THE Indicator
Serving 6,200 ACS Members

Emily A. Carter, Ph.D.
2024 William H. Nichols Medalist
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THE 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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September 2024	August 16, 2024

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

THE NEW YORK ACS MOURNS THE LOSS OF DR. DONALD DUDLEY CLARKE

Dr. Donald Dudley Clarke, a revered Fordham University Chemistry Professor for 61 years and a beloved member of the New York Local Section of the American Chemical Society (ACS), passed away on February 25, 2024, leaving behind a legacy of profound contributions to the field of chemistry.

Dr. Clarke chaired the Bylaws Committee from 2009 to 2022 and continued his involvement thereafter. His leadership extended to chairing the NYACS in 1977 and 1978, showcasing his dedication. Throughout his membership since 1953, Dr. Clarke participated in various local and national committees, including Councilor/Alternate Councilor, Long Range Planning, MARM Steering Committee, Continuing Education, and History of the NY Section. His commitment extended nationally to roles within the Chemical Abstracts Service, Senior Chemists Task Force, and Divisional Activities. Dr. Clarke's contributions earned him prestigious honors such as ACS Fellow and the New York ACS Outstanding Service Award.

In recognition of Dr. Clarke's impactful contributions, the New York ACS will honor his memory with a donation to the Fordham University Gift Annuity Fund, commemorating his remarkable service and enduring dedication to advancing chemistry. There will be a memorial service for Prof. Clarke at Fordham University on April 6, 2024 at 11:00 AM, a reception will follow.

During this difficult time, our thoughts are with Dr. Clarke's family and loved ones. May they find comfort and strength as they remember a remarkable individual who touched the hearts and minds of many within the ACS community.

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Stay in the know.

The Indicator is distributed electronically to members via email and their websites. Non-members are invited to read it online. ACS Members should register their email addresses at

https://www.acs.org/

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NORTH JERSEY SECTION MEETINGS

https://www.njacs.org

2024 NORTH JERSEY ACS EXECUTIVE COMMITTEE MEETINGS

2024 North Jersey ACS Chair Sandra Keyser and the Executive Committee welcome you to our monthly NJACS meetings. **This month's meeting has been moved to Monday night from 6:30 pm to 8:30 pm.** All members are welcome to attend and become more involved in section activities. The dates for 2024 are, as follows:

Monday, April 8, 2024 (hybrid)
Wednesday, May 15, 2024 (hybrid)
Wednesday, June 12, 2024 (hybrid)
Wednesday, September 11, 2024 (hybrid)
Wednesday, October 9, 2024 (hybrid)
Wednesday, November 13, 2024 (virtual)
2025 Planning Meeting in December, TDB

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

2023 BAEKELAND MEDAL

The 2023 Baekeland Award Symposium will be held in honor of Prof. Keary M. Engle (The Scripps Research Institute) on April 12, 2024 at Fairleigh Dickinson University in Madison, New Jersey. Dr. Engle will be celebrated for his novel catalytic alkene functionalization reactions, inventing general and versatile strategies for the programmed functionalization of olefins and developing nickel and palladium catalysts that are widely used in academic and industrial research labs around the world. The speakers of the symposium include Dr. Steven Wisniewski (Bristol-Myers Squibb), Tianning Diao (New York University), Peng Liu (University of Pittsburgh), and Scott Miller (Yale University). Detailed program and agenda given on the next two pages.

2023 BAEKELAND AWARD SYMPOSIUM

American Chemical Society-North Jersey Section
2023 Baekeland Award Symposium

Friday, April 12, 2024 • 1:00 pm – 6:00pm

Fairleigh Dickinson University, Florham Campus, The Mansion, Lenfel Hall
285 Madison Avenue, Madison NJ 07940

The North Jersey Section of the American Chemical Society established the Baekeland Award in 1944 to commemorate the technical and industrial achievements of Leo Hendrik Baekeland and to encourage younger chemists to emulate his example. The award is presented biennially to a United States-based chemist under 40 years of age in recognition of accomplishments in pure or industrial chemistry, as characterized by the initiative, creativeness, leadership, and perseverance of the individual and indicated by published or unpublished evidence. Professor Keary M. Engle is being recognized for his general and versatile strategies for the programmed functionalization of olefins and the development of widely used nickel and palladium catalysts.

Agenda

1:00 Registration

1:30 **Welcome Address**
Dr Sandra Keyser, *Baekeland Symposium Chair*

1:40 **Dr. Steven Wisniewski**
How Base Metals Catalysis Can Impact Process Chemistry

2:20 **Dr. Tianning Diao**
Leveraging One- and Two-Electron Mechanisms in Nickel-Catalyzed Cross-Coupling

3:00 **Dr. Peng Liu**
Modeling Catalytic Organic Reactions

3:40 Break / Refreshments

4:10 **Dr. Scott Miller**
TBD

4:50 **Remarks and Baekeland Award Presentation**
Bonnie Lawlor, *ACS Director*
Dr. Sandra Keyser, *NJ-ACS Section Chair*

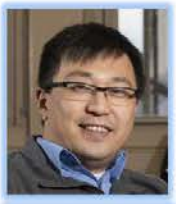
5:00 **Keynote: Dr. Keary Engle**
Metal–olefin interactions and the catalytic chemistry they inspire

5:50 **Closing Remarks**
Mrs. Diane Krone, *NJ-ACS Awards Chair*

Keary M. Engle, PhD
Professor of Chemistry
The Scripps Research Institute
Keynote Speaker
2023 Baekeland Awardee

Steven Wisniewski, PhD
Associate Scientific Director
Bristol-Myers Squibb

Tianning Diao, PhD
Professor of Chemistry
New York University



Peng Liu, PhD
Professor of Chemistry
University of Pittsburgh

Scott Miller, PhD
Sterling Professor of Chemistry
Yale University

Registration Fee: $15 professionals; $5 students, retirees, unemployed
Online registration required by April 1, 2024 at **www.njacs.org/baekeland** due to limited seating.

www.njacs.org

Questions? Contact Dr. Sandra Keyser (skeyser@njacs.org), Chair of the 2023 Baekeland Award Committee

Organizing Committee: Alan Cooper, Mohammed Elshaer, Miriam Gulotta, Bettyann Howson, Diane Krone, Cecilia Marzabadi, Amanda Mann, Joseph Badillo

2023 BAEKELAND AWARD SYMPOSIUM SPEAKER ABSTRACTS

2023 Baekeland Award Symposium
Speaker Abstracts

Metal–olefin interactions and the catalytic chemistry they inspire

Keary M. Engle, Baekeland Awardee
The Scripps Research Institute, La Jolla, CA

Alkenes are inexpensive, widely available chemical feedstocks that can be sourced from petroleum or renewable resources. The goal of research in the Engle lab is to develop novel catalytic alkene functionalization reactions that introduce new functional groups at each of the alkenyl carbon atoms in a programmable fashion. In this way, simple planar starting materials can be directly converted into densely functionalized, stereochemically defined products, which can then serve as building blocks for structurally complex target molecules that are of academic and industrial importance, including many widely used pharmaceutical agents. To this end, the Engle lab has developed strategies involving directing auxiliaries, native directing groups, and transient directing groups, as well as complementary non-directed approaches that are compatible with a variety of metals, redox manifolds, and coupling partners. Detailed mechanistic studies have shed light on the interplay between the substrate, metal, and ancillary ligands in dictating reaction outcomes, informing new catalyst designs through an iterative feedback loop.

How Base Metals Catalysis Can Impact Process Chemistry

Steven Wisniewski
Bristol-Myers Squibb, New Brunswick, NJ

Process chemists consider several factors when designing synthetic routes to active pharmaceutical ingredients (APIs) including amongst others safety, number and type of chemical transformations, availability of starting materials, sustainability, and cost. Enabling disruptive, rather than incremental, innovation that delivers a step change in synthetic efficiency is critical to achieving business goals, especially with the increasing molecular complexity of new pharmaceutical candidates. Many of these routes utilize transition metal catalysis to forge key carbon-carbon and carbon-heteroatom bonds. Our extensive experience in addition to the significant mechanistic work in the field make palladium the go-to catalyst in process chemistry. We believe that additional tools and methods will be required to continue to enable disruptive outcomes in the synthesis of new pharmaceutical candidates. Therefore, we are upinvesting in Earth-abundant metal catalysis as the distinct reactivity of iron, cobalt, and nickel may enable new disconnections and result in shorter, cheaper, and more sustainable routes to APIs. This presentation will cover the development and impact of base metal catalysis on the synthesis of clinical candidates from Bristol Myer Squibb's portfolio.

Leveraging One- and Two-Electron Mechanisms in Nickel-Catalyzed Cross-Coupling

Tianning Diao
New York University, New York, NY

While palladium-catalyzed cross-coupling reactions have revolutionized the construction of multi-aryl scaffolds in pharmaceutical synthesis, the reactivity of nickel in mediating radical pathways has expanded the scope of cross-coupling to include a variety of alkyl motifs. Through mechanistic investigations and understanding the ligand effects, we have established that strong σ-donor and π-acceptor ligands exhibit redox-activity, facilitating nickel catalysts to initiate radical formation, capture radicals, and direct bond formation from open-shell intermediates. The orthogonal reactivity of radicals with polar functional groups in biomolecules has opened new avenues for synthesizing non-canonical peptides and carbohydrates, which are important for drug discovery. In contrast, two-electron pathways are crucial for nickel-catalyzed bi-aryl coupling. Building on this insight, we have developed a novel ligand that enhances the reactivity of nickel-catalyzed Suzuki-Miyaura couplings, paving the way for the application of nickel catalysts in pharmaceutical process synthesis.

Modeling Catalytic Organic Reactions

Peng Liu
University of Pittsburgh, Pittsburgh, PA

New computational approaches have been used to understand and predict the reactivity and selectivity of various C–H bond and olefin functionalization reactions. Although steric and electronic effects have long been used to control organic reaction reactivity and selectivity, other factors, such as non-covalent interactions and catalyst flexibility and rigidity, are poorly understood and thus rarely leveraged in new reactions. Energy decomposition analysis (EDA) methods were used to quantitatively analyze covalent and non-covalent interactions between the catalyst and the substrate, providing a straightforward way to identify the dominant factors controlling reactivity and selectivity. These approaches were applied to conformationally flexible catalyst systems, including transition metal catalysts with conformationally flexible and hemilabile ligands, asymmetric ion-pairing catalysis, organic reactions in solution, and stereoselective biocatalytic reactions. In collaboration with synthetic experimental groups, we are exploring how the theoretical insights, in particular, quantitative descriptions of noncovalent interactions and catalyst flexibility effects, can be employed to guide rational catalyst design and discovery.

