



Honoring Excellence See page 17





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IN MEMORIAM: NORTH JERSEY MOURNS THE LOSS OF TOM KRONE



Although Tom Krone was not a member of the ACS nor a chemist, he was a valuable honorary member of the North Jersey Section. Tom, a master photographer, was responsible for the vast majority of photographs taken at our awards dinners and outreach events. Tom was a mild-mannered man. He'd quietly sneak into events during the New Jersey Chemistry Olympics (NJCO) taking photos of competitors without disturbing their presentations. Unlike the judges the students never feared Tom. Tom's photos were a critical part of written presentations the NJCO used to secure the outside grant money that was critical for keeping the event running. When the Thomas Edison Laboratory in West Orange was made an ACS Historical Landmark Site, Tom was there to photograph the event. That year, the NJACS started running outreach events with visitors to the Edison Labs during Edison Day. Tom captured our volunteers at work both that first year and for many of the years that followed. Tom's wife, Diane (an ACS fellow) has been one of the organizers of our Awards dinners for many years. Tom and his camera always came with her to the dinners. He took all the photographs while Diane and Bettyann Howson (another ACS fellow) ran the show.

In 2019 the section awarded him the NJACS Pro-Bono Award to thank him for his service. No one is quite sure how he both took the photo and received the award at the same time but if anyone could do that it was Tom! The historical record of North Jersey's activities is full of the wonderful photographs that Tom took over the years. It was a fitting role, since in his working life Tom was a highly decorated and very loved history teacher. The section is very sad to report that we lost Tom on December 22nd. Our hearts go out to his wife Diane, their daughter Anne, her husband and their three children. His family asks that anyone wanting to pay tribute to Tom do so by donating to the section's Project SEED program.



THE INDICATOR – FEBRUARY 2025

THIS MONTH IN CHEMICAL HISTORY

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

In this column I continue looking back at the new chemistry of 100 years ago as reflected in the pages of The Chemical Society's Annual report for 1925 (Volume XXII) published in London in 1926. In my last column I examined the new developments in inorganic chemistry. It's only fair that this month organic chemistry gets its turn.

Detailed studies of the conversion of maleic acid into fumaric acid have cast light upon the mechanism of the transformation. In aqueous solution, in the presence of hydrochloric acid or potassium thiocyanate as catalyst, the initial reaction rate is proportional to the concentration of the catalyst and the second power of the initial concentration of maleic acid. The rate limiting step is indicated to be the addition of the catalyst to the double bond. It is concluded that any substance capable of adding to the double bond should effect the transformation, and this is confirmed by the observation that metallic potassium converts methyl maleate in ether solution into methyl fumarate.

Many studies of long-chain fatty acids from natural products have been published. Separations of mixtures of such acids have been successfully accomplished by fractional distillation of their methyl or ethyl esters. Location of the double bonds in these esters by oxidation with permanganate in hot acetone or acetic acid solution seems to take place without migration of the double bonds. Tests on pure ethyl oleate gave azelaic acid in 95% yield, and nonoic acid in 59% yield. Whale oil from South Georgia was shown to contain about 1% of a C_{14} mono and di-unsaturated acid; 15% of a C_{16} monounsaturated acid; and a substantial amount of solid C_{20} and C_{22} acids containing on average 4 to 5 double bonds. The double bonds seem to be near the carboxyl group.

When aqueous formaldehyde is heated in the presence of alkaline catalysts a mixture of sugars is formed. This mixture has now been shown to contain sorbose as well as dl-fructose and a keto-pentose. No aldoses are formed by this procedure. A study of the reaction with a magnesium oxide catalyst at 2 atmospheres pressure shows the initial production of formic acid and methanol while the magnesium oxide dissolves. Sugars are then rapidly produced along with dihydroxyacetone.

New examples of optically active compounds have now been established for sulfur and arsenic. Sulfoxides of formula $O:S(R_1)(R_2)$ have been resolved in accord with earlier resolutions of sulfonium salts of formula $(R_1)(R_2)(R_3)S^+X^-$. 4-coordinate arsenic compounds have now been resolved. They are of the following type: $(R_1)(R_2)(R_3)As:S$.

A detailed study of the isomerization of PhOC(Ph): N(Ph) to O:C(Ph)N(Ph)₂ including a kinetic investigation and a study of conductivity changes has indicated that the reaction proceeds intramolecularly without separation of ionic intermediates. This result was suggested as an example of a more general rule for many similar rearrangements.

On the borderline between organic and inorganic chemistries are significant studies on soil chemistry. Crops vary widely in their sensitivity to soil pH. The best pH range for growing lucerne is 6.5 – 7.0; for rye 6.0- 6.5; for buckwheat 6.0 – 7.0. However at pH 4.0 the yield of lucerne falls to 13% of its optimum value whereas the yield of buckwheat is still 90% of optimum and that of rye 82%. Most plants prefer a slightly acidic or neutral soil; alkaline soil generally depresses plant growth.

Small traces of boron are essential for the normal growth of many legumes. Boron, in the form of boric acid, helps develop the root nodules (the nitrogen-fixing apparatus) of legumes. If boron is lacking the microorganisms in the nodules attack the plant proteins rather than fixing nitrogen for plant growth. I will conclude this look back at advances in chemistry of 100 years ago in my next column.

THE INDICATOR

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THE INDICATOR – FEBRUARY 2025

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

March 2025	February 16, 2025
April 2025	March 16, 2025
May 2025	April 16, 2025
June 2025	May 16, 2025
September 2025	August 16, 2025

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.

