THE Indicator

NATIONAL CHEMISTRY WEEK

CALL FOR VOLUNTEERS

National Chemistry Week 2021

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ACS Local Section New York

ACS Local Section North Jersey

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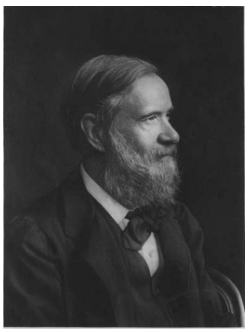
THIS MONTH IN CHEMICAL HISTORY

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



This is my penultimate column in my "Great Books in Chemistry" series and we are now well into the 19th. Century, the end goal of this set of columns. I am still contemplating whether to start another set on the great books of chemistry of the 20th. Century. So here is a CHALLENGE TO THE READER. My email is at the top of the column. Please send me YOUR NOMINEES for the 20th. Century's greatest chemistry books. They may provide me with material for another dozen columns or more. The Editor's choice (that's me) is final.

Meanwhile back to our subject: great books of the 19th. Century. This column is about a very slim book, no more that a pamphlet, but one of the most influential volumes in the whole of chemical history. It is Stanislao Cannizzaro's 1858 "Sketch of a Course in Chemical Philosophy". My personal copy is No. 18 of the valuable Alembic Club Reprints, an English translation of Cannizzaro's Italian original, published in Edinburgh, Scotland, in 1911 and reprinted in 1947.

In the first few decades of the 19th. Century, after Dalton announced his atomic theory, there was much confusion about how to go about determining good atomic weight values. The confusion was so great that many important chemists, like Humphry Davy, abandoned atomic weights for equivalent weights (the mass of an element that combined with, e.g., exactly 8g of oxygen), claiming the experimental superiority of equivalents over the "theoretical" atomic weights. Cannizzaro, planning a course in general chemistry at the Royal University of Genoa, pointed the way forward, and summarized his approach, and his course, in this book.

I quote from the opening of the book:" I believe that the progress of science made in these last years has confirmed the hypothesis of Avogadro, of Ampere, and of Dumas on the similar constitution of substances in the gaseous state; that is, that equal volumes of these substances, whether simple or compound, contain an equal number of molecules..." Cannizzaro then goes on to outline how he develops this theme to arrive at unambiguous atomic weights for those elements that form gaseous compounds.

In a clear and logical presentation he cites the work of Gay-Lussac that so influenced Avogadro; examines the arguments of Berzelius' dualistic theory that led that great chemist to reject formulas like H_2 and O_2 for the molecules of these elemental gases, formulas that inevitably proceeded from the acceptance of Avogadro's hypothesis. Gas densities then become the key to Cannizzaro's determinations of the relative weights of a variety of molecules even before their formulas are known. He then defines atomic weight empirically: "The different quantities of the same element contained in different molecules are all whole multiples of one and the same quantity, which, always being entire, has the right to be called an atom." Cannizzaro applies this principle to hydrogen, oxygen, chlorine, and, perhaps most significantly, carbon. The volatile compounds of mercury are also examined and, by applying the specific heat principle of Petit and Dulong (not acknowledged by Cannizzaro in this work!) he derives atomic weights for a number of metals. Altogether a spectacular advance in chemistry.

Cannizzaro was one of the attendees at the first international chemistry conference, held at Karlsruhe in 1860. The agenda of the conference included trying to reach agreement on such fundamental terms as atom, molecule, atomic and molecular weights etc. The planning committee could not even agree on an agenda! Meanwhile Cannizzaro made his presentation and distributed copies of his pamphlet, most of which probably made it to various round files. However two attendees kept their copies and actually read them and later alluded to the powerful impression it made on them. Both were young university faculty charged with planning a beginning chemistry course. Both used Cannizzaro's work in planning their courses. And both kept thinking about and extending Cannizzaro's ideas. Their names were Victor Meyer and Dmitri Mendeleev. Each independently and almost simultaneously invented the periodic table. And the rest, as they say, is chemical history.

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THE Indicator

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The Indicator (ISSN0019-6924) 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.