Searching for Selective Catalytic Reactions in Complex Molecular Environments

Scott Miller
Yale University, New Haven, CT

This lecture will describe recent developments resulting from our efforts to develop catalysts for asymmetric reactions, in particular for the preparation of densely functionalized, stereochemically complex structures. Over time, our foci have been on enantioselectivity, site-selectivity and chemoselectivity. In much of our current work, we are studying issues of enantioselectivity as a prelude to the extrapolation of catalysis concepts to more complex molecular settings where multiple issues are presented in a singular substrate. Complex natural products, for example, will be presented as quintessentially complex scaffolds for catalytic modification. Mechanistic paradigms, and their associated ambiguities – especially in light of catalyst or substrate conformational dynamics – will figure strongly in the lecture. Moreover, our focus on peptide-based catalysts has facilitated analogies to enzymes. Finally, several interesting collaborations – often unanticipated by us –will be discussed.

NORTH JERSEY ACS MASS SPECTROMETRY DISCUSSION GROUP

The North Jersey ACS' Mass Spectrometry Discussion Group is proud to announce its April in person meeting featuring a social hour, complimentary dinner, and two talks. Attendance is free, but please register. Special thanks to Bruker for their sponsorship of this event.

Date: **April 9, 2024**
Time: 5:30 PM to 9:00 PM
Location: Somerville Elks Lodge
375 Union Avenue
Bridgewater, NJ 08807
Registration: Click here to register

HLA-peptide discovery to develop tumor-specific immunotherapies for the treatment of cancer
Mr. Darshit Shah, M.S.
Regeneron Pharmaceuticals

Ultra-high sensitive Single Cell Proteomics on the timsTOF Ultra
Dr. Shourjo Ghose
Bruker Daltonics

NORTH JERSEY ACS CHEMISTS CELEBRATE EARTH WEEK

The North Jersey ACS is currently finalizing plans for an exciting in-person event at Edison Museum in West Orange. Stay tuned for the date and time in our newsletter or next Indicator issue!

NJACS CCEW Illustrated Poem Contest "Get a CHARGE Out of Chemistry"

Each year, the ACS sponsors an illustrated poem contest for K-12 students in the US. The North Jersey ACS is participating in the 2024 contest and will accept the top three winners in the grade categories of K-2, 3-5, 6-8, and 9-12 from local schools and sponsoring groups (boys and girls clubs, scouts, home schoolers). This year's theme is "Get a Charge out of Chemistry" and focuses on electrochemistry. All posters must be received by **April 28th, 11:59 pm, ET** and are to be submitted electronically to Bettyann Howson (bhowson@njacs.org). *Grade Category* Winners will receive Amazon Gift Cards - 1st Place $50, 2nd Place $25. 3rd Place $10 and Category Winner Teachers will also receive a corresponding monetary prize. Local 1st place winners advance to the national contest for a chance to win cash prizes. ACS will award $300 to first-place and $150 to second-place national contest winners in each grade category! Resources to help students create their poster can be found here. Please see the flyer for contest details and use the entry form when submitting your poster. NJ-ACS looks forward to receiving your posters!

NORTH JERSEY ACS CHEMISTS CELEBRATE EARTH WEEK

ACS Chemistry for Life®

CHEMISTS CELEBRATE EARTH WEEK

2024 CCEW Illustrated Poem Contest
Get a CHARGE Out of Chemistry

The North Jersey Local Section of the American Chemical Society (NJACS) is sponsoring an illustrated poem contest for students in Kindergarten through 12th grade. ***EACH SCHOOL MAY SEND NJACS ITS TOP 3 WINNERS ONLY IN EACH GRADE CATEGORY:***

K-2 3-5 6-8 9-12

Contest Deadline: *Electronic entries only* *and* ***must*** *be received by* **April 28th by 11:59 pm ET**

Prizes: *Grade Category Winners:* ***Amazon Gift Cards - 1st Place $50, 2nd Place $25. 3rd Place $10***
(Category Winner Teachers will also receive a corresponding monetary prize.)

Contact and Submissions: *Bettyann Howson (bhowson@njacs.org)*

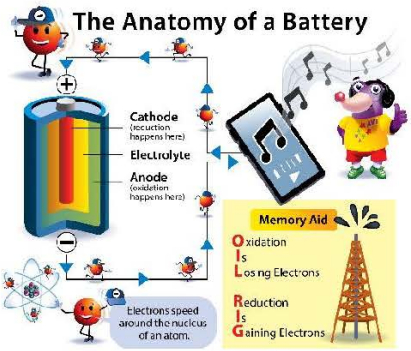
First Place Winners of the North Jersey Local Section's Illustrated Poem Contest will advance to the National Illustrated Poem Contest for a chance to be featured on the ACS website and to win prizes!

Write and illustrate a poem using the CCEW theme, "**Get a CHARGE Out of Chemistry.**" Your poem must be no more than 40 words and in the following styles to be considered:

HAIKU - LIMERICK - ODE - ABC POEM - FREE VERSE - END RHYME - BLANK VERSE

Possible topics related to the battery theme include:

- Alkaline batteries
- Anode
- Atoms
- Cathode
- Disposable batteries
- Electrons
- Rechargeable batteries
- Renewable energy



Entries will be judged based upon:

- Artistic Merit - use of color, quality of drawing, design, and layout
- Poem Message - fun, motivational, inspiring about yearly theme
- Originality Creativity - unique, clever and/or creative design
- Neatness - free of spelling and grammatical errors

(For resources and ideas, visit: https://www.acs.org/content/acs/en/education/outreach/ccew/educational-resources.html)

Contest rules:

- **Do not put your name on the poster.**
- All poems must be no more than 40 words, and in one of the following styles to be considered: Haiku, Limerick, Ode, ABC poem, Free verse, End rhyme, and Blank verse.
- Entries are judged based upon relevance to and incorporation of the NCW theme, word choice and imagery, colorful artwork, adherence to poem style, originality and creativity, and overall presentation.
- All entries must be original works without aid from others. Poems may be submitted by hand on an unlined sheet of paper not larger than 11" by 14" and scanned and sent via email. Illustrations may be created using crayons, watercolors, other types of paint, colored pencils, or markers. The illustration may also be electronically created by using a digital painting and drawing app on a computer, tablet, or mobile device.
- The text of the poem should be easy to read and may be typed before the hand-drawn or digital illustration is added, or the poem may be written on lined paper, which is cut out and pasted onto the unlined paper with the illustration.
- No clipart or unoriginal images can be used.
- Only one entry per student will be accepted; all entries must include an entry form. If the illustration is created using a digital painting or drawing app, the name of the program must be included on the entry form.
- All illustrated poems and/or digital representations of the poems become the property of the American Chemical Society.
- Acceptance of prizes constitutes consent to use winners' names, likenesses, and entries for editorial, advertising, and publicity purposes.

NORTH JERSEY ACS CELEBRATES ITS 50-, 60-, & 70-YEAR ACS MEMBERS

The North Jersey Section ACS congratulates its members who have reached 50, 60, and 70 year anniversaries and thanks them for their service to the American Chemical Society and their contributions to the sciences.

50 Year Members

Mr. Alan Bornstein
Mr. Jimmy F. Chin
Mr. Robert J. Clark
Dr. Lynn Carol Francesconi
Ms. Carol Frishberg
Mr. Richard G. Griskey
Dr. David M. Hindenlang
Mr. Bao Shan Huang
Ms. Susan Elizabeth Knauf
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Ms. Pushpa Devi Singh
Dr. Ronald Eugene White
Mr. Carl Thomas Wilder

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Dr. Alan Wayne Tamarelli
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Dr. Gisela Witz
Dr. Stephen Michael Wolpert

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Dr. Harold Gainer
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Mr. Leonard Conviser Klein
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Mr. Howard Leonard Rachbach
Mr. James Andrew Rogers, Jr
Mr. Joseph Weisfeld
Dr. James John Wittick
Dr. Harvey A. Yablonsky

NORTH JERSEY ACS DRUG METABOLISM DISCUSSION GROUP

The North Jersey ACS' Drug Metabolism Discussion Group is proud to host its Spring symposium and vendor exhibition entitled:

Discovery, Development, and Regulatory Strategy for Biologics and ADCs in Oncology and Immunology

Date: **Thursday, April 11, 2024**
Time: 8:00 AM to 4:00 PM
Location: The Palace at Somerset Park
333 Davidson Avenue
Somerset, NJ
Registration: Click here to register

Program

8:00 a.m.	Registration / Continental Breakfast / Vendor Exhibit
8:45 a.m.	Introductory Remarks Arian Emami Riedmaier, PhD; Chair, NJ DMDG
9:00 a.m.	The Evolution of First-in-Human Dose Selection for Biologics in Oncology and Beyond Haiqing Wang, PhD; Senior Director, DMPK, Alnylam
9:45 a.m.	Mutants, Loners and Bad Influences (Systems Model of KRAS Pathway Describing Mechanism of Response in G13D CRC) Edward Stites, MD, PhD; Associate Professor of Laboratory Medicine and Pathology, Yale School of Medicine
10:30 a.m.	Vendor Exhibit & Coffee Break
11:15 a.m.	Mitochondrial Bioenergetic Health Index as a Biomarker for Kidney Injury Kiran Deshpande; PhD Candidate, Ernest Mario School of Pharmacy Rutgers, New Brunswick, NJ
11:45 p.m.	Vendor Exhibit & Lunch
12:45 p.m.	Immunogenicity Risk Assessments and Bioanalytical Strategy for IND Enabling Studies for Complex Biologics Sanjay Dholakiya, PhD; Principal Scientist, BMS
1:30 p.m.	Developing Effective Drug Development Strategies for Biologics Samuel Chuang, PhD; Senior Director, Scientific Advisory Services, Charles River
2:15 p.m.	Vendor Exhibit & Coffee Break
2:30 p.m.	ADCs as Therapeutic Options: History, Resurgence and DXd Based ADCs from DSI Tushar Garimella, PhD; Executive Director, Clinical Pharmacology, Daiichi-Sankyo
3:15 p.m.	Medicilon Strategy & Experience for Dual Filing of ADC IND to US FDA & China NMPA Chunlin Chen, PhD; CEO and Founder, Medicilon USA Corp.
4:00 p.m.	Program close