All views expressed are those of the editor and contributors and do not necessarily represent the official position of the New York and North Jersey Local Sections of the American Chemical Society unless so stated.

February Calendar

NORTH JERSEY SECTION

Wednesday, February 12, 2025

North Jersey Executive Committee Meeting *See page 12*

Thursday, February 20, 2025 NMR Discussion Group *See page 13*

Tuesday, February 25, 2025

Mass Spectrometry Discussion Group *See page 12*

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NEW YORK SECTION

Friday, February 7, 2025

Long Island Subsection See page 8

Saturday, February 8, 2025 Project SEED Research Symposium See page 10

Monday, February 24, 2025 New York ACS Board of Directors Meeting *See page 6*

Wednesday, February 26, 2025

Westchester Chemical Society See page 7



Contact our Ad Sales Manager for more details

NEW YORK SECTION MEETINGS

http://www.newyorkacs.online 2025 BOARD MEETING DATES

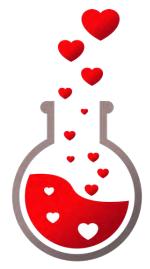
The New York ACS Board of Directors meetings dates for 2025, are, as follows:

Monday, February 24, 2025 (virtual)MMonday, March 31, 2025 (hybrid)MFriday, April 11, 2025 (in person)MWilliam H. Nichols DistinguishedMSymposium and Medal Award CeremonySt. 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 Ms. Bernadette Taylor. Prof. Eric Chang will Chair all meetings. The 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>.



Valentine's Day



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WESTCHESTER CHEMICAL SOCIETY

Recreating Historical Chemical Advertisements Using Material Safety Data Sheets

Speaker:Julian Silverman, Ph.D.
Department of Science and Math
Fashion Institute of TechnologyDate:Wednesday, February 26, 2025Place:via ZoomTime:7:30 PM



Abstract: The Science History Institute's digital archive and Safety Data Sheets (SDS) are complementary open-access resources to explore the history of chemistry and science communication. Both chemical advertisements and SDS come filled with physical, chemical, toxicological, and regulatory information. Critically reading both advertisements and SDS is crucial to conducting work in the laboratory and evaluating the safety and sustainability of chemicals. A project focused on designing and presenting recreated historical advertisements using information sourced from SDS connects students and non-scientists with the chemicals we interact with within the laboratory and in our everyday lives. We learn about important topics including properties of matter, their units, personal protective equipment, their proper use, and how to find and use reliable information from digital resources. Inspired by chemical advertisements in the Science History Institute's digital archives, we critique historical advertisements, investigate notable chemicals, and design and present advertisements using SDS. Suited for introductory courses or practitioners who use specific materials at work these free resources help us learn about the history and communication of chemistry, the nature of the chemical industry, and how scientific information lives online in our digital era. Using archived advertisements connects us to our current uses of chemicals enabling us to creatively and critically evaluate chemistry from multiple perspectives.

Download flyer here

WESTCHESTER CHEMICAL SOCIETY: SAVE THE DATE

One-Dimensional Bimetallic Architectures as Multi-Functional Electrocatalysts in Alkaline and Acid Conditions

Speaker:Dr. Christopher Koenigsmann
Associate Professor of Chemistry
Fordham UniversityDate:Wednesday, March 12, 2025Place:Westchester Community College and Zoom
6:00 PM



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THE INDICATOR – FEBRUARY 2025

LONG ISLAND SUBSECTION

Development of Small Molecule Gankyrin Binders

Speaker:Dr. Aaron Muth, Associate Professor
Department of Pharmaceutical Sciences
St. John's UniversityDate:Friday, February 7, 2025Place:St. Albert Hall, Sciarra Room
and via ZoomTime:6:45 PM

Registration required, click here to register



Abstract: Gankyrin is an ankyrin repeat-containing protein that promotes cell proliferation, tumor development, and cancer progression when overexpressed. Additionally, gankyrin is important to the growth of numerous cancer types. Therefore, gankyrin and its multiple protein-protein interactions are considered prospective targets for inhibiting the growth of certain cancers. Our work has focused on developing a library of small molecules which bind gankyrin and disrupt its various protein-protein interactions, resulting in decreased cancer cell proliferation. These small molecules were also used to shed light on gankyrin's biological role in regulating cancer cell proliferation. This talk will focus on SAR studies on two different small molecule scaffolds, while investigating their ability to bind gankyrin and inhibit cancer cell proliferation.

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2025 WILLIAM H. NICHOLS DISTINGUISHED SYMPOSIUM & AWARD PRESENTATON

ADVANCING BIOLOGY THROUGH INNOVATIONS IN CHEMISTRY



A distinguished symposium honoring

Professor Benjamin F. Cravatt Scripps Research Institute

for developing activity-based protein profiling and advancing covalent drug discovery

> Date: Friday, April 11, 2025 St. John's University Directions

> > Time: 1:00 PM – 7:30 PM Register here

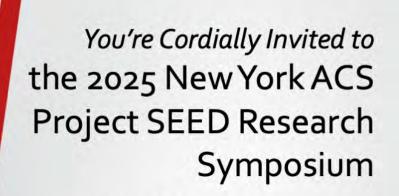
Symposium Program

Welcome Professor Eric Chang, 2025 New York ACS Chair, Pace University
Opening of the Distinguished Symposium <i>Mr. Joseph Weiner,</i> 2025 New York ACS Chair-Elect, PepsiCo
Chemical tools for uncovering new redox biology at the host–microbe interface <i>Professor Stavroula Hatzios, Yale University</i>
Chemical Approaches to Studying Chromatin Professor Tom Muir, Princeton University
Coffee Break
Systematic Chemical Diversity to Enable Biological Discovery Professor Damian Young, Baylor College of Medicine
Activity-based protein profiling – target and ligand discovery on a global scale Professor Benjamin F. Cravatt, 2025 Nichols Medalist, Scripps Research Institute
Reception
Medal Award Presentation