September Calendar

NORTH JERSEY SECTION

Thursday, September 23, 2021
NMR Topical Group
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North Jersey Executive Meeting
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Saturday, October 23, 2021
ChemExpo 2021
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also

Thursday, October 18, 2021
NMR Topical Group
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Saturday, October 23, 2021
ChemExpo
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Thursday, November 18, 2021
Organic Topical Group
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Mondays, October 18, November 15 and December 13, 2021
North Jersey Executive Meeting
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NEW YORK SECTION

Wednesday, September 8, 2021
Younger Chemists Committee
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NORTH JERSEY SECTION MEETINGS

https://www.njacs.org/

2021 NORTH JERSEY EXECUTIVE COMMITTEE MEETINGS

Section officers, councilors, committee chairs, topical group chairs, and section event organizers meet regularly at the Executive Committee Meetings to discuss topics of importance to running the section and representing the membership. The team is scheduling monthly virtual meetings on Monday evenings at 7 – 9 PM (EST). See the table below for the remaining meeting dates for 2021.

All members are welcome to attend these meetings and become more involved in section activities. For any additional information, please contact Mirlinda Biba (NJACS 2021 Chair) at mbiba@njacs.org.

2021 ACS North Jersey Local Section Executive Committee Meetings Schedule

All meetings are virtual.

Date: Monday, September 27, 2021
Time: 7:00 – 9:00 PM EST

Future Meetings

October	Monday, October 18, 2021
November	Monday, November 15, 2021
December	Monday, December 13, 2021

NORTH JERSEY 2022 OFFICER ELECTIONS

The North Jersey Section ACS 2022 election will take place **September 13 – October 12, 2021**. Balloting will be electronic and managed by Vote-Now.com Ballots will be sent to all current North Jersey ACS members via the email address that they registered with ACS. The following are candidates for the 2022 offices of Chair-elect and Treasurer and for position of Councilor/Alternate Councilor.

Chair-elect:
Justyna Sikorska

Treasurer:
Miriam Gulotta
Luciano Mueller

Councilor/Alternate councilor
Lynda Box
Miriam Gulotta
Diane Krone
Robert Menger
Michael Peddicord
Monica Sekharan
Yalan Xing

NMR TOPICAL GROUP

The NMR Topical Group has two amazing events planned for the fall!

We will be having our annual "**Bruker Night**" on **Thursday September 23rd** at 6 pm EDT for dinner followed by a seminar at 7 pm EDT where we will host a speaker from Bruker Biospin to present on new developments in instrumentation and methodologies.

Fall Symposium – Save the Date

The annual Fall Symposium will be held on **Monday October 18th** from 8 am ET to 7 pm ET to hear from world renowned experts in NMR. We have an exciting speaker lineup for this year's symposium including: Christian Griesinger, Gerhard Wagner, Lewis Kay, and Matthias Ernst.

Both events are planned to be held in person at Princeton University (pending approvals and covid restrictions moving forward) and live webcast. In the event we cannot meet in person, we will hold both events virtually via webcast.

More details on venue to come early September once we assess safety concerns and in person meeting restrictions.

Keep an eye on the Topical Group website for more details to be published soon.

ORGANIC TOPICAL GROUP

The Organic Topical Group presents

2021 Award for Creativity in Molecular Design and Synthesis Symposium

honoring Prof. Stephen L. Buchwald of the Massachusetts Institute of Technology on November 18, 2021.

Contributors are advised that the OCTOBER ISSUE DEADLINE is September 16, 2021

ChemExpo 2021 – Saturday, October 23, 2021 at the Liberty Science Center!

We are proud to announce the North Jersey Section's exciting, fun-filled celebration of the National Chemistry Week – *The 27th ChemExpo!*

Planned events include:

- Hands-on science activities and demonstrations geared towards all levels of student from middle-school to college as well as all family members
- Contests for the best demonstration/hands-on activity by a college student team AND by a high school team – multiple prizes awarded for each category!

Please help us make ChemExpo 2021 a success by volunteering to celebrate Chemistry Week 2021 with us!

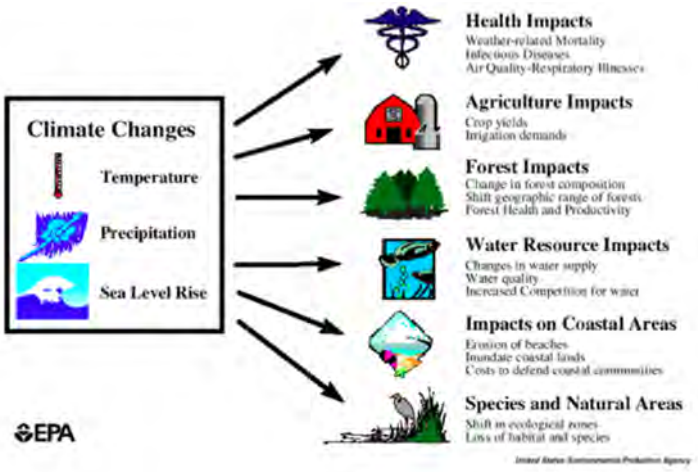
Call for Help (any age)
Call for College Students