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NORTH JERSEY ACS NMR SPECTROSCOPY TOPICAL GROUP

Adopting NMR spectroscopy to address the dynamic aspects of G protein-coupled receptor (GPCR) activation

Speaker: Joshua J. Ziarek
Associate Professor
Northwestern University
Feinberg School of Medicine
Department of Pharmacology

Date: **Thursday, April 25, 2024**
Time: 12:00 PM ET via Microsoft Teams

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Abstract: X-ray crystallography and cryo-EM have established a detailed picture of the G protein-coupled receptor (GPCR) structural landscape – laying the foundation for understanding receptor activation in terms of the induced fit and conformational selection models of allostery. Yet, in many instances these conceptualizations remain unsatisfactory for explaining the molecular mechanisms of partial agonists, allosteric modulators and biased agonists. The dynamically-driven model of allostery posits that fluctuations about the mean conformation, which do not produce structural changes on a scale observable by cryo-EM and X-ray crystallography, are sufficient to lower the energy barrier between inactive and active modes. NMR can report on entropically-driven allosteric mechanisms; yet, technical challenges have largely limited its application to the super-microsecond motional regimes of GPCRs. Focusing on a thermostabilized peptide-binding GPCR, the neurotensin receptor 1 (NTS1), we employed NMR and density functional theory (DFT) to probe global sub-microsecond motions of $^{13}C^{\varepsilon}$-methionines. Using this approach, we establish that the NTS1 solution ensemble includes substates with lifetimes on several discrete timescales. The longest-lived metastable states reflect those captured in agonist- and inverse agonist-bound crystal structures separated by large energy barriers. Individual methionine residues, some distributed up to 32 Å apart, also sense rapid motions superimposed within these long-lived states. We observe that the degree of fast, global dynamics correlates with ligand pharmacology. Our results suggest a role for sub-microsecond dynamics and conformational entropy in GPCR ligand discrimination. This approach sidesteps the isotopic labelling limitations imposed by eukaryotic expression systems. We're actively testing the generalizability of our results to the GPCR superfamily and working to understand the underlying mechanism of methionine-based order parameters.

Connection Information: This will be a virtual meeting hosted via Microsoft Teams. A direct link to the meeting is located HERE. Further information can be found on the NMR Topical Group website. Please reach out to Christine Jorge (christine.jorge@bms.com) or Rongfeng Zheng (rongfeng.zheng@bms.com) with any questions.

SAVE THE DATE : MARM 2025

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Contact our Ad Sales Manager for more details

NEW YORK SECTION MEETINGS

http://www.newyorkacs.online

2024 NEW YORK ACS BOARD MEETINGS

The New York ACS Board of Directors meetings dates for 2024, are, as follows:

Friday, April 12, 2024 (in person)
William H. Nichols Distinguished Symposium and Medal Award Dinner
The Sonesta Hotel, White Plains, NY.
Monday, June 10, 2024 (hybrid)
Monday, September 16, 2024 (hybrid)
Monday, November 25, 2024 (hybrid)

These meetings will be held on the campus of the United States Merchant Marine Academy in Kings Point, NY (directions) in the Library's Crabtree Conference Room. 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. Ping Furlan 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 ACS website.

VOTING

Ballots, electronic or paper, will be sent to the membership by May 1, 2024. Any member that does not receive voting materials by May 1, please contact the Section Office.

NEW YORK ACS 2024 ELECTIONS

The Board of Directors thank the following candidates for accepting the nominations, and for their willingness to support the New York ACS and chemistry through donating their time, efforts, and sharing their expertise.

Chair-Elect for 2025
Mr. Joseph Ulichny (Columbia University)
Mr. Joseph Wiener (PepsiCo)

Secretary for 2025 – 2026
Dr. Naphthali O'Connor (LehmanCollege)

Director-at-Large for 2025
Dr. Daniel Amarante (Mercy University)
Dr. Yosra Badiei (St. Peter's University
Dr. Jaclyn Catalano (Montclair State University)
Dr. Ron D'Amelia (Hofstra University)
Dr. Qi Wang (Nassau Community College)
Dr. Justyna Widera-Kalinowska (Adelphi University)

Councilors for 2025 – 2027
Dr. Brian Gibney (Brooklyn College)
Dr. Barbara Hillery (SUNY – Old Westbury)
Dr. Pamela Kerrigan (University of Mount Saint Vincent)
Dr. Patricia Redden (Fordham University)
Dr. Ruben Savizky (The Cooper Union)
Dr. Rita Upmacis (Pace University)

Alternate Councilor
-to fill vacancy for 2025
Dr. Kathleen E. Kristian (Iona University)

Download the candidate bios here

2024 WILLIAM H. NICHOLS DISTINGUISHED SYMPOSIUM & AWARD BANQUET

PHYSICAL CHEMISTRY AND SUSTAINABILITY

A distinguished symposium honoring

Professor Emily A. Carter
Princeton University

for groundbreaking quantum insights in sustainable catalysis

Date: Friday, April 12, 2024
Sonesta Hotel, White Plains, NY
Hotel website

Time: 1:30 PM – 9:00 PM
Download Brochure here
Register here

Symposium Program

1:30 PM **Welcome**
Professor Ping Furlan, 2024 New York ACS Chair, US Merchant Marine Academy

1:35 PM **Opening of the Distinguished Symposium**
Professor Eric Chang, 2024 New York ACS Chair-Elect, Pace University

1:45 PM **Computational Discovery of Metal-Organic Frameworks for a Changing World**
Professor Laura Gagliardi, University of Chicago

Addressing the energy challenges that we face globally requires the coordinated efforts of scientists, engineers, and policy makers. Chemistry has the potential to drive quantum leaps in technology. With theory, computation, and machine intelligence we can accelerate the search for solutions to water scarcity, decarbonization, and clean energy. Metal-organic frameworks (MOFs) are versatile platforms for various applications including catalysis for complex reactions and water harvesting. I will first present our ongoing efforts to understand and design the water-filling mechanism for water-harvesting MOFs.[1]I will then describe our combined computational and data-driven study of MOF-supported catalysts. Utilization of machine learning algorithms in conjunction with experimental data can not only predict superior catalytic materials, but also under which experimental conditions they are most optimal.[2].

2025 WILLIAM H. NICHOLS MEDAL – CALL FOR NOMINATIONS

The New York ACS solicits nominations for the 2025 William H. Nichols Medal, the first award established by the American Chemical Society. Since 1903, the Nichols Medal has honored a chemical scientist for outstanding original research.

Nominations for the 2025 Nichols Medal are due May 31, 2024

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

2024 WILLIAM H. NICHOLS DISTINGUISHED SYMPOSIUM & AWARD BANQUET (continued)

2:30 PM **Designing Metal-Oxide-Based thermochemical Redox Materials and Processes: Solar Fuels and Energy Storage (continued)**
Professor Ellen Stechel, Arizona State University

In this talk, we unveil cutting-edge developments in metal oxide-based thermochemical redox materials and processes[1], applicable to solar fuels and energy storage. We start by exploring how the high-temperature endothermic reduction of redox-active metal oxides, capable of releasing oxygen gas under achievable operating conditions, effectively converts thermal energy into stored chemical energy. A subsequent re-oxidation step then either recovers this energy as heat or drives further chemical reactions. The ability to indefinitely repeat these two steps opens the door to sustainable energy cycles. Here we will focus on two interrelated processes: reversible re-oxidation with oxygen and bond-breaking re-oxidation with CO2 and/or water. This presentation will also highlight the groundbreaking design of a novel perovskite metal oxide material, Ca2/3Ce1/3Ti1/3Mn2/3O3 (CCTM2112), specifically engineered for enhanced thermochemical hydrogen production. This material, predicted solely from theoretical considerations and validated experimentally, showcases a unique cation redox chemistry. Utilizing quantum-based modeling [2], we reveal how the deliberate manipulation of cation composition on both A and B sub-lattices leads to a material with optimal oxygen vacancy formation energies and superior redox dynamics to facilitate splitting of water and carbon dioxide. This presentation will delve into the intricacies of CCTM2112's thermodynamics, demonstrating its potential. Our findings not only introduce a high-performing material but also open new avenues in the design of redox-active materials through a deep understanding of their electronic characteristics.

3:15 PM *Coffee Break*

3:45 PM **Observing Molecular Transport through Living-Cell Membranes – Pushing the Boundary of Physical Chemistry toward Biology**
Professor Hai-Lung Dai, Temple University

Why should we store food in refrigerator to avoid bacteria contamination? But why refrigeration cannot keep the food fresh for a long period of time? How do bacteria develop antibiotic resistance? How are vesicles used for delivering mRNA vaccines into human body? All these questions can find answers from understanding molecular transport through cell membranes. Nonlinear light scattering in the form of Second Harmonic Generation, due to its symmetry properties, has been proven effective for observing molecular adsorption and transport at the surfaces of colloidal objects, including living biological cells. This method affords membrane specificity, real time resolution, and the ability to image single cells in examining molecule-membrane interactions. This talk will lay out the basic physical principles of the newly developed Second Harmonic Light Scattering (SHLS) method and illustrate how SHLS can be applied to examine molecular adsorption and transport at cell membranes. In addition to answering the questions above, this method has been used to determine the fundamental mechanism of the century-old Gram stain for classifying bacteria, understand effects of molecular structure and membrane structure in influencing molecular transport through cell membranes, and characterize membrane phase transition and membrane asymmetry.