Supported in part by the William H. Nichols Fund For Chemistry at the Boston Foundation

THE INDICATOR – FEBRUARY 2025

PAGE 10 PROJECT SEED RESEARCH SYMPOSIUM



A Virtual Celebration of Innovation and Student Excellence in STEM

Co-sponsored by the New York and Southern California ACS Local Sections, supported by the LSAC DEIR Grant

> When: Saturday, February 8, 2025 1–4 PM EST | 10 AM –1PM PST

Where: Online (Virtual Event)

Cost: FREE (Registration required)

Register Here Today!

For more information, email: <u>Ping.furlan@gmail.com</u> or <u>kkallury@gmail.com</u>





DR. ROLANDE HODEL TO BE AWARDED THE 2025 WESTCHESTER CHEMICAL SOCIETY DISTINGUISHED SCIENTIST AWARD ON APRIL 24, 2025

The Westchester Chemical Society is proud to announce that the 2025 Distinguished Scientist Award will be presented to Dr. Rolande Hodel of AIDSfreeAFRICA on Thursday, April 24, 2025 at Pace University, Pleasantville campus. Details to follow in the March issue of The Indicator.



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NORTH JERSEY SECTION MEETINGS

2025 NORTH JERSEY ACS EXECUTIVE COMMITTEE MEETINGS

2025 North Jersey ACS Chair Robert Menger and the Executive Council welcome you to our monthly NJACS meetings. The meetings are normally held on the second **Wednesday from 6:30 pm to 8:30 pm.** All members are welcome to attend and become more involved in section activities. The dates for 2025 are, as follows:

Wednesday, February 12, 2025 (virtual) Wednesday, March 19, 2025 (virtual)) Wednesday, April 16, 2025 (hybrid) Wednesday, May 21, 2025 (hybrid) 2026 Planning M

12, 2025 (virtual)Wednesday, June 18, 2025 (hybrid)2025 (virtual))Wednesday, September 10, 2025 (hybrid)2025 (hybrid)Wednesday, October 15, 2025 (hybrid)2025 (hybrid)Wednesday, November 12, 2025 (virtual)2026 Planning Meeting in December, TDB

For links to the virtual meetings and RSVP for in-person attendance at hybrid meetings, please <u>click here to email our Communications Chair</u>.

NORTH JERSEY ACS MASS SPECTROMETRY DISCUSSION GROUP

Sampling, Ambient Mass Spectrometry, and the Philosophy of Damage in a Museum Setting

Speaker:Dr. G. Asher Newsome
Smithsonian Institution, Physical Scientist
Museum Conservation InstituteDate:Tuesday, February 25, 2025Place:Somerville Elks Lodge 1068Time:5:30PM

Registration is FREE including dinner, click here to register



Abstract: Material analysis is needed to support all manner of research at the Smithsonian, but it may be more important to the museum and other interested parties that rare, precious, or culturally sensitive objects remain un-damaged. Mass spectrometry in its various forms presents a powerful tool, but it is inescapably destructive at some level. As the sensitivity of modern instrumentation grows, the sample mass that must be collected and ionized shrinks, perhaps to the point where it becomes debatable whether the amount removed constitutes "damage". Ambient mass spectrometry methods offer particular opportunities for sensitive object analysis because they can theoretically be performed without cutting material from a whole or preparing the surface. I will present several recent projects that pertain to different forms of minimally-invasive, ambient sampling from materials such as wood, parchment, textiles, and synthetics, among others. I will also show recently-developed instrumentation methods that accommodate intact objects too large to fit immediately adjacent to the mass spectrometer.

NORTH JERSEY ACS NMR TOPICAL GROUP

New NMR-based Strategies for Exploring Function, Structure, and Inhibition within Protein-Membrane Interfaces

Speaker:Dr. Brian Fuglestad
Assistant Professor
Virginia Commonwealth UniversityDate:Thursday, February 20, 2025Place:via MS TeamsTime:12:00PM



Abstract: Among membrane associated proteins, peripheral membrane proteins (MPs) are unique as water-solubilized proteins that bind to membranes, often reversibly, to perform their function. Due to technical challenges, detailed study of structure, function, and inhibition for MPs are overwhelmingly focused on the nonfunctional, water-solubilized state. While NMR is often the best method to explore MPs, its potential must be further tapped through development of improved membrane models. Our recently developed membrane mimicking reverse micelles (mmRMs) house PMPs within a nanoscale assembly of surfactants or lipids and allow their membrane- embedded state to be captured. These systems present a number of advantages over other established membrane models in structural and functional study of membrane-bound proteins. We have applied mmRMs to PMPs such as glutathione peroxidase 4(GPx4) and phosphatidylethanolamine binding protein 1 (PEBP1), and lipid chaperones such as fatty acid binding protein 4 (FABP4) and sterol carrier protein 2 (SCP2). While we have applied fragment-based inhibitor design for a membrane anchoring PMP, p47^{phox}, this approach is a greater challenge for other PMP types. Our new mmRM-based drug discovery strategy allows easy accessibility to membrane embedded protein targets. Fragment-screening of GPx4 in its functionally relevant, membrane-bound state has revealed hits that bind within the lipid recognition region. Not only do these binders represent inhibitor building-blocks, but they reveal properties of small-molecule binding within the largely unexplored space of proteinmembrane interfaces. Advances outlined here will help reveal structure and function of PMPs in their functional membrane-bound state as well as provide a strategy for inhibition of this challenging category of protein.

