretical physics already within sight of the end of my dissertation. A fortunate involvement with an experimental college course treating physical science for the non-scientist provided my first exposure to the history of science. To my complete surprise, that exposure to out-of-date scientific theory and practice radically undermined some of my basic conceptions about the nature of science and the reasons for its special success." The essay was first published in 1962, and a slightly enlarged version appeared in 1970.

Chapter titles give a quite clear guide to Kuhn's thinking about how science progresses. In his "Introduction, A Role for History", the author argues that the classics of science and science textbooks imply that they embody the content of science uniquely and that the techniques embodied therein are the ones that will advance their particular branch of science. Kuhn asserts that this is what most scientists do, and calls that "Normal Science". He equates normal science to puzzle solving and suggests that it leads to the formulation of paradigms that are the views accepted by the majority of the scientific community of particular segments of their sciences.

And then along comes anomaly – the emergence of phenomena or data that cannot be explained by the current paradigms. An example might be the failure of classical physics, in the hands of such able practitioners as Kelvin and Jeans, to explain "black-body radiation". The explanation of this particular anomaly led to a far-reaching scientific revolution (hence the title of the book) namely the invention of quantum theory by Max Planck, a physicist whose work had previously been mainly in thermodynamics, and who devised quantum theory as a formalism to explain the phenomena without at first realizing its revolutionary implications. An article by Einstein a few years later explaining the photo-electric effect was influential in leading scientists to accept quantum theory.

So anomaly may lead to a state of crisis in scientific theory, and the answer to anomaly may be a scientific revolution and the emergence of new paradigms. The implications of these new paradigms lead to new pursuits of normal science and textbooks are rewritten to embody the new views – until the next anomaly and the next revolution.

Kuhn concludes with a discussion of what constitutes progress in a field of study. Why does science apparently, and uniquely, move steadily ahead whereas areas such as art or political theory do not? This may be solely semantics. We label areas that do progress in the way described: "sciences". As the author puts it: "Does a field make progress because it is a science, or is it a science because it makes progress?"

Kuhn's assay has had, and continues to have, a considerable impact on historians of science, with both supporters and detractors. It has affected my own teaching of history of chemistry and I use Kuhn's approach to discuss, among other topics, Lavoisier's oxygen theory of combustion, and Dalton's atomic theory. The concepts of paradigm and revolution have, thanks to Kuhn, become essential tools in thinking about the history of science.

Happy holidays, and happy new year.

## THE INDICATOR – DECEMBER 2024

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# Indicator

http://www.theindicator.org/

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## EDITORIAL DEADLINES

January 2025	December 16, 2024
February 2025	January 16, 2025
March 2025	February 16, 2025
April 2025	March 16, 2025
May 2025	April 16, 2025
June 2025	May 16, 2025

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# December Calendar

## **NEW YORK SECTION**

## Thursday, December 5, 2025

Long Island Subsection See page 9

## SAVE THE DATE

## Saturday, January 25, 2025 New York ACS Sectionwide Conference See page 7

## Friday, April 11, 2025

William H. Nichols Distinguished Symposium and Medal Presentation See page 9

## NORTH JERSEY SECTION

Saturday, December 7, 2025 2025 Planning Meeting See page 12

## SAVE THE DATE

May 28-31, 2025 Middle Atlantic Regional Meeting *See page 12* 



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Interested in reaching 6,000+ chemists in the chemists in the tri-state area to inform them of your products/services to grow your business? Contact our <u>Ad Sales</u> <u>Manager</u> for details.



# NEW YORK ACS CHAIR'S MESSAGE

Dear NYACS Members,

I am honored to serve as the 2025 Chair of the New York Local Section of the American Chemical Society. My tenure starts during unsettling times for our country and the future of K-12 and higher education. More than ever, the ACS must support and uplift our membership, especially our younger and aspiring chemists who will become the next generation of scientists, physicians, educators, policymakers, and thought leaders to help their families, communities, and the world.

My passion for chemistry began in high school when I realized the endless potential for exploration, discovery, and inquiry offered to those studying the world at the molecular level. Since then, I have come to view my role as a scientist as someone who serves the greater good. I gladly devote my time to conducting basic science research, mentoring the next generation of scholars, and giving back whenever possible to the chemical and biochemical communities that have provided me ample opportunities.

As Chair of the NYACS, I plan to continue the practice of exemplary service to the chemical community provided by our past Chairs. I am passionate about making our discipline more inclusive, particularly to BIPOC faculty and students historically underrepresented in chemistry and STEM. I plan to work toward bringing more students and scientists with diverse backgrounds to our meetings and events and encourage them to be part of our leadership, making NYACS a more equitable and sustainable organization. I also want to work hard to bring our members working in industry back to our local event and leadership and recruit new members outside of academia working in industry, non-profits, and other chemical careers adjacent to the bench and lectern.

To accomplish these goals, I plan to:

- 1. Revitalize our social media presence on LinkedIn to be more accessible and reach a broader audience of scientists from across the globe
- 2. Partner with regional organizations like the Metropolitan Museum of Art and the New York Society of Cosmetic Chemists to provide more exposure at high-profile venues for NYACS
- 3. Foster new relationships with other science outreach and advocacy groups in the New York City area like BioBus, RockEDU, and the LifeSci NYC Internship Program to bring more collaborative and cross-disciplinary opportunities to our members
- 4. Advocate for more guest speakers and awardees from marginalized backgrounds to be invited and celebrated by the NYACS for their accomplishments in advancing STEM

I welcome input and feedback from anyone in the NYACS. Contact me with any ideas or concerns about our section and how we can better support chemists and other scientists in New York and beyond. I look forward to serving as the NYACS Chair for 2025 and wish you all a safe and happy holiday season.