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

2024 WILLIAM H. NICHOLS DISTINGUISHED SYMPOSIUM & AWARD BANQUET (continued)

4:30 PM **A Physical Chemist's Journey to Combat Climate Change**
Professor Emily A. Carter, 2024 Nichols Medalist, Princeton University

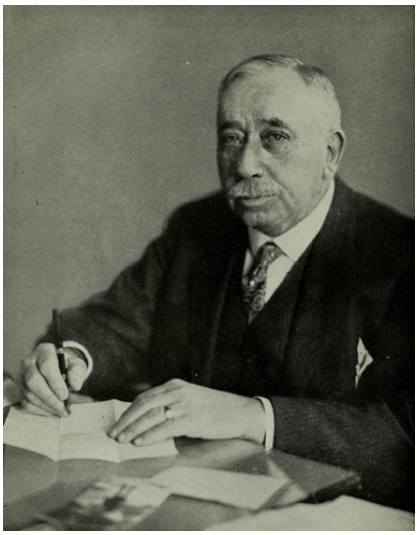
When I first became fully cognizant of what fossil fuel burning was doing to our planet, I vowed to use my expertise full-time to transition the world to sustainable energy. But now it is terribly clear that to preserve the planet for future generations, this action – far from complete - is not nearly enough. We must stop emitting carbon into the atmosphere from all sectors, aiming not just for net-zero but net-negative emissions. More than 15 years ago, I pivoted my quantum simulation research to design materials for clean electricity (solar cells, fusion, fuel cells). More recently, we design catalysts for renewable fuels and chemicals production, via electro-/solar-thermo-chemical water splitting and photo/electro/solar-thermo-chemical carbon dioxide reduction. However, recycling CO2 is not enough; we must develop sustainable processes to convert and store CO2 in useful, durable products. I will describe our quantum embedding simulation methods that accurately simulate sustainable production of fuels and chemicals catalytically using electricity and/or light, and introduce its use for studying processes related to direct ocean capture of CO2 to form minerals, a strategy for getting to negative emissions.

5:45 PM *Social Hour*

6:45 PM **Medal Award Dinner**

Presiding;	**Dr. Ping Furlan** 2024 Chair, ACS New York Section
ACS Greetings:	**Dr. Mary Carroll** ACS President
Introductory Address:	**Dr. Michael Berman** Air Force Office of Research
Medal Presentation:	**Dr. Ping Furlan**
Acceptance Address:	**Dr. Emily A. Carter** Nichols Medalist

THE WILLIAM H. NICHOLS MEDAL AWARD



Dr. William H. Nichols, shown at right, established this annual award, the first of its kind, in 1902 to honor a chemical scientist for original research. Since its inception, the New York ACS has administered the award. It has been perpetuated through the generosity of Dr. Nichols, his family, and the Nichols Foundation, Inc. The Nichols Medal has been presented to 20 Nobel Laureates – including two double Nobel Laureates – and one Nobel Laureate twice, and 33 National Medal of Science recipients. Leo H. Baekeland won the Nichols Medal in 1910 and nine Nichols Medalists have also received the Leo H. Baekeland Award presented by the North Jersey ACS!

Read more here

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

2024 WILLIAM H. NICHOLS DISTINGUISHED SYMPOSIUM & AWARD BANQUET (continued)

BANQUET RESERVATIONS DEADLINE – APRIL 1, 2024

Symposium only:	**$80 Non-ACS Member** **$55 for ACS Member** **$30, Student, unemployed, retired** **$0 50+ year ACS member**
Banquet only:	**$210 Non-ACS Member** **$180 for ACS Member**
Symposium & Banquet:	**$235 Non-ACS Member** **$205 for ACS Member**
Table of 8 or more for symposium/banquet	**$205 per person (non-ACS Members)**

RESERVE BY MAIL USING THIS ORDER FORM MAILED WITH AN ENCLOSED CHECK (payable to ACS, New York Section, Inc.) To:

ACS, New York Section Office
C/O Bernadette Taylor
1313 3rd Ave, # 2 South
Spring Lake, NJ 07762

CLICK HERE FOR ONLINE RESERVATION AND PAYMENT VIA PayPal

BANQUET RESERVATIONS DEADLINE – APRIL 1, 2024

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 website. 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 Dr. Neil Jespersen, Chair, Committee on the History of the NY Section.

UNDERGRADUATE RESEARCH SYMPOSIUM – CALL FOR ABSTRACTS

The Student Activities Committee of the New York ACS invites all undergraduates to present their research at the 71st Annual Undergraduate Research Symposium. This year's URS will be held at Medgar Evers College – CUNY on May 4, 2024 from 8:00AM – 2:00PM and will feature a keynote address by Prof. Markin Parasram of New York University. Registration is FREE.

Abstracts are due April 2, 2024

Anaerobic Heteroatom Transfer Reactions Promoted by Photoexcited 1,3-Diploles

Speaker: Marvin Parasram, Ph.D.
Assistant Professor
Department of Chemistry
New York University
Date: **Friday, May 4, 2024**
Place: Medgar Evers College
– City University of New York
Time: 8:00 AM – 2:00 PM

Registration: Student Presenters
Faculty Mentors
Exhibitors
Guests

Abstract: Heteroatom units, such as carbonyls, C(sp^3)–OH and C(sp^3)–NH_2 bonds, are prevalent motifs in many medicinally important compounds. Methods to incorporate these important functional groups at the expense of hydrocarbons rely on the use of non-commercial heteroatom transfer agents, precious transition metals, and/or costly engineered enzymes. Also, these methods often require exogenous oxidants to promote the C–heteroatom bonding event, which greatly limits substrate scope. Our laboratory focuses on the employment of economical 1,3-dipoles as versatile reagents that can serve as the hydrocarbon activator and the heteroatom atom source for the heteroatom incorporation of aliphatic systems under benign visible-light irradiation. Our contributions involve the cleavage of alkenes leading to valuable carbonyl derivatives and the direct C–H oxidation of hydrocarbons via anaerobic oxygen-atom transfer from photoexcited nitroarenes. Using photoexcited azoxys, an anaerobic nitrogen atom transfer event can occur leading to the aziridination of alkenes. Mechanistic studies reveal that the 1,3-dipoles are the sole photo-absorbing species, which leads to the formation of diradical intermediates that are responsible for heteroatom transfer events.

Download flyer here

HUDSON-BERGEN SUBSECTION – CALL FOR ABSTRACTS

25th Annual Student Research Symposium and Award Night – Call for Abstracts

This is a forum for students and their faculty mentors from colleges and universities that participate in the subsection's activities to present the results of their research. Outstanding graduating students, chemistry/biochemistry majors from the participating colleges, are also being recognized (they receive the Hudson-Bergen Chemical Society Award consisting of a certificate and a gift certificate). All the presenters will receive certificates of participation. Students who wish to make presentations (~10 min each) must send an abstract via e-mail to mleonida@fdu.edu, by **April 5, 2024**. The abstract should be in MS Word (font Times New Roman 12) and must include the names and addresses of the student(s) and their faculty adviser(s) in addition to the title of the abstract. The abstract should not exceed 200 words. The name of the student presenting the poster should be underlined. There is no registration fee.

Using DNA Sequencing to Understanding Protein Structure and Function

Speaker: Neel H. Shah, Ph.D.
Assistant Professor
Department of Chemistry
Columbia University
Date: **Friday, April 26, 2024**
Place: Fairleigh Dickinson University
Time: 4:30 PM Student Presentations
6:00 PM Dinner and Awards
6:45 PM Plenary Lecture

Abstract: As chemists, we often seek to understand how the structure of a molecule defines its properties. This can be done by making small, methodical changes to a molecular structure and measuring changes in the properties of that molecule. For example, a medicinal chemist may synthesize derivatives of a drug and examine how the addition or removal of specific atoms or functional groups impacts the potency, selectivity, or bioavailability of that molecule. This exercise may yield an improved drug, but it will also yield a deeper understanding of the key chemical features driving the activity of that drug. Similarly, a biochemist might make single amino acid substitutions, or mutations, in a protein and measure how these mutations impact the function of that protein. Although this time-tested approach has allowed biochemists to methodically dissect the roles of individual functional groups or atoms within large, complex protein molecules, it can be laborious and low-throughput. In this presentation, I will describe our efforts to increase the scale and throughput by which we can probe structure-activity relationships in proteins. Our methods leverage the power of next-generation DNA sequencing, coupled with cell-based assays for protein function, to rapidly make thousands of protein measurements at once. These approaches are revealing new insights into protein regulation and molecular recognition.

Download flyer here

LONG ISLAND SUBSECTION

Marie Skłodowska–Curie: The Life of a Pioneer Scientist

Speaker: Dr. Paris Svoronos
Professor Emeritus
Department of Chemistry
Queensboroough Community College
Date: **Thursday, April 4, 2024**
Place: St. John's University
D'Angelo Center, Room 407
or via Zoom (register here)
Time: 6:45 PM

Abstract: Maria Salomea Skłodowska-Curie (1867-1934) was the first ever female to win a Nobel prize, the first ever scientist to win two Nobel prizes and the only person to win her prizes in two different fields. Born in Russia-occupied Poland she emigrated to France to earn her post-high school degrees and eventually became the first ever woman professor at the Université de Paris. Her life, accomplishments and honors will be discussed with emphasis on her impact to radioactivity.

Biography: Paris Svoronos earned his PhD in Organic Chemistry at Georgetown (1979) and has served as a full-time faculty at CUNY Queensborough Community College (CUNY-QCC) for over 40 years (1981-2021). He was the first Chemist to be selected as Professor of the Year by the CASE/Carnegie Foundation (2003) and the only community college faculty to be presented the James Flack Norris Award by the ACS-NE section (2021). He has served Long Island Subsection of the American Chemical Society (LI-ACS) as its Chair (2002), Director-at-Large and current Secretary. He was selected as the ACS-NY Section Chair (2015), Community College first Professor of the Year (2019) and alternate counselor. He is an ACS fellow (2018), as well as a recipient of the Stanley Israel Award for advancing diversity in the chemical sciences (2018), and the Ann Nalley Regional Award for volunteer service (2016). He has served MARM as co-General Chair (2008, QCC) and co-Program Chair (2016, Mount St. Vincent) as well as an ACS-General Chemistry Test Committee member (2018-2021).