Call for Participation
Call for High School Students

MITA CHAKI HONORED WITH 2021 VOLUNTEER OF THE YEAR AWARD FOR THE NORTH JERSEY SECTION

Mita Chaki, the 2021 North Jersey ACS Local Section Volunteer of the Year awardee, has participated in many teacher workshops and led student groups performing demonstrations during NCW and CCEW, and served as the NCW outreach committee chair for the past 5 years. Through Mita's outreach efforts & leadership, the North Jersey Section conducted numerous events that have reached hundreds area children.

More online



2021 State Science Day Challenge:
Considering issues of equity and social justice, design a solution to reduce the impacts of climate change in your community through adaptation and/or mitigation efforts.

State Science Day 2021 Report – Winners and Honorable Mentions Announced

New Jersey State Science Day is a competition to acknowledge high school students' use of science and engineering practices to define a problem in your community with a focus on its marginalized and/or underserved members, and to design a solution.

The competition was held during NJ STEM Month, March 2021, and the projects were judged and celebrated at a virtual event on May 20, 2021. We are proud to list the eighteen winners, four honorable mentions, and the honored teachers here.

Student Winners

Kurt Ajami	Manchester Regional High School
Will Allain	Hunterdon Central Regional High School
Ava Augustine	West Morris Mendham High School
Kedhar Bartlett	DCL STEM Academy
Kaitlyn Culbert	Toms River High School North
Gianna Galiano	West Morris Mendham High School
Arielle Huang	Ramsey High School
Sandra Laauwe	Manchester Regional High School
Zhenyu Li	Ranney School
Sweksha Mehta	Union County Vocational Technical High School
Elina Puri	Scotch Plains Fanwood High
Arabella Quane	Millburn High School
Saiyam Shah	John P. Stevens High School
Rutva Shah	Toms River High School North
Nafees Shaheed	Fair Lawn High School
Vidhu Suryavamsh	Hillsborough High School
Kavya Venkatesan	Old Bridge High School
Eric Wang	Millburn High School

Honorable Mentions

María Correa	Hackensack High School
Monica Ifezue	Irvington High School
Anuja Magdum	Randolph High School
Anshbir Soin	John P. Stevens High School

State Science Day 2021 Report – Winners and Honorable Mentions Announced

Honored STEM Teachers

Michael Abadir
Alyssa Apryasz
Susan Arrigoni
Bonnie Berenger
Vito Cangelosi
Kate Cilluffo
Duncan Crannell
Dina Ellsworth
Nancy FitzGerald
Christine Girtain
Donna Griggs
Joanna Knoblock-Jorge
Mariel Kolker
Hope Kowalski-Porta
Rachel Lasda
Kathryn Meneghin
Rubab Nadeem
John Palumbo
Rosemarie Pittenger
Lauren Poma
Alyssa Shurminsky
Richard Skibitski
Michael Sturr
Bruce Taterka
Kathleen Van Valen
Tanya Vollenweider
Theresa Wertheimer

For more information, please visit the NJ State Science Day website, which will be updated with New Jersey State Science Day 2022 information as it becomes available.

NORTH JERSEY ACS HOLDS THEIR 2nd VIRTUAL NEW JERSEY CHEMISTRY OLYMPICS

The New Jersey Chemistry Olympics (NJCO) team once again triumphed over the pandemic by creating a 100% virtual event. North Jersey ACS members and NJIT's Chemistry & Environmental Science Department (CES) worked together to make the virtual NJCO (vNJCO) a success. Prior to this year, there were 34 in-person NJCOs and the 2020 NJCO planned as in-person but converted to virtual due to the mid-season shutdown. The 2021 vNJCO participants included 134 high school students from 14 different high schools across New Jersey. While the 2021 vNJCO was about half the size of an in-person competition, it was more than double the size of last year's event. In addition to the core of long-time participants, we welcomed Ridge High School and Woodbridge Academy for the first time, and welcomed back Bergen County Technical School after a long absence. We are pleased to report that all three high schools won at least one medal!