All the best,

Eric P. Chang

Eric P. Chang, Ph.D. Associate Professor of Biochemistry at Pace University 2025 Chair of the New York Local Section of the American Chemical Society

# NEW YORK SECTION MEETINGS

## **2025 BOARD MEETING DATES**

The New York ACS Board of Directors meetings dates for 2025, are, as follows:

Saturday, January 25, 2025 (in person) Sectionwide Conference
Monday, February 10, 2025 (virtual) Monday,
March 31, 2025 (hybrid)
Friday, April 11, 2025 (in person) William H. Nichols Distinguished Symposium and Medal Award Ceremony St. John's University
Monday, June 9, 2025 (hybrid)
Monday, September 8, 2025 (virtual)
Monday, November 3, 2025 (hybrid)

These meetings will be held online via Zoom with several hybrid meetings from the campus of Pace University – New York City Campus (directions). These meetings are open to all members, however, an RSVP for in-person attendance is required 5 days before the meeting, i.e. the Wednesday before the Monday meeting. All members who would like to attend any of the meetings should inform the New York Section office by emailing <u>Ms. Bernadette Taylor</u>. Prof. Eric Chang will Chair all meetings. The virtual and hybrid meetings will start at precisely 6:30 PM.

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

Deadline for submitting articles and advertisements for the January 2025 issue is December 16, 2024



## WESTCHESTER CHEMICAL SOCIETY DISTINGUISHED SCIENTIST AWARD 2025 – CALL FOR NOMINATIONS

The Westchester Chemical Society is now accepting nominations for the "Westchester Chemical Society Distinguished Scientist Award 2025". Scientists who live or work in Westchester County or the Bronx qualify. Self-nominations are acceptable. Nominees be from private companies can or educational institutions or government. The awardee is expected to attend the Awards Dinner (April/May time-frame) and present aspects of their to work. Nominations are not carried over from previous years. New and possibly updated nominations should be submitted. Please send a cover letter stating why your nominee should receive the award along with the nominee's resume by January 15, 2025 to Dr. Peter Corfield.

## 2025 SECTIONWIDE CONFERENCE: SAVE THE DATE



#### 2025 SECTION-WIDE CONFERENCE SATURDAY, JANUARY 25, 2025, 10:00am – 1:00pm University of Mount Saint Vincent, Riverdale, NY

#### Registration is free for this In-Person Event! Click here to register

#### PRELIMINARY PROGRAM

09:30 AM Continental breakfast will be available.

#### 10:00 AM ACS, NEW YORK SECTION COMMITTEE PLANNING SESSIONS FOR 2024.

Educational Activities: Chair: Dr. Alison Hyslop Chemagination, Chemists Celebrate Earth Day, Continuing Education, High School Olympiad, National Chemistry Week, Nichols Foundation Teacher Award, Project Seed, Student Membership, Student Recognition

#### Member Affairs: Chair: Dr. Joseph Serafin

ACS Fellows, Awards, Employment and Professional Relations, History of the New York Section, Indicator, Membership, Outstanding Service Award, Minority Affairs

**<u>Program Review</u>:** Chair: Dr. Anne O'Brien; Frank Romano, Councilor, presiding Subsection and Topical Discussion Group Chairs

Public Affairs: Chair: Dr. Robert Nolan

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

10:40 AM	GREETINGS FROM THE ACS NEW YORK SECTION 2025 CHAIR	Dr. Eric Chang
		Pace University

#### 10:50 AM REPORTS FROM THE CHAIRS OF THE COMMITTEE PLANNING SESSIONS

#### 11:00 AM AWARD PRESENTATIONS

	Service Plaque and Pin to the 2024 ACS New York Section Chair	<b>Dr. Ping Furlan</b> US Merchant Marine Academy
	ACS New York Section Outstanding Service Award	Dr. Pamela Kerrigan University of Mount Saint Vincent
	Outstanding Chemistry Faculty Teaching Award Division: Four-Year University with Graduate School	To be announced
	Outstanding Chemistry Faculty Teaching Award Division: Four-Year Undergraduate College and University	To be announced
	Outstanding Chemistry Faculty Teaching Award Division: Two-Year College	To be announced
	Outstanding Full-Time Lecturer and Instructional Faculty Teaching Award	To be announced
	Outstanding Adjunct (Part-Time) Teaching Award	To be announced
	Nichols Foundation High School Chemistry Teacher Award	Maria Zeitlin Smithtown High School East
1	PRESENTATION OF CANDIDATES FOR THE 2025 ELECTIONS	<b>Dr. Joseph Wiener</b> PepsiCo 2025 Chair Elect ACS NY Section

PROJECT SEED Presentations by New York Section Project SEED Students Nadia Makar, STEM Supervisor Jose Marti Stem Academy

12:00 PM KEYNOTE LECTURE:

11:30 AM

11:45 AM

1:00 PM CONCLUSION OF THE MEETING.