Download flyer here

Deadline for submitting articles and advertisements for the May 2024 issue is April 16, 2024

LONG ISLAND SUBSECTION HIGH SCHOOL AWARDS DINNER

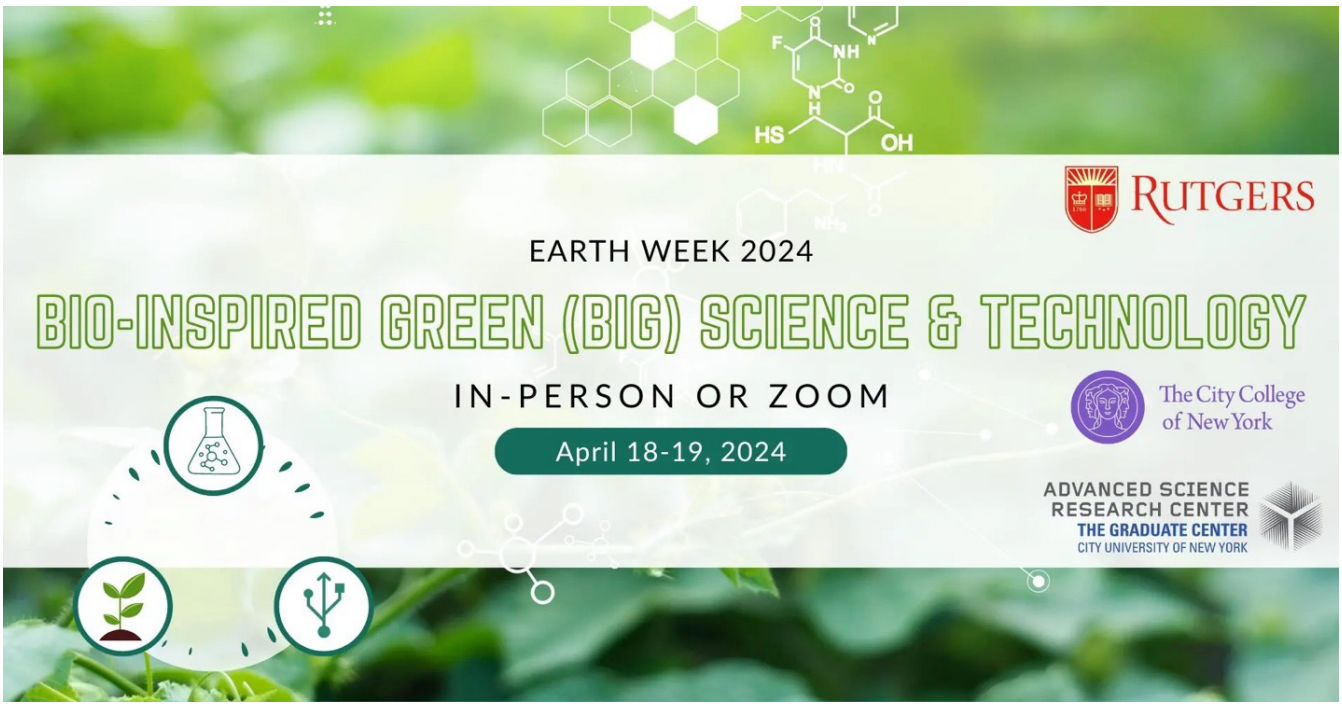
How Color Changed the World

Speaker: Dr. Mary Virginia Orna
ChemSource, Inc.
Date: **Thursday, May 9, 2024**
Place: Adelphi University
Ruth S. Harley University Center
Time: 6:45 PM

For the 35th consecutive year, the American Chemical Society will be recognizing outstanding high school chemistry students from high schools in Nassau, Suffolk, and Queens. Teachers are invited to nominate their student(s) who have demonstrated a strong interest and who have excelled in the field of chemistry. Teachers from each school should consult science teacher colleagues and come to a consensus for selecting student(s), then complete the nomination form below by **Friday, May 3, 2024** (nomination deadline).

These students will be feted at a dinner in their honor on **May 9, 2024** with a keynote presentation by Dr. Mary Virginia Orna entitled *How Color Changed the World*. This is a ticked event, please see the flyer for more details.

Download flyer here



NEW YORK ACS' 11th ANNUAL CHEMISTS CELEBRATE EARTH WEEK EVENT

Where: Jones Beach Energy & Nature Center
150 Bay Parkway
Wantagh, NY

Date: **Sunday, April 14, 2024**
Register here for FREE
Please register by April 3, 2024

Time: 11:00 – 3:00 PM

GET A CHARGE OUT OF CHEMISTRY
ACS Chemistry for Life
April 21-27, 2024 | #CCEW
CHEMISTS CELEBRATE EARTH WEEK

Join us at New York's famous Jones Beach as we celebrate Earth Week at the newly renovated Energy and Nature Center!

The day's event includes an introduction of Jones Beach by the Education Team, a tour of the Nature Center, a self-guided hike through the beach and preserve area, as well as snacks, lunch, and cool earth day gifts!

Space is limited and everyone must register (including children). Once registration has reached capacity it will be closed. There is a parking fee to enter Jones Beach.

Hope to "sea" you there!

Click here to register. Registration is FREE

For more information contact:

Prof. JaimeLee Rizzo
CCEW Coordinator
jrizzo@pace.edu

NYACS CHEMISTS CELEBRATE EARTH WEEK ILLUSTRATED POEM CONTEST

2024 CCEW Illustrated Poem Contest
Get A Charge Out of Chemistry

The New York City Local Section Local Section of the American Chemical Society (ACS) is hosting an illustrated poem contest for students in Kindergarten through 12th grade. Entries must be sponsored by a local school or community group for verification purposes.

Contest Deadline: Friday, April 5, 2024 at 11:59 PM Eastern
Local Prizes: 1st Prize in each category receives a $20 gift certificate
Winners of the New York City Local Section's Illustrated Poem Contest will advance to the ACS National Illustrated Poem Contest for a chance to be featured on the ACS website and to win prizes!
Local Contact: Elmer E. Mojica, Department of Chemistry and Physical Sciences, Pace University, One Place Plaza, New York, NY 10038 (Phone: 2123461344; Email: emojica@pace.edu)

Write and illustrate a poem using the CCEW theme, "Get A Charge Out of Chemistry." Your poem must be **no more** than 40 words and in the following styles to be considered:

HAIKU - LIMERICK - ODE - ABC POEM - FREE VERSE - END RHYME - BLANK VERSE

Possible topics related to the CCEW 2024 theme include:

Batteries Natural Gas Biofuels Gasoline Renewable Energy

Entries will be judged based upon:

Artistic Merit - use of color, quality of drawing, design & layout
Poem Message - fun, motivational, inspiring about yearly theme
Originality Creativity - unique, clever and/or creative design
Neatness - free of spelling and grammatical errors

Contest rules:

- All poems must be no more than 40 words, and in one of the following styles to be considered: Haiku, Limerick, Ode, ABC poem, Free verse, End rhyme, and Blank verse.
- Entries are judged based upon relevance to and incorporation of the yearly theme (Get A Charge Our of Chemistry), word choice and imagery, colorful artwork, adherence to poem style, originality and creativity, and overall presentation.
- All entries must be original works without aid from others. Physical drawings may be scanned or captured via camera and submitted to the online form. Illustrations may be created using crayons, watercolors, other types of paint, colored pencils, or markers.
- The illustration may also be electronically created by using a digital painting and drawing app on a computer, tablet, or mobile device. If the illustration is created using a digital painting or drawing app, the name of the program must be included on the entry form.
- The text of the poem should be easy to read and may be typed before the hand-drawn or digital illustration is added, or the poem may be written on lined paper, which is cut out and pasted onto the unlined paper with the illustration.
- No clipart or unoriginal images can be used.
- Only one entry per student will be accepted.
- Students must be sponsored by a school or another sponsoring group *(e.g. Homeschool Association, Boys and Girls Club, Scout Troop, 4-H, etc.)*.
- All illustrated poems and/or digital representations of the poems become the property of the American Chemical Society.
- Acceptance of prizes constitutes consent to use winners' names, likenesses, and entries for editorial, advertising, and publicity purposes.

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

NADRIAN C. SEEMAN MEMORIAL LECTURE IN CHEMISTRY

THE ART OF BUILDING SMALL
FROM MOLECULAR SWITCHES TO MOTORS

BEN FERINGA

NOBEL LAUREATE
PROFESSOR OF CHEMISTRY
UNIVERSITY OF GRONINGEN

Co-Hosts: Marvin Parasram and Martin Tomanik

Prof. Dr. Ben L. Feringa
(Image: Eckert/TUM)

NYU

April 12, 2024
11:00 am

NYU Silver Center
Jurow Lecture Hall
31 Washington Place, room 101

ACS Local Section
New York
Nanotechnology Discussion Group

NEW YORK NANOSCIENCE
DISCUSSION GROUP
Monday, April 15, 2024
Waverly 500
Refreshments: 5:00 p.m.
Science: 5:30 – 7:00 p.m.

New York University
Department of Chemistry
Silver Center
32 Waverly Place
New York, NY 10003
Phone: 212-998-8400

SPEAKERS

Nathalie Pinkerton
New York University
Assistant Professor of Chemical and Biomolecular Engineering, Tandon School of Engineering
NYU Pain Research Center

Irene de Lázaro
New York University
Assistant Professor of Bioengineering, Tandon School of Engineering

Chris DelRe
CUNY Advanced Science Research Center
Assistant Professor in the Nanoscience Initiative

Sessions feature three 30-minute presentations on nanoscience, one each with strong orientation in biology, chemistry, and physics/applied mathematics. Presentations will be focused on discussion of recent work, although speakers will be expected to place the work in a context understandable to a broad audience.

NEW YORK UNIVERSITY Department of Chemistry

2024 WESTCHESTER CHEMICAL SOCIETY STUDENT ACHIEVEMENT AWARDS

Four Decades of Dairy Research

Speaker: Michael H. Tunick, Ph.D.
Drexel University
US Department of Agriculture
Date: **Tuesday, April 23, 2024**
Place: Pace University
Pleasantville, NY (directions)
Time: 5:15 PM Registration and Social Hour
6:00 PM Lecture
7:00 PM Student Awards
7:15 PM Dinner

Download flyer here

Abstract: This talk will cover Michael Tunick's 40-year career as a chemist and food scientist at the USDA and Drexel University. He will focus on four of the many projects he was involved with, namely detection of mislabeled cheese, development of low-fat Mozzarella for the National School Lunch Program, storage of whey powder in the Food for Peace program, and a comparison of milk from pasture fed and conventionally fed cows. He will emphasize the ways that research in chemistry can help others.