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2025 MIDDLE ATLANTIC REGIONAL MEETING HOSTED BY NORTH JERSEY ACS



The Mid-Atlantic Regional Meeting (MARM) of the American Chemical Society (ACS) will be held May 28-31, 2025, at Seton Hall University in South Orange, New Jersey. At this meeting we will celebrate the 100th Anniversary of the North Jersey Section of the ACS. A plenary lecture will be given by Nobel Laureate Morten Meldal (2022); a co-recipient for his work on the development of click chemistry and bioorthogonal chemistry. Keynote lectures will be presented by Phaedria St. Hilaire, angel investor and co-founder of ProWoC (Professional Women of Color) and by Rebecca Ruck, Associate Vice President in Process Research & Development at Merck & Company and co-founder of EWOC (Empowering Women in Organic Chemistry). Presentations will also be given by David Laviska (ACS, Portfolio Manager for Green Chemistry & Sustainability in Education) and W. Walker Smith (Roy G Biv). A range of other programming will be presented including Advances in AI in Chemistry and Chemical Biology and Biochemistry. Please join us to hear cutting-edge research and to mark our 100th Anniversary. For more information go to https://marm2025.com/



Deadline for submitting articles and advertisements for the March 2025 issue is February 16, 2025

MARM AWARDS FOR 2025

WILLIAM "BILL" SUITS UNDERGRADUATE MIDDLE ATLANTIC REGION AWARD FOR OUTSTANDING STUDENT VOLUNTEER SERVICE TO THE AMERICAN CHEMICAL SOCIETY

Purpose: To recognize an outstanding undergraduate student who has provided exemplary volunteer service in the Mid-Atlantic Region of the ACS. Academic records, volunteer service in the region, and a student's application statement will be considered. Additionally, the ACS is actively committed to cultivating a diverse, equitable, inclusive and respectful community of chemical professionals. Diversity, equity, inclusion and respect



(DEIR) are among the core values of the ACS. This award seeks to recognize undergraduate students who allow issues related to DEIR, such as the obstacles they have overcome, to inform their daily choices, such as their volunteer work, their classes, their extracurricular activities, individuals with whom they invest their spare time.

Nature and Establishment: William "Bill" Suits, who passed away on April 9, 2020, was passionate about his work as a mentor for high school students in the ACS Project SEED program, a long-time ACS career consultant, an honored member of the MARM Board, and an active member of the ACS North Jersey Section. This award was established in 2023 by the MARM Board seeking to recognize the dedication and impact Bill had in the region. Bill's influence was seen directly in the numerous different groups of ACS that he worked with and his participation in meetings and symposia. In a less measurable way, yet of fundamental importance, Bill invested much of his time in one-on-one conversations with students and colleagues. His gentle encouragement, his gift for identifying future leaders, his wealth of knowledge about the chemistry employment sector, and his passionate love of science had a positive effect on generations of professionals in the field.

The MARM Board will recognize Bill Suits by funding a yearly award to an outstanding undergraduate in the MARM area to attend MARM. The "William "Bill" Suits Undergraduate MARM Award" will cover travel, registration, two hotel nights, and reasonable meal expenses up to a total of \$1,000.

This award is to recognize an outstanding undergraduate student who has provided exemplary volunteer service in the Mid-Atlantic Region of the ACS. This award honors the memory of North Jersey ACS's Bill Suits by funding an outstanding undergraduate in the MARM area to attend MARM.

MARM AWARDS FOR 2025 (continued)

E. ANN NALLEY REGIONAL AWARD FOR VOLUNTEER SERVICE TO THE AMERICAN CHEMICAL SOCIETY

Recognizes the volunteer efforts of individuals who have served the American Chemical Society, contributing significantly to the goals and objectives of the Society through their regional activities.

DUE MARCH 8, 2025

Learn more

E. EMMET REID AWARD IN CHEMISTRY TEACHING AT SMALL COLLEGES IN THE ACS MIDDLE ATLANTIC REGION

Recognizes, encourages and honors high quality and outstanding achievements in teaching and research at small colleges in Middle Atlantic Regional Meeting (MARM) of the American Chemical Society. Nominations for the Award are made by the Local Sections of the Middle Atlantic Region.

DUE MARCH 8, 2025

Learn more

ACS DIVISION OF CHEMICAL EDUCATION (CHED) REGION AWARD FOR EXCELLENCE IN HIGH SCHOOL TEACHING

Recognizes, encourages, and stimulates outstanding teachers of high school chemistry in the Middle Atlantic Region. The Region Award consists of a cash award and a plaque. The nominee must be actively engaged in the teaching of chemistry or a chemical science in a high school (grades 9-12) on at least a half-time basis.

Due March 8, 2025

<u>Learn more</u>

STANLEY C. ISRAEL REGIONAL AWARD FOR ADVANCING DIVERSITY IN THE CHEMICAL SCIENCES

Recognizes individuals and/or institutions who have advanced diversity in the chemical sciences and significantly stimulated or fostered activities that promote inclusiveness within the region. This award is sponsored by the ACS Committee on Minority Affairs.