**Dr. Raychelle Burks** 

## 2025 SECTIONWIDE CONFERENCE: MEET THE SPEAKER

After working in a crime lab, Dr. Burks returned to academia, teaching, and forensic science research. Her research team is focused on the development of field portable colorimetric and luminescent sensor arrays for the detection of analytes of mainly forensic interest such as explosives, chemical weapons, controlled substances, and latent prints. She writes a science-meets-true crime column called "Trace Analysis" for Chemistry World. Beyond forensics, Dr. Burks collaborates with colleagues in a variety of fields on projects where low cost and reliable rapid screening methods are needed. An in-demand science communicator, Dr. Burks regularly appears on TV, in podcasts, at large genre cons such as DragonCon and GeekGirlCon, and other venues to converse on



chemistry, forensic science, and STEM meets pop culture. She is the 2020 recipient of American Chemical Society's Grady-Stack Award for Interpreting Chemistry for the Public. She is a member of several local, national, and international committees, task forces, and projects focused on social justice and STEM. In 2021, Dr. Burks was listed as one of the "<u>6</u> women who are changing chemistry as we know it" by BBC Science Focus Magazine.

## NEW YORK ACS PROPOSES SIGNIFICANT CHANGES TO ITS BYLAWS

Updates to the <u>American Chemical Society's Governing Documents</u>, i.e. the Constitution, Bylaws, Standing Rules, Schedule of Dues and Benefits, and Regulations, due to the introduction of International Chapters and the changes to the Schedule of Membership have necessitated a revision of the New York ACS Bylaws to remain in compliance with the national Society. The NYACS ByLaws Committee has worked in collaboration with the Society's Committee on Constitution and Bylaws to revise the New York ACS Bylaws over the past two years to include all associate and member rights, duties, and privileges. The proposed New York ACS Bylaws are significantly different than the existing Bylaws in both structure and content which makes explaining all the changes in a point-by-point manner difficult. The Operations Manual referenced in the proposed Bylaws is under development at this point in time.

In accordance with NYACS' existing Bylaws, the proposed Bylaws are being published for the membership to review prior to a vote on the new Bylaws. In addition, since changes have been proposed along with a reorganization of the Bylaws, a document describing the Committee on Bylaws discussion of the changes is provided. Lastly, the existing Bylaws are provided for comparison. The vote on the proposed Bylaws will take place starting January 1, 2025 and concluding January 31, 2025. Details will be provided in the January issue of The Indicator, and in the biweekly Chair emails to members.

# LONG ISLAND SUBSECTION HOLIDAY DINNER AND SEMINAR

Meteorites on the Ice: The Antarctic Search for Meteorites (ANSMET) 2023-2024 Field Season

Speaker:Dr. Jon M. Friedrich<br/>Professor of Chemistry<br/>Department of Chemistry and Biochemistry<br/>Fordham UniversityDate:Thursday, December 5, 2024Place:Nassau Community College<br/>CCB Building, Room 252<br/>via ZoomTime:6:00PM dinner followed by seminar



Download flyer here

**Abstract:** ANSMET (Antarctic Search for Meteorites) is a program funded by NASA and supported by the National Science Foundation that looks for meteorites in blue ice areas of the transantarctic mountains. The 2023-2024 field season marked a return to the field since the end of the COVID-19 pandemic. The team camped at the Davis Nunataks-Mount Ward site in the Dominion Range of Antarctica and worked there for several weeks to recover over 200 meteorites. All of the meteorites collected by ANSMET become part of the US Antarctic Meteorite Collection and are curated for the purpose of research and public education. I will give a short history of ANSMET, a summary of the 23-24 ANSMET field season, and give the audience an idea of what it is like to live and work in Antarctica at McMurdo Station and at a deep field site.

## William H. Nichols Distinguished Symposium and Medal Presentation

Professor Benjamin F. Cravatt, the Norton B. Gilula Chair of Chemical Biology in the Department of Chemistry at The Scripps Research Institute, will be fêted on **April 11**, **2025** as the William H. Nichols Medalist for 2024. The Distinguished Symposium in his honor, entitled:

## Advancing biology through innovations in chemistry

will feature lectures by:

Stavroula Hatzios, Yale University Tom Muir, Princeton University Damian Young, Baylor College of Medicine and Benjamin Cravatt, The Scripps Research Institute

Full details will be featured in an upcoming editions of <u>The Indicator</u> and on the <u>New York ACS website</u>.



Professor Benjamin F. Cravatt 2024 Nichols Medalist

## 2024 NADRIAN C. SEEMAN MINI-SYMPOSIUM IN CHEMISTRY RSVP here.

The New York University Department of Chemistry and the International Society for Nanoscale Science, Computation and Engineering (ISNSCE) present the

NADRIAN C. SEEMAN MEMORIAL MINI-SYMPOSIUM IN CHEMISTRY

#### **FEATURING SPEAKERS:**

Seeman Postdoc Simon Vecchioni Department of Chemistry New York University

Seeman Alumnus

Xing Wang Associate Professor of Chemistry University of Illinois Urbana-Champaign

> Distinguished Seeman Lecturer Juan de Pablo

> > Executive Vice President for Global Science and Technology Executive Dean of NYU's Tandon School of Engineering *New York University*

> > > Hosted by: James W. Canary

# December 9, 2024 2:00 p.m.

NYU Silver Center Hemmerdinger Hall 31 Washington Place, room 102 reception to follow



## HONORING 50-, 60-, & 70-YEAR ACS MEMBERS

On behalf of the The American Chemical Society's New York Section Senior Chemists Committee and Board, we would like to acknowledge and congratulate all our local members that have reached their 50-, 60-, and 70- year member anniversary in 2024! National ACS offers their robust congratulations and sincere gratitude to the following members for their many years of service and dedication to the chemical sciences.