Biography: Michael H. Tunick had 40 years of experience as a chemist and research chemist at the United States Department of Agriculture after serving there as a student trainee. He planned and conducted research aimed at creating new dairy products and expanding marketability of existing products. He also led and executed his research unit's effort on basic and applied aspects of rheology and microstructure of dairy commodities including milk, low-fat Mozzarella cheese, and Hispanic cheese. He was also an adjunct faculty member at Drexel University until he started at Drexel full-time in September 2017 upon retiring from the USDA. He teaches various food science courses, including Cheesemaking, and mentors students in the M.S. in Food Science program.

Dr. Tunick has authored or coauthored over 140 publications, has coedited ten books, and has co-chaired over 20 symposia in the Division of Agricultural & Food Chemistry in ACS. He served on the ACS Speaker Service with more than 50 presentations at universities and at ACS local sections. ACS has asked him to present webinars to their membership on the chemistry of both cheese and chocolate. He served as AGFD Chair in 2001, Secretary from 2003 to 2018, and Councilor starting in 2019. He became an ACS Fellow in 2011 and Oxford University Press published his book "The Science of Cheese" in 2013.

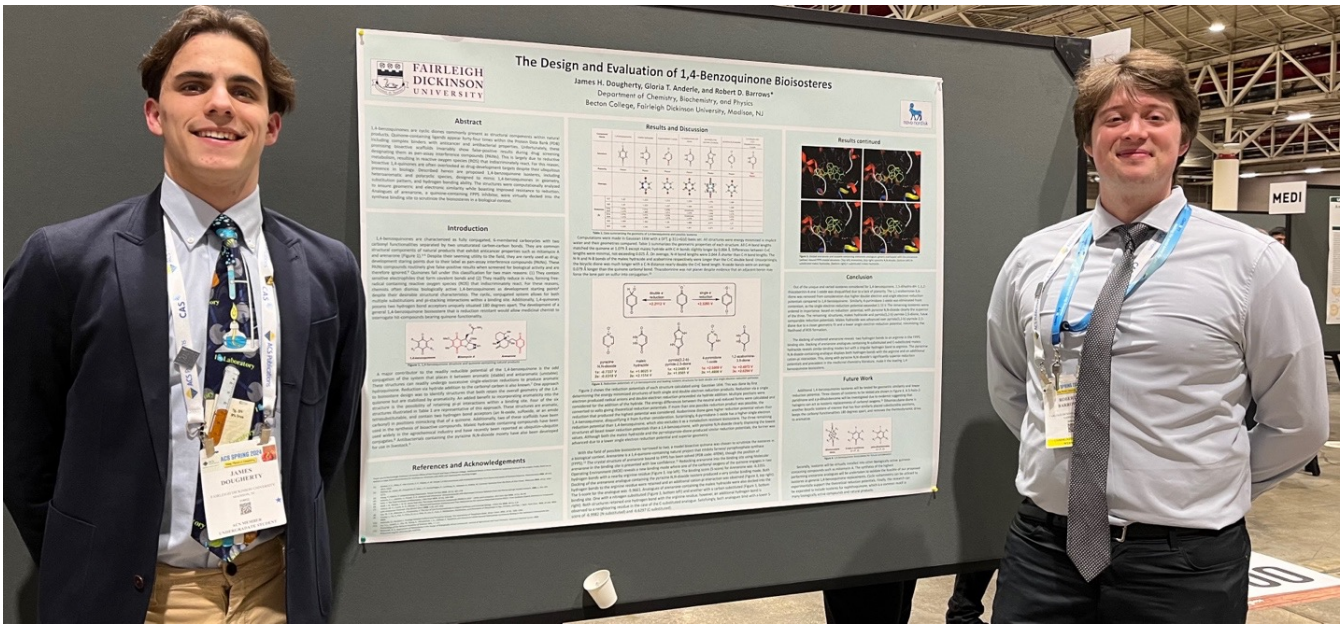
MEETING REPORTS

NORTH JERSEY ACS UNDERGRADUATE TRAVEL GRANT STUDENT

James H. Dougherty, recipient of the undergraduate travel grant from the North Jersey local section presented his research at the spring ACS National Meeting in New Orleans, Wednesday, March 20, 2024. Along with his research advisor, Dr. Robert Barrows of Fairleigh Dickinson University, James displayed the results of his investigations entitled:

The design and evaluation of 1,4-benzoquinone bioisosteres.

The poster was included in the Division of Medicinal Chemistry section.



James Dougherty on left; Dr. Robert Barrows on the right. (photo credit: Robert Menger)

BATH & BODY WORKS SUPPORTS ACS SCHOLARS

Thanks to Bath & Body Works for their commitment to the ACS Scholars Program that supports undergraduate students from historically underrepresented groups in science. To date, over 450 students have been supported by the ACS Scholars program, including 50 that have joined the faculty ranks across the United States.

Read more about the ACS Scholars Program here

THE CHEMISTRY OF LOVE

The New York Section held its third annual "Chemistry of Love" event on Sunday, March 3, 2024 at Pace University. The goal of the event was to bring more awareness of Chemistry to the community in a positive, cheerful, and happy way. What better way than to host an event filled with LOVE! We were happy that a room was available on a weekend this year as to attract more outside participants to the gathering.

Registered participants met at the newly renovated Student Center at Pace University where it was decorated with hearts in the colors of red, pink, and white. The tables were covered with white covering and pretty centerpieces of Erlenmeyer flasks filled with fresh flowers and Hershey kisses were scattered on the tables. Everyone mingled at the morning Blender Bar where a heart-healthy and freshly prepared "Ginger Zinger" was made along with a Strawberry, blueberry, coconut, cinnamon, veggie protein powder smoothie. We fueled up on the health while listening to a fun "happy love song" playlist.

Dr. Rizzo (pictured above on right) welcomed the guests then introduced the Chair of the NY Section of the ACS, Dr. Ping Furlan (pictured above at left). Dr. Furlan gave her greetings on behalf of the NY Section and distributed a list of upcoming events in the Section to all. She encouraged students and faculty to take part in the Section's activities and wished everyone a fun day at the event. Dr. Rizzo then introduced the Dean of Dyson College of Arts and Sciences, Dr. Tresmaine Grimes, via a pre-recorded speech. Dr. Rizzo then read some of the responses from the participants' questionnaire to the "What is Love?".

The following Pace University Student STEM clubs then gave some informative and fun presentations – the Chem Club, “The Excitement of Love,” Tri-beta, “Prairie Voles and Oxytocin,” Pre-Professional Health Society, “Patient Care and Dopamine”, Neuroscience, “Love in the Brain,” qSTEM, “Queer Scientists,” and the Pre-vet club, “Pawsitive Affection”. The keynote speaker was Dr. Michele Zaccario (pictured below), of Pace University’s Psychology Department, who gave a presentation entitled, “Physical and Chemical Bonding of an Infant and Their Caregiver”. It was an educational presentation and heart-warming with an enlightening discussion that followed.

Lunch was then served with healthy sandwiches, salad, fruits, coffee, and tea. Participants were further entertained with a fun raffle; gifts included a variety of chocolates, love themed mugs and cups, adorable stuffed animals, candles, and socks. Guests were presented with gift bags filled with “love stuff” including custom ^{4}Be <3 (to read “Be Love”) beanies, custom ^{4}Be <3 t-shirts, custom ^{4}Be <3 shaker bottles, love soaps, heart shaped sun glasses, and more! The day ended with a scrumptious ice cream bar with all the toppings! It was indeed a great day to love and be loved <3

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!

NEWS FROM OUR PARTNERS

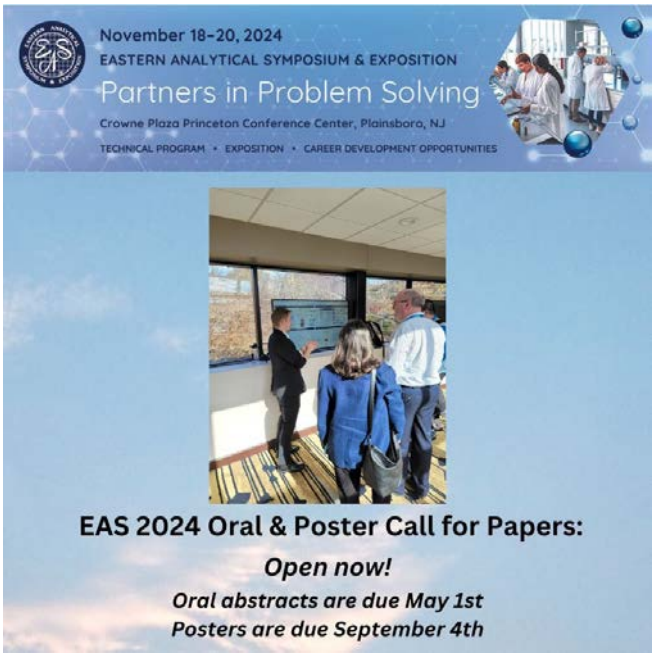
EASTERN ANALYTICAL SYMPOSIUM

The **FREE** Eastern Analytical Symposium Virtual Student Symposium (VSS) will be held **May 20, 2024** from **10:00AM – 3:00PM (EDT).** Undergraduate students and graduate students are invited to submit an abstract and present your work at this virtual event. Posters and slides, accompanied by oral presentations, are accepted. Abstracts are due May 10.

Register here
Submit your abstract here

Abstracts for oral presentations at the Eastern Analytical Symposium are due May 1st. The EAS will be held on **November 18-20, 2024** at the Crowne Plaza Princeton Conference Center.

Read more here



RUTGERS
UNIVERSITY | NEWARK

Department of Chemistry

Dr. H. Martin Friedman University Lecture

Friday, April 26, 2024 – 11:30 a.m.

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

Professor Hosea M. Nelson

Division of Chemistry and Chemical Engineering,
California Institute of Technology (Caltech)
Pasadena, CA

"New reactions of dicoordinated carbocations and methods for structural characterization"

Seminar information

APRIL IS CITIZEN SCIENCE MONTH

Sign up to prepare, participate, report activities (# of Acts), and receive a digital certificate and recognition on the Citizen Science Month website. If you are a project scientist or event organizer, this is a great way to reinspire your communities to participate in your project/event in April. All registered projects and events will also be promoted by SciStarter and its media partners leading up to and during the month of April!