DUE MARCH 1, 2025 Learn more



MEETING REPORTS

2025 NEW YORK ACS SECTIONWIDE CONFERENCE

The New York ACS held its 2025 Sectionwide Conference on January 25th at the University of Mount Saint Vincent in Riverdale, NY. The beauty of the campus was matched with the vitality of the members assembled on that cold day. Chair Eric Chang, Ph.D. greeted the sixty-five members assembled to plan the events of 2025, hear the inspiring keynote speaker, celebrate the excellence of the awardees and Project SEED students, and present the slate of candidates for the election to be held in May. He also discusses his intentions to focus on connecting the New York ACS with the broader science outreach community in NYC, and reconnecting with our active but unengaged membership, especially those in industry.



2025 New York ACS Chair Eric Chang, Ph.D. welcoming the Sectionwide Conference attendees.

The New York ACS expressed its gratitude to 2024 Chair Ping Furlan, Ph.D. for her tireless service. Ping has gone to great lengths to ensure that all members have a voice, especially in the proposed bylaw changes.

2024 New York ACS Chair Ping Furlan, Ph.D. was honored for her service.





University of Mount Saint Vincent President Dr. Susan Burns welcomed everyone to campus.



Former Chairs Ruben Savizky and Rita Upmacis conversing over coffee.

2025 NEW YORK ACS SECTIONWIDE CONFERENCE (continued)

Outstanding Service Awardee

Assistant Dean for the School of Natural and Mathematical Sciences at the University of Mount Saint Vincent, Pamela Kerrigan, was unanimously selected as the 2025 Outstanding Service Awardee for the New York ACS. Pam is being recognized for her longstanding commitment to the New York ACS and its deep impact. Pam's passion for education is clear, she has hosted three Undergraduate Research Symposia, participated in National Chemistry Week for almost two decades, been the faculty advisor for the UMSV ACS Student Chapter since 1995, and has served on the American Chemical Society Committee on Education (SOCED). Currently a NYACS Councilor, Pam has served as Secretary (2000-2004) and as the NYACS Chair (2014) which led to three ChemLuminary Awards under her leadership. At the regional level, she was also



instrumental in the organization of MARM2016 as The Outstanding Service Award being presented to General Co-Chair. Prof. Pamela Kerrigan (left)

College Teaching Awardee: Four-Year University with a Graduate School



Dr. Marvin Parasram Outstanding Four-Year University with Graduate School Chemistry Faculty Teaching awardee

Dr. Marvin Parasram, New York University, received the the 2024 Outstanding Four-Year University with Graduate School Chemistry Faculty Teaching award because, in addition to his prolific and successful research mentoring, he is also a celebrated educator at NYU. Out of roughly three thousand professors at NYU, only fourteen shared the honor of receiving the NYU Teaching Innovation Award for the 2022–2023 academic year, and Dr. Parasram was one of them. In 2024, Marvin was awarded NYU's most prestigious teaching award, the Golden Dozen Award, for his outstanding contribution to learning in Organic Chemistry. His teaching student evaluations are excellent. Dr. Parasram is devoted to improving student engagement in the classroom and generating interest in undergraduate research. He works on the development and integration of the projects developed in his laboratory into the undergraduate laboratory curriculum at New York University. The intent is to showcase how a protocol from a recent research publication can lead to fascinating discoveries. In addition, he engages students through modern teaching pedagogies and methods.

THE INDICATOR – FEBRUARY 2025

2025 NEW YORK ACS SECTIONWIDE CONFERENCE (continued)

College Teaching Awardee: Four-Year Undergraduate College and University

Prof. Robert Topper, The Cooper Union, was presented with the 2024 Outstanding Four-Year Undergraduate College and University Faculty Teaching Award by New York ACS Chair Eric Chang, Ph.D. Dr. Topper was recognized for his exceptional mentoring skills, his passion and enthusiasm for teaching, and for the guidance that he has provided for his students over the years that has led them to pursue highly successful careers in STEM. He has mentored over 120 undergraduate students in his research lab, many of whom are now published co-authors with him in prestigious journals. His passion for teaching and engaging students in Chemistry both in the classroom and in research over the years has sparked a curiosity and excitement for learning among his students, making them lifelong science enthusiasts.



Dr. Robert Topper (left) Outstanding Four-Year Undergraduate College and University Faculty Teaching awardee

College Teaching Awardee: Two-Year College



Dr. Jihyun (Ji) Kim Outstanding Two-Year College Chemistry Faculty Teaching awardee

Prof. Jihyun (Ji), Stella and Charles Guttman Community College, was honored with the Outstanding Two_Year College Chemistry Faculty Teaching Award because she has consistently demonstrated exceptional innovation and creativity in the development of green Chemistry curricular materials. She has pioneered teaching green chemistry at Guttman Community College, a Hispanicserving institution in New York City. In a college environment with limited resources, she has successfully developed and piloted both general and organic chemistry courses that embed green chemistry principles. In addition, Dr. Kim is actively involved in the New York ACS as co-coordinator of National Chemistry week (NCW) and Chemists Celebrate Earth Week (CCEW) activities. Recently, Dr Kim has taken on a contributing role as a member of the Student Activity Committee and co-organizer of the Undergraduate Research Symposium (URS).