#### **70 Year Member Anniversary**

Dr. Carl J. Abraham Dr. George Baum Dr. Francis Johnson Dr. Elias Klein Dr. David Charles Mauzerall Dr. Donald Rivin Mr. George E. Salser Dr. Shu-Lung Wang Mr. Harold G. Weinreb Mr. Ronald Zager



### **60 Year Member Anniversary**

Mr. Peter S. Blumenstein Mr. Richard John Delasi Dr. Evangelos John Gizis Dr. Gary L. Hickernell Dr. Jerome Levkov Mr. Robert E. Lippman Dr. Antonio Locopo Mr. Frederick Robert Mahn Dr. Philip Henry Mark Dr. Harmon C. McAllister, Jr. Mr. Michael Murphy Dr. Elliot Redalieu Dr. Patricia Ann Redden Dr. Sanford Slae Mr. Richard Joseph Stanley Mr. Charles H. Taylor Dr. Thomas J. Venanzi Dr. Theodore S. Wang





### **50 Year Member Anniversary**

Mr. Richard Paul Adamkiewicz Dr. Norbert S. Baer Mr. John David Blank Dr. Melvin Blum Dr. Bruno DePamphilis Mr. Roy G. Engels Mr. Anthony Frederick Forgione Dr. Chirakkal Variyam Krishnan Dr. Stuart Z. Levine Mr. Richard S. Magliozzo Sister A. Ann Melber Dr. Paula I. Olsiewski Mr. Charles Donald Olson Dr. Lynne H. Parker Dr. Regina Maria Santella Dr. Elie G. Shami Dr. Jeffrey M. Singer Dr. David Joseph Szalda Dr. Maria Concepcion Tamargo Dr. Nancy Marion Tooney Dr. Harel Weinstein

# NORTH JERSEY SECTION MEETINGS

## 2025 NORTH JERSEY ACS PLANNING MEETING

2024 North Jersey ACS Chair Sandra Keyser and the Executive Committee have extended invitations to the section leadership to plan events for 2025. This will be held **December 7**, **2024**.

For links to events planned by the North Jersey ACS, please <u>check out the calendar on our</u> <u>website</u>.

## NORTH JERSEY ACS TO HOST MARM 2025





# MEETING REPORTS

## NEW YORK ACS HOSTS A COMMUNITY CELEBRATION FOR 2024 NATIONAL CHEMISTRY WEEK WITH NEW YORK HALL OF SCIENCE, PEPSICO, AND LOCAL COLLEGES

On Sunday, October 13, 2024, from 10 am to 4 pm, the New York Section of the American Chemical Society (NYACS) celebrated its 18<sup>th</sup> National Chemistry Week (NCW) at the New York Hall of Science (NYSCI) in Queens. After challenges from the pandemic and hurricane damage since 2020, this successful in-person event was made possible through the renewed partnership of NYACS, PepsiCo, NYSCI, and area universities and colleges. Around 150 volunteers from diverse backgrounds gathered to present hands-on demos celebrating the 2024 NCW theme, "Picture Perfect Chemistry." Traveling early to contribute, they ran over 20 activity tables with 25+ safe, engaging experiments, including Illustrated Poetry Corners, and photo backdrops that captured the event's spirit. The interactive displays engaged 750 Hall visitors, especially K-12 students, in a memorable day of chemistry exploration.





A large, eye-caching, and inviting NCW banner adorned the exterior of the NYSCI, creating a visually appealing welcome for attendees. Inside, a well-organized welcome table provided safety glasses, lab coats, program brochures, chemistry demo passport cards, and guidance to the various activity sites.

The event officially commenced with welcome remarks from Mr. Joseph Wiener, NYACS NCW coordinator, and Dr. Ping Furlan, 2024 Chair of the New York ACS. Dr. Furlan congratulated the New York ACS and its NCW volunteers and sponsors on

winning the ChemLuminary Award for Outstanding Ongoing NCW event, commending their dedication, teamwork, and community impact. She invited the attendees to explore chemistry's connections to photography and imaging, and to celebrate its beauty and "magic" in every experiment and interaction. In line with the theme, Dr. Furlan and Mr. Wiener presented the 2024 ACS Salute to Excellence Award to Brookhaven National Laboratory's Center for Functional Nanomaterials (BNL-CFN) for advancing chemistry, providing cutting-edge imaging facilities to area users, and fostering scientific discovery in the region. Dr. Aaron Stein, Chief of Staff & Senior Scientific Staff, accepted the award on behalf of BNL-CFN.

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## NEW YORK ACS HOSTS A COMMUNITY CELEBRATION FOR 2024 NATIONAL CHEMISTRY WEEK WITH NEW YORK HALL OF SCIENCE, PEPSICO, AND LOCAL COLLEGES (continued)

NYACS volunteers—including college students, professors, and chemists—hosted tables inside the Viscusi Gallery, offering captivating demos, hands-on activities, and engaging conversations that drew eager, inquisitive youngsters. Clad in lab coats, scientist IDs, and safety glasses, youth participants, accompanied by guardians, moved excitedly from station to station and delighted by their experience with their role models. Activities ranged from Dark Photography, Ink Impression, Making Your Own Bubbly, Color Reactions, Invisible Ink, Color Mixing, Snapshot of Snow, Suntan Lotion and UV Beads, Shadowgraphy, Teddy Bear Tumor Detection, Marker Chromatography, Nylon Magic, Acid-Base Reactions, Drawing with Electricity, Colored Alginate Beads, Silver Mirror Creation, Glowing Rocks, to Chemistry Makes Scents. Three themed photo booths let visitors capture memories against creative backdrops: the 2019 NYACS-designed Periodic Table elements, the beloved NCW mole characters—Nano, Meg, and Avi—and a lively PepsiCo chemistry lab. Several Poetry Corners were set up throughout the museum to encourage creativity and participation in the 2024 NCW Illustrated Poetry Contest.