Learn more here

CITIZEN SCIENCE MONTH
ONE MILLION ACTS OF SCIENCE

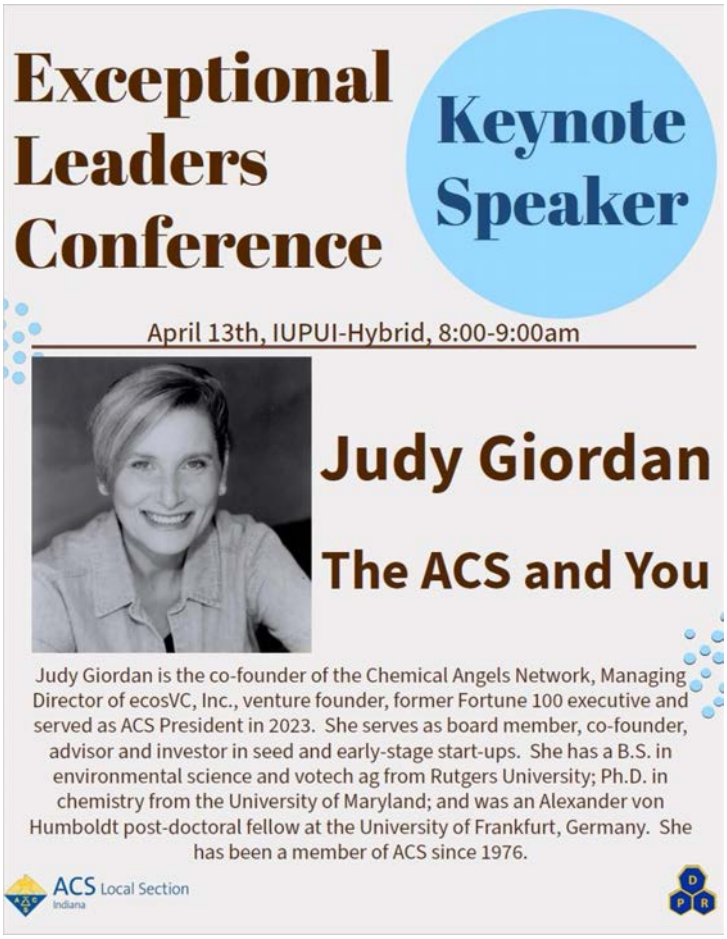
INDIANA ACS

The Indiana ACS invites all members to their 2024 Exceptional Leaders Conference. This hybrid event will feature the keynote lecture entitled:

The ACS and You

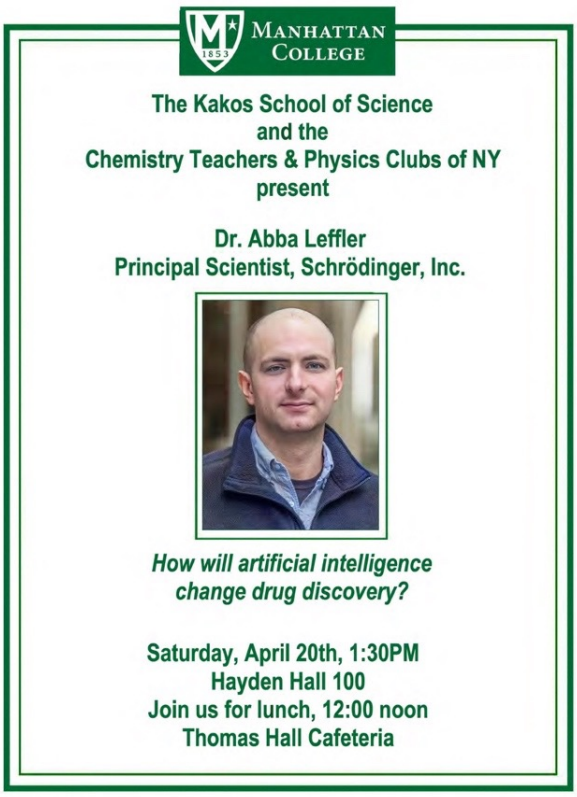
presented by 2023 ACS President Judy Giordan. This **FREE** conference will be held **April 13, 2024** from **8:00AM – 9:00AM (EDT).**

Register here



The Indicator is posted to the web on the 1ST of each month
http://www.theindicator.org/

CHEMISTRY TEACHERS AND PHYSICS CLUBS OF NEW YORK



The Kakos School of Science at Manhattan College and the Chemistry Teachers and Physics Clubs of NY are proud to present a lecture entitled, as follows: How will artificial intelligence change drug discovery?

Speaker: Dr. Abba Leffler
Principal Scientist
Schrodinger, Inc.
Date: **Saturday, April 20, 2024**
Place: Hayden Hall 100
Manhattan College
Riverdale, NY 10471
Time: 12:00 PM Lunch in Thomas Hall
1:30 PM Speaker

Download Flyer

DIVISION OF ORGANIC CHEMISTRY

The Division of Organic Chemistry proudly presents a virtual symposium sponsored by the Beyond CCHF: The Catalysis Innovation Consortium. This event feature two speakers:

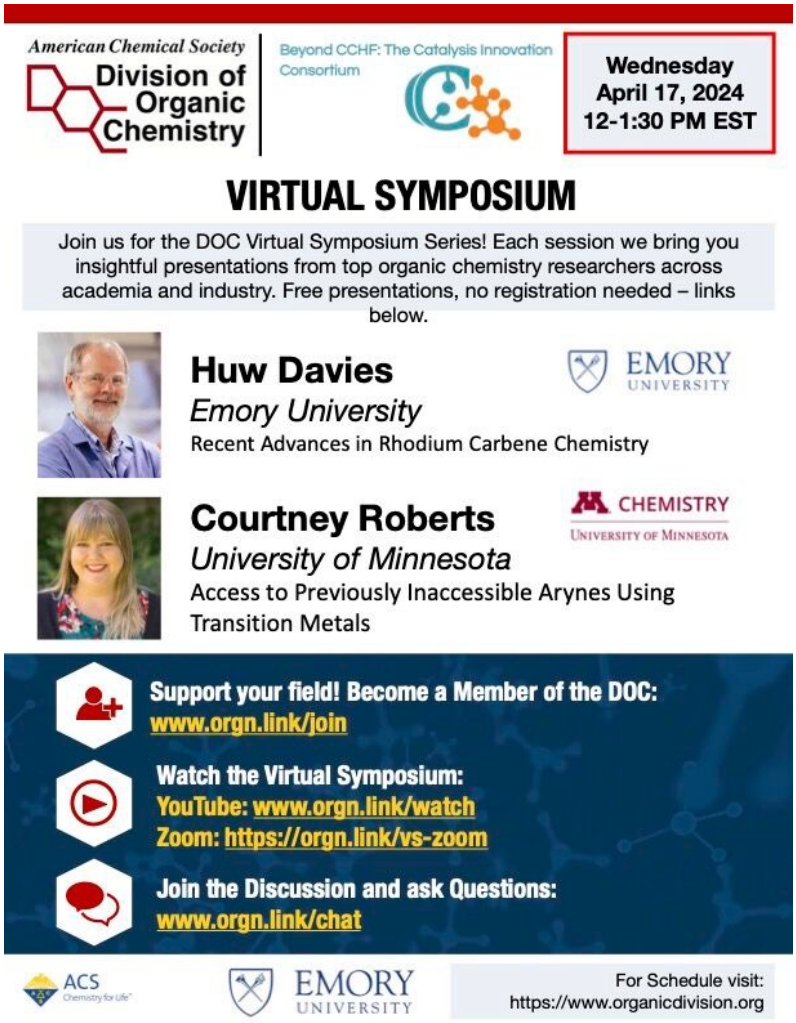
Huw Davies (Emory University) &
Courtney Roberts (University of Minnesota)

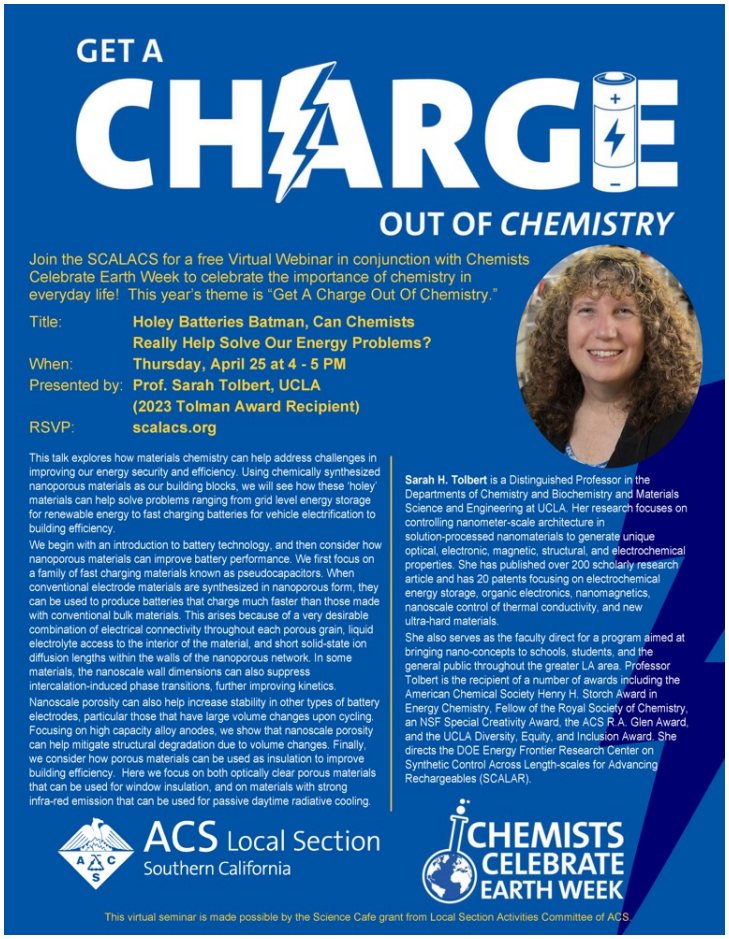
speaking on

Recent Advances in Rhodium Carbene Chemistry &
Access to Previously Inaccessible Arynes Using Transitional Metals, respectively.

Date: **Wednesday, April 17, 2024**
Place: Via Zoom or YouTube
Time: 12:00 – 1:30 PM (EDT)

Download flyer here





SOUTHERN CALIFORNIA ACS

The Southern California ACS invites you to a FREE virtual webinar celebrating the importance of chemistry in everyday life. Focused on this year's Chemists Celebrate Earth Week theme of "Get a Charge Out of Chemistry", the webinar is entitled:

Holey Batteries Batman, Can Chemists Really Help Solve Our Energy Problems?