2025 NEW YORK ACS SECTIONWIDE CONFERENCE (continued)

College Teaching Awardee: Full-Time Lecturer & Instructional Faculty

Dr. Sesha Sridevi Alluri, a Senior Lecturer at Stevens Institute of Technology, was recognized with the Outstanding Full-Time Lecturer & Instructional Faculty Chemistry Teaching Award. She is receiving this award because of her commitment to excellent teaching as demonstrated by her innovative contributions to undergraduate and graduate teaching in Chemistry and Chemical Biology programs, and because of her dedication to mentoring and guiding students. She has made important contributions to the Chemistry and Chemical Biology Department at Stevens. For instance, she created a precollege summer program titled "Medicinal Chemistry - Molecules that Cure," which received overwhelmingly positive feedback from students, and has incorporated advanced tools, such as Schrödinger Maestro, into her courses. She also coordinates the research activities of all our students in the department. In her research, she has mentored undergraduate research students and on the design and synthesis of HIV protease inhibitors - molecules that cure.



Dr. Seshi Sridevi Alluri (left) Outstanding Full-Time Lecturer & Instructional Faculty Chemistry Teaching awardee

College Teaching Awardee: Adjunct (Part-time)



Dr. Ronald D'Amelia Outstanding Adjunct (Part-time) College Chemistry Faculty Teaching awardee

Dr. Ronald D'Amelia, an Adjunct Full Professor of Chemistry and Emeritus Faculty Advisor to the Student Members of the ACS at Hofstra University in New York, is the recipient of the Outstanding Adjunct (Part-time) Faculty Chemistry Teaching Award. After a career as a professional polymer chemist at Kraft/Nabisco Inc, Corporate Technology and Life Savers Inc, he has taught consistently as an adjunct at Hofstra University. According to the department Chair, he has taken on all the responsibilities of a full-time faculty member. He is being recognized for his passion and commitment to excellent teaching and to his students. He has demonstrated himself to be a master teacher in the classroom and in the laboratory, and as a research mentor. He has inspired hundreds of students by bringing his industrial research experience into the classroom.

2025 NEW YORK ACS SECTIONWIDE CONFERENCE (continued)

NICHOLS FOUNDATION CHEMISTRY TEACHER AWARDEE

Ms. Zietlin combines extensive knowledge with an approachable demeanor. She fosters an environment that motivates her students, inspires a love for learning and welcomes inquiry.

Stephanie O'Brien, Director of Science, Smithtown High School &
 2018 Nichols Foundation Chemistry Teacher Awardee

Ms. Maria Zeitlin, Smithtown High School East - a public school with 1400 students, was recognized as the 2024 Nichols Foundation Chemistry Teacher Awardee. She received her Bachelors of Science from Stony Brook University and was employed as an analytical chemist doing fluid analysis for military aircraft carriers prior to returning to earn her Master's degree in teaching. Her teaching load has included AP Chemistry and being both the coordinator and teacher of the Science Research Program. As research coordinator and teacher Maria mentors her students to great achievements. Her students enter science fairs including the Regeneron Science Talent Search, the Long Island Science Fair, Siemens Competition, STANYS, and the Think program where they have been finalists and first place winners.

Shray Thaker, former student, aspiring physician who is now in an MD/PHD program at Stony Brook University, uses and is inspired by three of Maria's quotes

- " Be a sponge for knowledge- observe learn and question everything"
- " Fail till you succeed"
- " Aim for excellence and recognition will follow"



Maria Zeitlin (left) Nichols Foundation Chemistry Teacher Awardee

Ms. Zeitlin gave countless hours as my guide through student research and college level chemistry. She is a lifelong mentor

– Shray Thaker, former student

Supported by the William H. Nichols Fund For Chemistry at the Boston Foundation

2025 NEW YORK ACS SECTIONWIDE CONFERENCE (continued)

PROJECT SEED STUDENTS PRESENT THEIR RESEARCH



One highlight of the Sectionwide Conference was the presentations by the New York ACS Project SEED students. David Rivera (pictured at left) presented his work on using silicon dioxide to capture microplastics. Darla Murillo (center) presented her work on axonal injury related to mild traumatic brain injury. Alex Perez (right) discussed his effort to synthesize vinyl cyclopropyl diboron as a novel building block. All were impressed with these young scholars.

SECTIONWIDE KEYNOTE PRESENTED BY DR. RAYCHELLE BURKS

Following the announcement of the slate of York ACS candidates for the New Officer elections, Dr. Raychelle Burks, a renowned forensic and chemical scientist, educátor, outreach specialist, gave a compelling keynote address. Her talk focused on the fundamentals of developing sound outreach activities, focusing on common sense approaches that we often take in the lab and our classrooms but forget when we're engaging our local communities. She advocates that we should approach outreach using an asset-based model, showing how everyone in a community brings a wealth of knowledge and chemical experience to the table, not just those with doctoral degrees or years of industry experience. Dr. Burks also recommends that we all play to our strengths and be authentic in our outreach when developing engagement activities. When we empower our outreach audiences, reflect carefully on our goals, and be true to ourselves, that's when the magic of all involved learning from each other happens. We grateful to Dr. Burks for her candid remarks and words of wisdom, and we hope to be able to apply them to our outreach efforts to make our section and profession more impactful and sustainable.



Dr. Raychelle Burks New York ACS Sectionwide Keynote Lecturer

STEM NIGHT AT E.M. BAKER ELEMENTARY SCHOOL INSPIRES FUTURE LEADERS

On January 16, 2025, the U.S. Merchant Marine Academy (USMMA) Science Club brought the wonders of science, technology, engineering, and mathematics (STEM) to life at E.M. Baker Elementary School in Great Neck, NY. Fourteen midshipmen and three faculty members participated in the first post-pandemic STEM Night, rekindling curiosity and excitement in over 250 young learners from grades 1-5. The USMMA Team has been a cornerstone of this cherished community event since its inception in 2015.