The 2021 NJCO theme was "***Chemistry and Current Events***". The eight events were:

1. Chemistry Research: Vaccine Development (including COVID-19 specific parts)
2. Environmental Science Research: Sustainability of Batteries
3. Chemical Engineering Research: Costs of Bringing a Vaccine to Market
4. Website Design: CRISPR Gene Editing Technology
5. Experimental: Physical Chemistry of Your Microwave – ***NEW for 2021!!!***
6. Nomenclature test (on a new platform due to Adobe Flash deprecation)
7. Information Search: Disinfectants
8. Debate: Should PFAS be banned? – ***NEW for 2021!!!***

We were delighted to see the wide distribution of medals: 10 of the 14 high schools won medals. It's a good indicator that the students and coaches all had an excellent understanding of the judges' expectations. If this trend continues to an in-person event, competition for the Platinum Crucible will be fierce.

To encourage participation by various districts with different combinations of online and in-person teaching, we instituted changes as illustrated below:

	2021 vNJCO	Prior in-person NJCOs
Registration fee	None	$150 (waiver available)
Team size and number	No limits on team sizes or number of teams per school	Most schools had one team of up to 12 members, but could have one more team
# of events per team	Unlimited (of 8)	Up to 6 (of 10)
# of teams per school per event	Up to 2	Up to 2
Awards	1st, 2nd, 3rd for each event; no cumulative award	1st, 2nd, 3rd for each event; the Platinum Crucible awarded to the highest scoring team
Judging & Award Ceremony	100% virtual over 2 weeks followed by an awards ceremony	Both 100% in-person; Both on Event Day

NORTH JERSEY ACS HOLDS THEIR 2nd VIRTUAL NEW JERSEY CHEMISTRY OLYMPICS

Participating schools and their medal totals are shown below. The number of participating students varied with South Brunswick High School bringing the most students to the competition.

2021 NJCO PARTICIPATING HIGH SCHOOLS & MEDAL TOTALS THANK YOU FOR BRINGING SCIENCE TO YOUR STUDENTS!!!	
School (NJ county)	Medals (event#)
Bergen County Technical School (Bergen)	Silver (5), Bronze (2)
Bergenfield High School (Bergen)	
Hunterdon Central Regional High School (Hunterdon)	Gold (2,6), Bronze (1)
John Paul Stevens High School (Middlesex)	Bronze (6)
Marine Academy of Technology and Environmental Science (Ocean)	Gold (1)
Pascack Hills High School (Bergen)	Silver (1)
Pascack Valley High School (Bergen)	
Ridge High School (Somerset)	Gold (7), Silver (2, 3)
Rutgers Preparatory School (Somerset)	
South Brunswick High School (Middlesex)	Gold (6, 8), Silver (4, 7), Bronze (3, 5)
Tenafly High School (Bergen)	Silver (7)
Woodbridge Academy – Allied Health & Biomedical Sciences (Middlesex)	Bronze (8)
Watchung Hills Regional High School (Somerset/Morris)	Gold (3, 4, 5)
Whippany Park High School (Morris)	Silver (8), Bronze (4)

Special thanks to NJIT's College of Science and Liberal Arts Dean and ACS Fellow, Dr. Kevin Belfield, for securing funding for the event and for speaking at the award ceremony; Dr. Mirlinda Biba (Senior Scientist at Merck & NJACS 2021 Chair) for also speaking at the awards ceremony. Distinguished Professor and CES Chair Dr. Omowunmi Sadik contributed her department's assistance with CES staff member Ms. Genti Price providing extra help.

We also want to thank financial donors: Merck, Exemplify BioPharma and Ashland LLC. NJIT's CSLA and the NJACS contributed both funds and volunteers.

Please email our Directors, Drs. Kathleen Gilbert and Miriam Gulotta, for more information on volunteering or having your high school team participate in 2022. *Note that SDA District high schools can apply for a fee waiver when they register.*

NORTH JERSEY ACS HOLDS THEIR 2nd VIRTUAL NEW JERSEY CHEMISTRY OLYMPICS

vNJCO Award Ceremony

Fair for Emerging Researchers Program Wins a METT Grant!

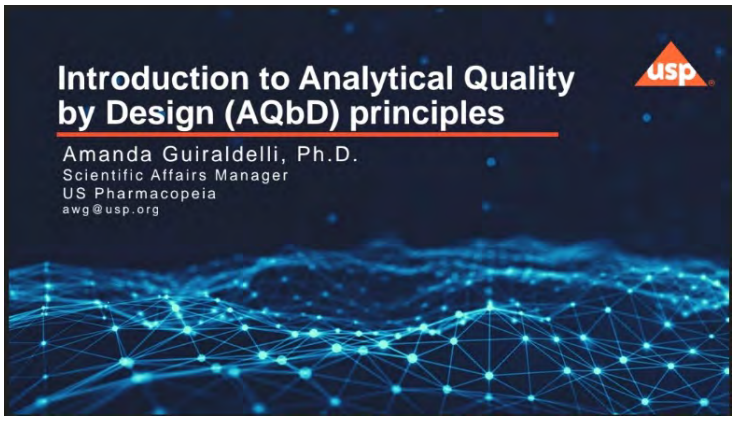
The North Jersey Section is proud to announce the award of a Local Section Members Engaging Through Technology (METT) Grant for the Fair for Emerging Researchers , founded by Drew University alumni Saif Yasin, Zoe Coates Fuentes, and their teammates.