Presented by Prof. Sarah Tolbert of UCLA, recipient of the 2023 Tolman Award.

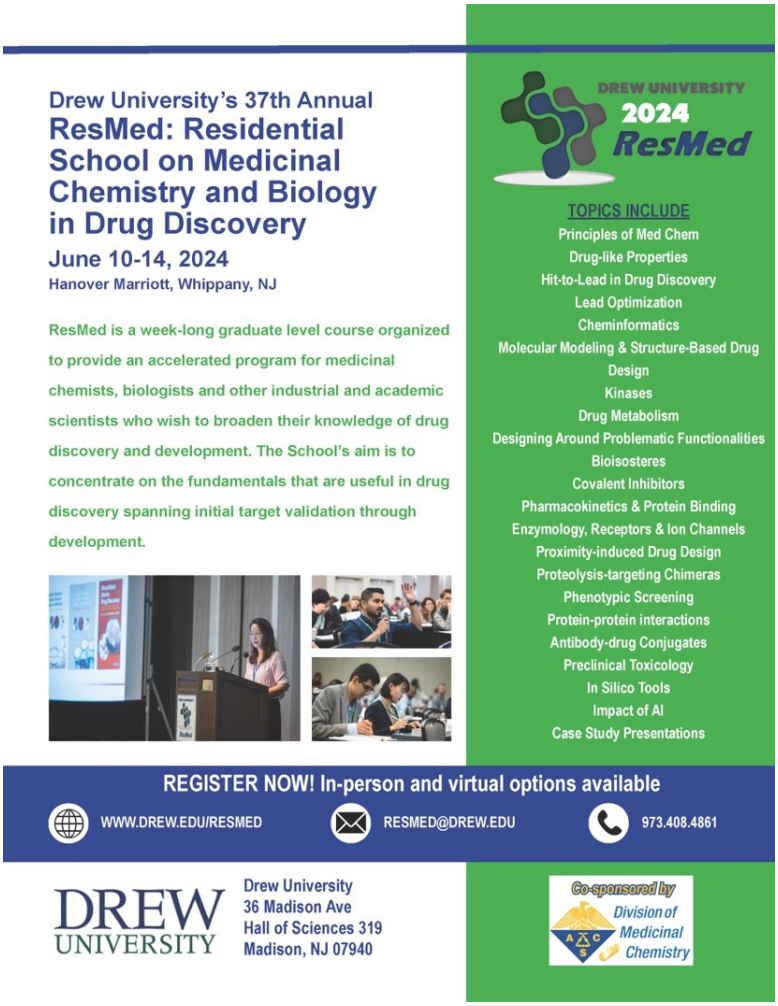
Date: **Thusday, April 25, 2024**
Place: Via Zoom
Time: 7:00 – 8:00 PM (EDT)
Registration: Please RSVP here

Download flyer here

CHINESE AMERICAN CHROMATOGRAPHY ASSOCIATION

Expanding interest in biopharmaceuticals over the past decade challenges modern liquid chromatography as a purification method due to issues like non-specific interactions. The Chinese American Chromatography Association presents a webinar entitled "Need More Clarity with your Chromatography? This will PEEK your interest".

Speaker: Dr. Raymond Wong, Shimadzu UK Limited
Date: **Wednesday, April 10, 2024**
Place: via Gotowebinar (register here)
Time: 12:00 PM EDT



CALL FOR NOMINATIONS

NEW YORK ACS OUTSTANDING SERVICE AWARD

The New York Section of the American Chemical Society is one of the most distinguished sections of the Society. This distinction is for members whose achievements have inspired and driven significant activities that contributed to over 30 ChemLuminary Awards over the years. Please help us recognize these inspirational leaders and send us by **June 30, 2024**, your nominations including up to two letters of recommendation per nominee who meets the criteria for the Award as noted below.

1. The purpose of this award is to recognize the efforts of members of the New York Section who provide their time, leadership skills and dedicated service in promoting quality programs that contribute to the excellence of the Section.

2 As shown above, this annual award consists of an engraved ACS plaque that is presented at the New York Section's General Meeting and Section-wide Conference in January. The awardee becomes a member of the Outstanding Service Award Committee for five years.

3. This award was established in 1976 and is supported by the New York Section.

4. Eligible are members of the New York Section whose nomination data has been sent to the Outstanding Service Award Committee by **June 30**. Please be sure to include with your submission at least one nomination letter with specific examples of the nominee's outstanding service and the impact it had on the Section. You may submit one additional letter of recommendation.

Nominations remain on file for 3 years.

Nominations with supporting data should be sent to the Office Administrator email btaylor@newyorkacs.org Visit our website for more details and see past awardees.

US EPA ANNOUNCES SUSTAINABLE CHEMISTRY GRANTS

The US Environmental Protection Agency has issued a request for applications to its Science to Achieve Results (STAR) Program ion Advancing Sustainable Chemistry. Four awards of up to $1.5M will be awarded. Applications due May 29, 2024.

Read the RFA here

OPPORTUNITIES

For High School Students & Teachers

ACS Hach Second Career Teacher Scholars
Due May 1

ACS–Hach Post-Baccalaureate Teacher Scholarship
Due May 1

Student Chapter Awards
Due May 31

ACS Division of Inorganic Chemistry Undergraduate Award in Inorganic Chemistry
Nomination by June 30

For Undergraduates

EAS Undergraduate Student Award
Nomination due April 30

Priscilla Carney Jones Scholarship
Due May 1

NYSCC Roumelia Alina Inclusion & Diversity Scholarship
Due May 15

For Graduate Students / Postdocs

EAS Graduate Student Award
Nominations due April 30

NYSCC Future of Sustainability Scholarship
Due May 15

Ciba/YCC Travel Award
Due May 15

Division of Inorganic Chemistry Travel Award
Due June 1

Women Chemists Committee/Eli Lilly Travel Award
Due June 1

For Professionals

Global Innovation Grant
Due April 12

Local Section Member Engagement and Enhancement (LS-MEET) Grant
Due May 31

William H. Nichols Medal
Due May 31

Trust in Science and Scientists Grant
Due June 1

Abstracts Due April 1

JOB BOARD

Starting your career or looking for the next challenge? Review postings at the New York ACS Job Board. Email your job postings to Jobs@NewYorkACS.org for inclusion.

Academic Positions

Assistant Teaching Professor – Adelphi University

Visiting Assistant Professor of Chemistry – Haverford College Apply here

Visiting Assistant Professor of Chemistry – Trinity College Apply here

Full-time Faculty, Chemistry – Bard high School Early College Newark Apply here

Assistant/Associate Professor of Organic Chemistry – Hofstra University Apply here

Assistant Professor, Biochemistry – Iona University Apply here

Visiting Assistant Professor in Organic Chemistry – Bucknell University Apply here

Dean, College of Arts and Sciences – New York Institute of Technology Apply here

Part-time Laboratory Technician, Science and Math – Fashion Institute of Technology Apply here

Program Officer – ACS-PRF Apply here

Industrial Positions

Senior Principal Scientist – Bristol Myers Squibb

Senior Scientist – OSMO Apply here

Senior Analytical Scientist – EPM Scientific Apply here

Senior Scientist, Analytical Chemistry – Regeneron Apply here

Analytical Chemist – Haleon Apply here

Environmental Chemist II, Evonik Apply here

Principal Scientist, Analytical Development – VIATRIS Apply here

Scientist I, Analytical R&D – Contract Pharmacal Corp Apply here

Computational Materials Scientist – Schrodinger, Inc. Apply here

Apply here

THIS MONTH IN CHEMICAL HISTORY

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

I continue to look back skeptically at the new chemistry of 90 years ago as allegedly reflected in the pages of The Chemical Society's Annual report for 1934 (Volume XXXI) published in London in 1935. Here are a few of the most surprising results reported.

Work by Bettis and Kramer on the synthesis of the elusive cyclo-octatetraene, the eight-membered ring analog of benzene, has apparently proceeded with (limited) success with an overall yield of 0.37% from the starting material of a butadiene dimer. The new hydrocarbon was obtained as orange prismatic crystals with a melting point of 84°C. A limited number of chemical explorations have shown the new compound to be reactive towards a variety of both electrophilic (HNO_3, H_2SO_4) and, surprisingly, nucleophilic ($NaNH_2$) reagents, although, because of the extremely small amounts of material available the products of these reactions have not yet been identified. The ultraviolet spectrum of the new compound is extraordinary with numerous sharp absorption bands throughout the near and usual U.V. regions.

Further study of reduction reactions with potassium in liquid ammonia have been reported by Vandelay and Seinfeld. Hexachlorobenzene yields approximately 37% benzene; 48% naphthalene, 16% anthracene, and 21% of as yet unidentified polycyclic and partially chlorinated apparently aromatic hydrocarbons. The fact that these reported yields add up to over 100% has not gone unnoticed by this journal's reviewers and does cast doubt on the care used by the reviewers of the original article that appeared in the *Journal of the Alternative Herzegovinian Academy of Agriculture Related Research*.

A new analytical tool of apparently remarkable utility in investigating complex organic systems has been reported by Gervais. There can hardly be a practicing organic chemist who is unaware of the ubiquitous "whirling Dervish" chromatographic apparatus that has taken the organic chemistry community by storm. It is hard to realize that this piece of analytical equipment was invented only a year ago. For the miniscule proportion of the unenlightened the apparatus consists of a circle of filter paper suspended horizontally from its center, fed by a reservoir of the developing liquid (usually an aqueous solution) and spun at ultra-high speeds so that centrifugal force greatly accelerates the development of the chromatogram. Reports of the successful application of this new method have appeared from groups as varied as those studying animal and human steroids; hormones; peptides; and plant pigments. (is a Nobel Prize in the near future likely?).

The numbers of theoretically possible structural isomerides in series of aliphatic compounds, though seldom required for stereochemical purposes, are of some interest as giving perspective. The following are from the calculations of H. R. Henze and C. M. Blair. * for saturated hydrocarbons.

# Carbon atoms	5	10	15	20
#Isomers	3	75	4347	366,319

(this one is accurate!).

By the way, please glance at the date of the beginning of the month in which this column was supposed to be published. Back to serious chemistry in May.