The event, organized in collaboration with the USMMA Science Club and the E. M. Baker Elementary's Parents' Group, featured nearly 20 engaging hands-on activities that highlighted the wonders of STEM and Robotics as path ways to exciting careers. The USMMA Team hosted six tables with 8 interactive activities that brought STEM concepts to life. Local youths explored the roles of acids and bases in water safety in the **Ocean Rainbow** experiment, learned how chemistry detects and controls contaminants with **Pollution Patterns**, and uncovered the "magic" of image creation in **Photography Chemistry**. At the **Sunscreen for Seas** table, they saw how sunscreen UV protection mirrors the ozone layer's role, while **Spill Sponge** highlighted innovative spill-cleanup methods. **Secrets of the Ocean** experiment showed how chemistry can reveal hidden message just like scientists track invisible pollutions, like microplastics, and **Planetary Sculpting and Solar System Mapping** explored the unique features of planets and spatial relationships in our solar system. These activities inspired curiosity, demonstrated real-world applications of STEM, and left a lasting impression on young learners.

"The energy and enthusiasm of the USMMA team was contagious," said Bridgett Beerman, leader of the E.M. Baker's Parents' Group. "The children not only learned a lot but also had a great time. Many now are dreaming about becoming mariners and leaders."

PAGE 24 THE INDICATOR – FEBRUARY 2025 **STEM NIGHT AT E.M. BAKER ELEMENTARY SCHOOL INSPIRES FUTURE LEADERS** (continued)

Dr. Ping Furlan, USMMA Professor, USMS Commander, and Science Club Advisor, praised the team: "Watching our students and faculty interact with these young learners was inspiring. Their passion and dedication will undoubtedly leave a lasting impression on the future leaders of our country." She also expressed gratitude for the support from the Academic Dean's Office, Math & Science Department, and Students Activities Office.

Acting Provost CAPT James Zatwarnicki commended the team's efforts, emphasizing the Academy's commitment to fostering a love for STEM and maritime careers.

The event exemplified the USMMA's dedication to advancing STEM education and aligning with the American Chemical Society's mission to advance chemistry for the benefit of society, while fostering innovative outreach and community engagement.









SPRING ACS NATIONAL **MEETING & EXPOSITION**

Access cutting-edge research while sharing your work in beautiful San Diego with colleagues from across the globe at the ACS Spring 2025 National Meeting & Exposition being held March 23-27, 2025.

Meeting registration Hotel reservation







Abstracts due February 28

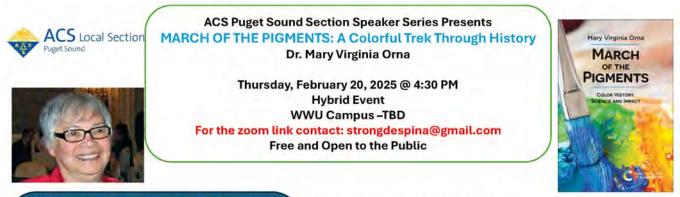
The Indicator is posted to the web 1st of the month at http://www.theindicator.org/

CALL FOR INPUT INTO ACS CERTIFICATION FOR TWO-YEAR COLLEGES

The American Chemical Society is exploring the possibility of recognizing community college chemistry departments and/or programs. As part of this exploration, they are holding a Blue-Ribbon Panel at ACS headquarters Feb 21-23 to query faculty at two-year colleges on what this might look like for them. New Yokr ACS Long Island Subsection member Kevin Kolack from Queensborough Community College – City University of New York (CUNY) has been chosen as a member of this panel. The process may be as simple as formalizing the current Guidelines as a certification similar to the ACS certification of 4-year schools, or perhaps something different. The first 2 years of chemistry at a community college are (or should be, arguably) equivalent to the first 2 years of chemistry at a 4-year school. Kevin Kolack (kkolack@qcc.cuny.edu) is happy to bring any input from the local Section to the Panel.

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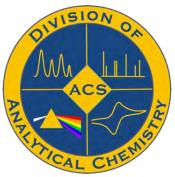
NEWS FROM OUR PARTNERS PUGET SOUND LOCAL SECTION



Dr. Mary Virginia Orna, is Professor Emerita of Chemistry, College of New Rochelle, New York. Her academic specialties are in the areas of color and archaeological chemistry. Her more recent books include The Chemical History of Color (2013), and Archaeological Chemistry: A Multidisciplinary Analysis of the Past (2020). In 2021 she received the the American Chemical Society Joseph B. Lambert History Award "for her original research in the area of color and pigment chemistry." In 1989, she was designated the New York State Professor of the Year, and in 1994 she served as a Fulbright Fellow in Israel. Her hobby is constructing crossword puzzles and has contributed many of these to the New York Times. She is a member of the Ursuline nuns of the Roman Union. Pigments speak of passion – passion in their creation and in their application. They have graced our world with joy, delight, symbolism, protection, identity and meaning. They pervade every aspect of human life from the food we eat, the clothes we wear and the buildings we build. They color our bodies inside and out. Their march through human history, propelled largely by the concomitant development of chemistry, and the effect they have had on that history is the subject of her talk.



ANALYTICAL DIVISION



The <u>Analytical Division</u> is the third largest division of the American Chemical Society. It organizes programming at the spring and fall ACS meetings, <u>Pittcon</u>, the <u>SciX conference</u> and the <u>Eastern Analytical Symposium</u> (EAS). The ANYL Division website provides a variety of information and member services, including the <u>Analytical Sciences</u> <u>Digital Library</u>. 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. This member oriented and directed group works for you! We welcome new members. Please join and/or volunteer to help on one or more activities.