A secondary welcome table near the Viscusi Gallery ensured young attendees received NCW gifts when they presented their stamped passport cards and provided feedback via a QR code. The feedback was overwhelmingly positive. As the event concluded at 4 pm, a sense of satisfaction and gratitude filled the air. Many volunteers enthusiastically committed to returning for National Chemistry Week 2025, making the day a resounding success and a memorable experience for all involved!

The New York ACS extends a heartfelt thank you to our 2024 NCW sponsors and participants: Bronx Community College, Columbia University, Guttman Community College, Lehman College, New York Hall of Science, Pace University, PepsiCo, Queensborough Community College, St. John's University, United States Merchant Marine Academy, and University of Mount Saint Vincent. Your support, dedication, and creativity were instrumental in making our National Chemistry Week Celebration at NYSCI another memorable success. Thank you.

## NEW YORK ACS 2024 NATIONAL CHEMISTRY WEEK ILLUSTRATED POEM CONTEST WINNERS

The New York ACS received a record number of submissions for the local Illustrated Poem Contest for National Chemistry Week. We thank all the students and their teachers for making it so difficult to judge the entries! The three winning submissions, shown below, have been forwarded to the ACS for consideration for national honors. Join us in celebrating all the participants and wishing these three students good luck at national.





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## METROWOMEN CHEMISTS' COMMITTEE

A chemistry seminar was given by Katherine Sanderson, on Oct 17<sup>th</sup> 2024 at Pace University, entitled "Preserving Photographs at the Metropolitan Museum of Art: Scientific Approaches to Practical problems".

Katherine Sanderson is a Conservator of photographs at the Metropolitan Museum of Art. The field of Art Conservation combines art, history, and science to both understand and preserve artworks for future generations. In her talk, Katherine gave an overview of the technology and structure of historic photographs and how practical decisions about storage and exhibition of the collection at The Metropolitan Museum of Art are informed by technical research and analysis. She discussed the different approaches to making photographs and how a photograph can be produced by harnessing the light-sensitive properties of metal halides and may incorporate a variety of additional components such as gelatin, albumen, paper, metal, or plastic, all of which have their own unique physical characteristics. Caring for a photograph requires proper identification of the component materials, as well as how they age. The deterioration of a photographs may be caused by inherent vulnerabilities of its component parts, materials used to house the works, or the environmental conditions of storage or exhibition spaces.

The NY ACS MetroWomen Chemists' seminars highlight women in chemistry and give students an idea of the careers that are possible in STEM. The event was attended by Pace University students (up to 60 in attendance) and some NY ACS members attended remotely, via Zoom. A <u>recording of the seminar</u> has been made available to New York ACS members.



Daguerreotype



Marie-Charles-Isidore <u>Choiselat</u> and Stanislas Ratel [The <u>Pavillon</u> de Flore and the Tuileries Gardens], 1849 Daguerreotype The Met 2005.100.29

Salted Paper Print



William Henry Fox Talbot Windsor Castle, June 1841 Salted paper print from paper negative The Met 2013.159.62

**Exhibition Decisions** 

The Metropolitan Museum of Art

2.2M feet<sup>2</sup> Over 2M works of art 2100 staff members 6.5M visitors/vear



IN SECTION OF STREET

United Press International (American) [Bank Robber Aiming at Security Camera, Cleveland, Ohio], March 8, 1975 Gelatin silver print The Met 2015.278

# THE INDICATOR – DECEMBER 2024 CHEMISTRY OF <sup>39</sup>Y<sup>8</sup>O<sup>31</sup>GA EVENT



The New York Section held its 1st annual "Chemistry of <sup>39</sup>Y<sup>8</sup>O<sup>31</sup>Ga" event on Saturday, November 9th at Pace University. The goal of the event was to bring more awareness of Chemistry to the community in a healthy, relaxing, and fun way. What better way than to host an event based on YOGA, which means "unity"!

Registered participants met at 1 Pace Plaza at Pace University and proceeded to the Gymnasium. The coordinator of the event and Professor of Chemistry at Pace University, Dr. JaimeLee Iolani Rizzo, welcomed everyone and distributed yoga mats and eye coverings. The Dean of Dyson College of Arts and Sciences of Pace, Dean Tresmaine Grimes, then gave greetings, and the owner from the yoga school, Always-at-Aum, Ms. Robin Appel-Maida, gave a keynote. A group of yoga instructors from various yoga schools gave a yoga practice and provided assistance and adjustments throughout the hour-long practice which included a warm-up, Sun Salutations, a flow, cool down, pranayama, and yoga nidra.



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## THE INDICATOR – DECEMBER 2024

## CHEMISTRY OF <sup>39</sup>Y<sup>8</sup>O<sup>31</sup>GA EVENT (continued)

All participants then made their way to 15 Beekman to the Bianco Room, where freshly made healthy smoothies were served. While everyone was enjoying the variety of prepared smoothies Dr. Rizzo gave her presentation as well as the virtual presentation of Dr. Ping Furlan, the NY ACS Section Chair. Tables were decorated with bright yellow tablecloths, fresh herb plant centerpieces, bubbles, crystals, and yoga stickers. All guests received gift bags which included custom-made beanies, a custom water bottle, and reusable tea bags.

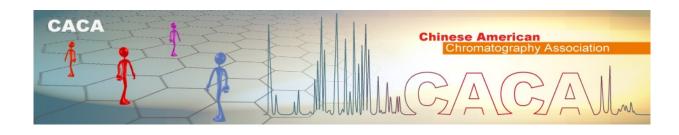


Student STEM clubs including the Chem Club and the Pre-vet club then gave some informative presentations about the chemistry involved in respiration, anatomy and physiology of the vagus nerve, and chemicals produced during a yoga asana and meditation practice.

A healthy lunch was then served including sandwiches, salad, fruits, coffee, and tea. Participants were further entertained with a fun raffle and the day ended with a scrumptious ice cream bar with all the toppings and a custom <sup>39</sup>Y<sup>8</sup>O<sup>31</sup>Ga cake. It was a beautiful gathering to unite people, move the body, breathe together, and make space in the physical body and in the mind.

Special thanks to all the wonderful volunteers of Pace University who helped with the planning, set-up, assisting throughout the day, and the big clean-up and to generous donors – Always-at-Aum Yoga school, Blue Lotus Health and Wellness, and the Yoga Shack! Namaste!





# NORTH JERSEY ACS HOSTS SUCCESSFUL CHEMEXPO IN CELEBRATION OF NATIONAL CHEMISTRY WEEK

## Contributed by Vidya R. Singh, Ph.D. candidate, New York University

In partnership with Liberty Science Center, the North Jersey chapter of ACS hosted the 30th annual ChemExpo on October 19, 2024 in celebration of National Chemistry Week. Over **1000** visitors came to the Liberty Science Center in Jersey City, NJ to engage in demonstrations centered on this year's theme of "**Picture Perfect Chemistry**" with student volunteers from colleges and high schools from all across New Jersey and New York. Over **95** student volunteers represented their schools: Caldwell College, Drew University, New Jersey City University (NJCU), Ramapo College, Seton Hall University, St. Peter's University, Immaculata High School, JP Stevens High School, The College of New Jersey (TCNJ), and Princeton International School of Mathematics and Sciences (PRISMS).

Caldwell College (right) provided a hands-on "Marble art" demonstration completely aligning with the theme of picture-perfect chemistry. Students dove into the colorful world of chemistry using carrageenan from red seaweed to explore surface tension. This engaging, kidfriendly activity combined vibrant paints, water, and oil to create stunning bilayers that danced across the surface. As they swirled their masterpieces, excitement filled the air, and each vibrant creation transferred beautifully to paper. The kids left with not just take-home treasures but also a spark of curiosity about the wonders of chemistry.



Kids performing marble art experiment





Drew chemistry student teaches attentive children chromatography



Drew University (left) put on a comprehensive demonstration where, voung scientists chromatography through explored an engaging experiment. Using coffee filters dotted with colorful markers, they observed how water's polarity interacted with nonpolar dyes. As the filters touched water, vibrant hues raced upwards, separating into distinct bands. Parents beamed with pride, watching their children's eyes light up with excitement and newfound scientific curiosity.

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## THE INDICATOR – DECEMBER 2024

# NORTH JERSEY ACS HOSTS SUCCESSFUL CHEMEXPO IN CELEBRATION OF NATIONAL CHEMISTRY WEEK (continued)

NJCU came with three engaging demonstrations that captivated visitors. First, they showcased a cyanide detection paper, creating cool shapes as Fe<sup>2+</sup> transformed to Fe<sup>3+</sup> under UV light. Next, they offered a microscopic view of a computer chip, revealing its intricate architecture. Lastly, they demonstrated microcapsule formation using vegetable oil, gelatin, and food coloring, providing a hands-on glimpse into microencapsulation technology.

At NJCU's exhibit, the cyanotype paper demonstration captivated attendees with its blend of art and chemistry. Kids were excited to pick their own objects to cast images on the lightsensitive paper, which was then exposed to UV light. This process transformed Fe<sup>2+</sup> ions to Fe<sup>3+</sup>, creating striking blue silhouettes against a white background. The children took home their unique creations, making the experience both educational and memorable!



A young scientist performing the experiment to create microcapsules using vegetable oil, gelatin, and food coloring.



NJCU asks students to pick their own objects to demonstrate the Sunprint light-interacting

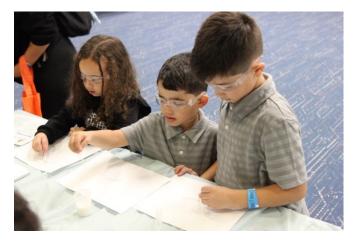
JP Stevens high school provided a series of exhibits visually showing how acid-base function when mixed with different foods all containing different pH. The blotting papers were soaked with red cabbage solution and were then subjected to various solutions of different pHs. Parents said that it is a fantastic way to learn and connect pH with the everyday materials around us.

## THE INDICATOR – DECEMBER 2024

## NORTH JERSEY ACS HOSTS SUCCESSFUL CHEMEXPO IN CELEBRATION OF NATIONAL CHEMISTRY WEEK (continued)

At TCNJ's exhibit, the invisible ink experiment captivated young scientists. Students wrote secret messages using lemon juice on paper, which disappeared when dry. To reveal their hidden words, they applied heat, causing the lemon juice to oxidize and turn brown. This engaging demonstration illustrated chemical reactions and oxidation processes, sparking curiosity about everyday kitchen science.

Not to be outdone, three high schools also presented at this year's ChemExpo, and their chemistry knowledge was top-notch. Immaculata High School students were kept busy



Children write secret messages for their invisible ink experiment at TCNJ's exhibit.

with their very popular exhibit on Lava lamp. At Immaculata's exhibit, the lava lamp demonstration mesmerized young scientists. Students eagerly selected their favorite glitter colors to add sparkle to a bottle filled with water and oil. When Alka-Seltzer tablets were dropped in, they sank through the oil layer, reacting with water to produce colorful, glittery bubbles that danced up and down. The addition of Glo Germ made the mixture glow under UV light, creating a magical effect. This engaging experiment brilliantly illustrated concepts of density, chemical reactions, and light properties, igniting curiosity and excitement among participants.