IUPAC: GLOBAL WOMEN'S BREAKFAST

The International Union of Pure and Applied Chemistry (IUPAC) invites all to celebrate the International Day of Women and Girls in Science by hosting a breakfast event on **February 11th, 2025**. The Global Breakfast's goal is to break down barriers to gender equity in science. Over the past six years, 2000 events have been held across 100 countries. This year's theme is "Accelerating Equity in Science".

Find out more here



NEWS FROM OUR PARTNERS (continued)

SOCIÉTÉ DE CHIMIE INDUSTRIELLE

Société de Chimie Industrielle & Racemics invite all to thier Joint Annual Meeting for Members and Non-Members! Join them on Wednesday, February 19, from 12 PM - 2 PM at Jay Conference Center (Bryant Park) for networking, lunch, and a panel discussion on The State of the Chemical Industry: Outlook for 2025 & Beyond. A panel of industry experts will share their views on the outlook of the chemical industry. They will also share their perspectives on what is happening, why it is happening, and what to expect looking ahead.

Register here





OPPORTUNITIES

For High School Students & Teachers

Presidential Awards for Excellence in Mathematics and Science Teaching (7-12) Due February 6

ACS Project SEED

Applications open

For Undergraduates

DOE & ACS Nuclear & Radiochemistry Undergraduate Summer Schools 2025 Due February 6

ACS Scholars Program

Due March 1

ACS Bridge Program

Due March 18

Women Chemists Committee Overcoming Challenges Award

Due April 1

For Graduate Students / Postdocs

L'Oreal for Women in Science Fellowship <u>Due February 14</u> D.E. Shaw Doctoral and Postdoctoral Fellowship

Future Faculty Workshop

Arthur C. Cope Postdoctoral Fellowship in Organic Chemistry

<u>Due April 1</u>

Due March 10

For Professionals

Division of Organic Chemistry Early- and Mid-Career Investigator Awards Due February 11

ACS Heroes of Chemistry Awards

Due February 15 Charles G. Overberger International Prize for Excellence in Polymer Research

Due February 20



APPLICATION DEADLINE: FEBRUARY 6TH, 2025



APPLY HERE!

GRANTS & AWARDS

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.

DUE FEBRUARY 15, 2025 View the ChemLuminary Award Descriptions

COMMUNICATIONS 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

HELEN M. FREE AWARD FOR PUBLIC OUTREACH

An award of \$1000 that recognizes outstanding volunteer achievements in the field of public outreach by a member of the ACS who improves public recognition and appreciation for the contributions of chemistry.

DUE FEBRUARY 15, 2025

<u>Learn more</u>

HEROES OF CHEMISTRY AWARD

An annual award to recognize teams of industrial chemical scientists whose work has led to the development of successful commercialized products ingrained with chemistry for the benefit of humankind.

DUE FEBRUARY 15, 2025 Learn more

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

<u>Learn more</u>

LOCAL SECTION SUSTAINABILITY GRANT

Up to \$500 for the promotion of opportunities that enhance the chemical community's awareness of and the essential role of chemistry in responding to sustainability challenges.

DUE FEBRUARY 21, 2025

<u>Learn more</u>

ACS CHEMISTRY FESTIVAL GRANT

Up to \$3,000, to support community engagement events outside the United States and Puerto Rico that highlight the role of chemistry in daily life.

DUE FEBRUARY 24, 2025 Learn more

WOMEN CHEMISTS COMMITTEE OVERCOMING CHALLENGES AWARD

An award to recognize an individual undergraduate for her efforts in overcoming hardship to achieve success in chemistry.

> DUE APRIL 1, 2025 Learn more



ARTHUR C. COPE POSTDOCTORAL FELLOWSHIP IN ORGANIC CHEMISTRY

The Arthur C. Cope Postdoctoral Fellowship (CPF) of the American Chemical Society (ACS) is a two-year postdoctoral fellowship awarded yearly to Ph.D. candidates or postdoctoral researchers within their first two years of pursuing postdoctoral research in organic chemistry.

DUE APRIL 1, 2025 Learn more

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Academic Positions

Tenure-Track Assistant Professor of Chemistry – St. Joseph's University	Arrishalsana	
Assistant Professor, Department of Biological Sciences – Columbia Universit	•	
Full-time Tenure-Track Assistant Professor – Seton Hall University	<u>Apply here</u>	
Chair, Department of Chemistry – New Jersey Institute of Technology	<u>Apply here</u>	
	Apply here	
Assistant Professor, Tenure Track, in Organic Chemistry – New Jersey City University <u>Apply here</u>		
Open Rank Faculty Positions in Biochemistry / Chemical Biology – Rowan Ur	hiversity Apply here	
	<u>Apply here</u>	
Associate Program Officer, Science – The Kavli Foundation		
Program Manager, Student and Postdoctoral Scholars Development – ACS	<u>Apply here</u>	
Program Officer, Office of Research Grants – American Chemical Society	<u>Apply here</u>	
Senior Manager, Office of Science Outreach – American Chemical Society	<u>Apply here</u>	
Industrial Positions	<u>Apply here</u>	
Senior Scientist, Emulsions – Edgewell Personal Care		
Principal Scientist, Analytical R&D – Merck	<u>Apply here</u>	
Senior Scientist, Bioconjugates – Janssen Research & Development	<u>Apply here</u>	
Engineer / Scientist QC II – Fisher Scientific	<u>Apply here</u>	
	Apply here	

Apply here