(Left) Child looking at the glowing lava lamp at Immaculata's exhibit and (right) Children performing the chlorophyll extraction at Seton University's exhibit.



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# NORTH JERSEY ACS HOSTS SUCCESSFUL CHEMEXPO IN CELEBRATION OF NATIONAL CHEMISTRY WEEK (continued)

The author can only hope the kids were paying attention. At Seton University's exhibit, students were captivated by a hands-on chlorophyll extraction experiment using spinach leaves and rubbing alcohol. Participants ground fresh spinach into a paste, soaked it in alcohol, and filtered the mixture to reveal a vivid green liquid containing extracted chlorophyll. This engaging demonstration not only illustrated the process of isolating plant pigments but also highlighted the role of chlorophyll in photosynthesis. Students observed the extracted solution under normal and UV light, witnessing its fluorescence and gaining insights into how light interacts with plant molecules. This experiment effectively brought botanical concepts to life, sparking curiosity about plant biology and photochemistry. At the New Jersey Institute of Technology's exhibit, students eagerly explored their own skin cells using the Foldscope, a portable microscope.

PRISMS, coming all the way from Princeton, NJ, also had a strong showing with multiple exhibits to share. The first showcased thermochromic paint, which changed color in response to temperature variations. Students observed how the paint shifted hues when warmed by hands or other heat sources, returning to its original color as it cooled, illustrating the concept of temperature-sensitive materials. The second demonstration featured photoresponsive liquid crystals, which alter their molecular orientation when exposed to light. Attendees learned how these crystals realigned under UV light, changing their optical properties, and discovered their applications in technologies like smart windows and displays. Together, these demonstrations highlighted the fascinating interplay between external stimuli and material properties, sparking curiosity about future innovations in materials science.

Judges Debra Hazard-Sweet, Marie Coschigano, Suzanne Lepore, Joan Zanfardino, Preeya Kuray and Angele Kwimi evaluated all of the demonstrations. The high schools all received prizes, but the top high school demonstration was J.P. Stevens. The first-place prize for the college category went to Caldwell College for their presentation on Marble Art. The second-place prize went to Seton Hall and Ramapo College for their presentations on Chlorophyll extraction and Sunprint light-interacting paper. The prizes were awarded based on the depth of chemical knowledge demonstrated, ability to explain science in an engaging manner to a broad audience, and overall creativity of the presentations. Congratulations and a big thank-you to all the teams who participated this year!



The author had a great time engaging with the young scientists and conducting experiments together.

## NORTH JERSEY ACS HOSTS SUCCESSFUL CHEMEXPO IN CELEBRATION OF NATIONAL CHEMISTRY WEEK (continued)

Financial support from NJACS made this event possible. The event was also made possible by the support and enthusiasm of all the student volunteers, their chemistry teachers and professors, the Liberty Science Center, and the ChemExpo 2024 Steering Committee: Sandra Keyser, Miriam Gulotta, and Kathleen Gilbert.

Attending the ChemExpo was a truly inspiring experience for the author, who witnessed students engaging with science through hands-on demonstrations. From creating vibrant marble art to exploring the wonders of chlorophyll extraction, the excitement in the room was palpable. These interactive activities not only sparked curiosity among young participants but also highlighted the importance of making science accessible and fun for everyone.

NJACS looks forward to another exciting ChemExpo in 2025!

# CALL FOR NOMINATIONS



## DREYFUS PRIZE IN THE CHEMICAL SCIENCES: ELECTROCHEMICAL PROCESSES

The Camille & Henry Dreyfus Foundation is seeking nominations focused on electrochemical processes for its 2025 Dreyfus Prize in the Chemical Sciences. Awarded to an individual the award recognizes exceptional and original research that has led to major advances in the field.



Due December 5

# **GRANTS & AWARDS**

## **GLOBAL INNOVATION GRANT**

Up to \$5000 to fund collaborative events between local sections and international chapters focused on solutions to global challenges.

> DUE JANUARY 10, 2025 Learn more

## LOCAL SECTION INNOVATIVE PROJECT GRANT

Up to \$3500 for for ACS local sections to conceive and implement projects to strengthen local section function.

# DUE JANUARY 15, 2025

<u>Learn more</u>

## CORPORATION ASSOCIATES LOCAL SECTION & INTERNATIONAL CHAPTER GRANT

Up to \$1000 for for ACS local sections and international chapters to promote industry-focused events.

DUE FEBRUARY 1, 2025 Learn more

## CALLING ALL STUDENT MEMBERS!

## CHEMLUMINARY AWARDS

ACS ChemLuminary Awards honor the best examples of programming, outreach, and operations from ACS local sections, technical divisions, regional meetings, and international chemical sciences chapters.

## NEW FOR 2025:

- Outstanding Public Outreach by an International Chapter
- Outstanding Event to Advance a Common Language of Chemistry
- Outstanding Activity Promoting Research Safety

## DUE FEBRUARY 15, 2025

View the ChemLuminary Award Descriptions

# LOCAL SECTION PUBLIC RELATIONS AWARD

To recognize outstanding efforts by ACS local sections to promote chemistry to the public or to local section members.

DUE FEBRUARY 15, 2025 Learn more

# Bundle up with ACS and win a periodic table blanket!

- Group Discount 50% off when 6 or more people join with a Premium Membership Package.
- Join at membership.join.acs.org
- On the Review step of the application, enter code BLANKET50 for a chance to win an ACS Periodic Table Blanket.

Multiple winners selected each week – now until December 31st.





# **OPPORTUNITIES**

# For High School Students & Teachers

ACS-Hach Professional Development Grant Due January 21 Presidential Awards for Excellence in Mathematics and Science Teaching (Grades 7-12)

Nominations due February 6

# For Undergraduates

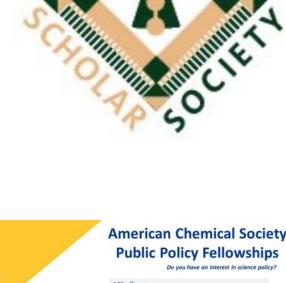
DoD Science, Mathematics, and Research for Transformation (SMART) Scholarship Due December 6 I.M. Kolthoff Enrichment Award Due January 13 **ACS Scholars Program** 

Due March 1

# For Graduate Students / Postdocs

ACS Public Policy Fellowships Due January 8 Henkel Award for Outstanding Graduate Research in Polymer Science and Engineering Due January 25 **CAS Future Leaders** Due January 28 L'Oreal for Women in Science Fellowship

Due February 14





# **For Professionals**

The Dreyfus Prize in the Chemical Sciences Due December 5 Camille Dreyfus Teacher-Scholar Awards Nominations due January 30 **ACS Public Policy Fellowships** Due January 8 ACS Heroes of Chemistry Awards Due February 1 Early Career Investigator Award, Division of Organic Chemistry, **Due February 11** 

2025 Awards Deadline Announcement • January 30

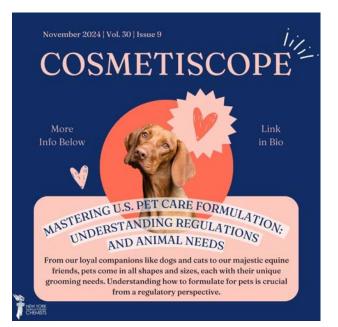
acs.org/policyfellow

Camille Dreyfus Teacher-Scholar Awards Program

## FROM OUR PARTNERS

## **NEW YORK SOCIETY FOR COSMETIC CHEMISTS**

The New York Society for Cosmetic Chemists invites all ACS members to attend their upcoming events. Join the NYSCC's INDIE 360° Preview webinar on December 5<sup>th</sup> at noon for an exclusive look at INDIE brands. This event will preview the content and engagement one can expect at their Suppliers' Day event on June 3-4, 2025 at the Javits Convention Center. To see more of their events, view the Cosmeticscope here



## **ACS SPRING 2025 NATIONAL MEETING & EXPOSITION**



## SOCIÉTÉ DE CHIMIE INDUSTRIELLE

Join the Société de Chimie Industrielle December 4<sup>th</sup> on at noon in Manhattan to experts discuss hear plastics derived from recycled and renewable-based raw materials. These sustainable plastics play a significant role in addressing plastic pollution and enabling a circular economy. These eco-friendlier alternatives keep plastics out of landfills, lower greenhouse gas emissions, and conserve natural resources.



#### Société de Chimie Industrielle

Annual Meeting, Luncheon & Sustainable **Plastics Panel** In person and virtual options are available!

Wednesday, December 4 12 PM - 2:15 PM ET

**Register** now!

#### **Featured Speakers**



**Tony Palmer** Vice President of Chemical Market Analytics by OPIS, a Dow Jones Company





Shaun Pan Chief Commercial Officer, Nazdar (Moderator)

**Register here** 

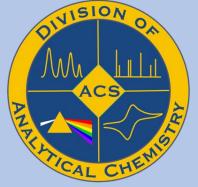
# FROM OUR PARTNERS

## IUPAC

# NEW YORK AREA GROUP FOR INFORMATICS AND MODELING



## **DIVISION OF ANALYTICAL CHEMISTRY**



The <u>Analytical Division</u> organizes programs for the spring and fall ACS Meetings, <u>Pittcon</u>, the <u>SciX conference</u> and the <u>Eastern Analytical</u> <u>Symposium (EAS)</u>. In addition, the Chromatography and Separation Chemistry subdivision addresses the issues of interest to its members. The division has a wide range of outreach programs including student travel grants and regional meeting support. Its award program includes undergraduate, graduate and professional awards. We welcome new members. Please join and/or volunteer to help with one or more activities.

## 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!

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

The New York Section has participated in the designation of seven National Historic Chemical Landmarks and four New York Section Historic Chemical Landmarks, as detailed on its <u>website</u>. 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 a historic chemical landmark - be it an achievement, a building or association. Send your nomination, with supporting documentation, to <u>Dr. Neil Jespersen</u>, Chair, Committee on the History of the NY Section.

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# 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.

Assistant/Associate/Full Professor, Tenure Track Biological & Chemical Sciences – New York Institute of Technology	
Tenure-track Faculty Position in Physical Chemistry – Rutgers University	Apply here
Tenure-track Faculty Position in Medicinal Chemistry – Rutgers University	<u>Apply here</u>
Assistant Professor of Analytical Chemistry – University of Hartford	<u>Apply here</u>
Tenure Track Assistant Professor of Chemistry – St. Joseph's University	Apply here
Tenure Track Assistant Professor, Physical Chemistry – Adelphi University	Apply here
Principal Scientist, Laboratory Technical Services – Endo	Apply here
Director, Small Molecule Analytical Research and Development – Merck	<u>Apply here</u>
Creation Lab Technician – dsm firmenich	Apply here
Junior Chemist – iff	Apply here
Quality Analyst – iff	Apply here
Product Development Chemist I – Benjamin Moore	Apply here
	Apply here