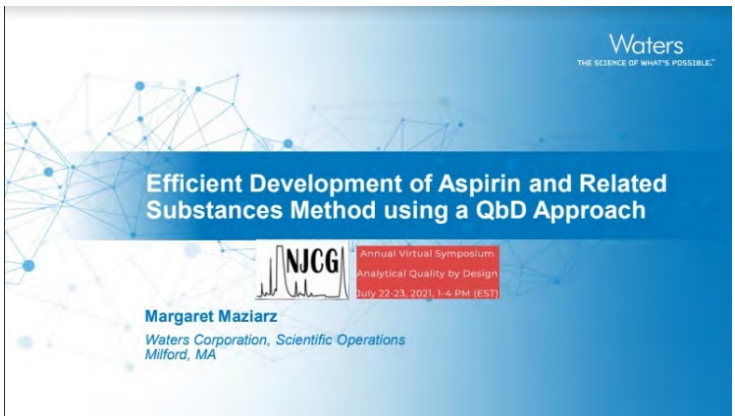
The FER program is an annual science fair held for middle school students in the NY/NJ/MD area. It was created in 2016 to provide a Project-Based Learning approach and targets students in underserved communities.

The FER was funded by an ACS Innovative Project Grant in 2017, received an ACS ChemLuminary Award in 2018, and has continued to run annual fairs, including virtual events in 2020 and 2021. We are very excited that the ACS and the North Jersey Section are both supporting this outstanding program!

Email for more info

CHROMATOGRAPHY TOPICAL GROUP SYMPOSIUM HELD IN JULY

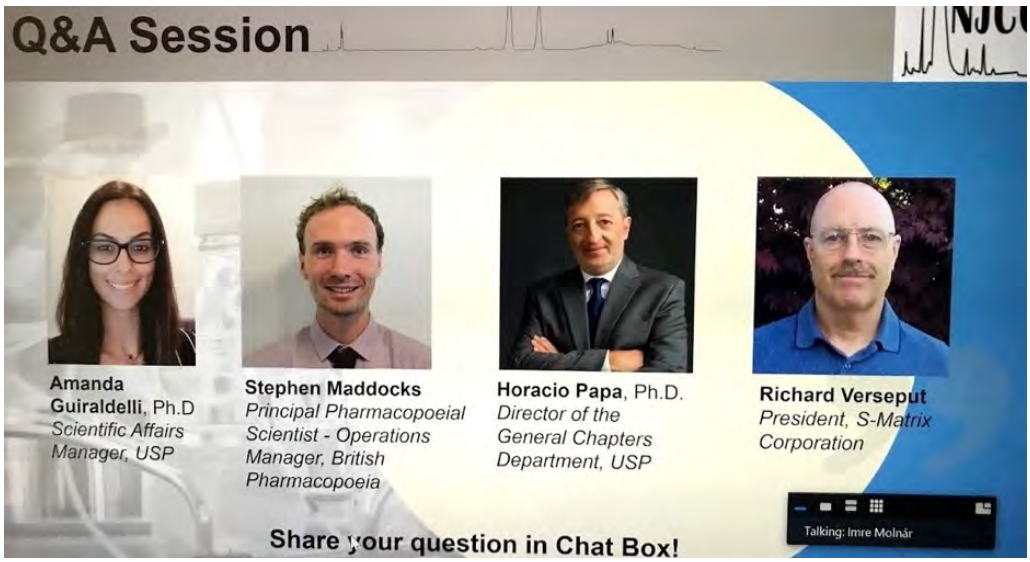




North Jersey Chromatography Group (NJCG) held a successful virtual Annual Symposium on Analytical Quality by Design on July 22nd and 23rd, 2021. Speakers from USP, BP, industry and suppliers shared their current thinking on this topic.

Over 400 attendees participated during the two-day symposium, an annual NJCG event held virtually this year with speakers and attendees from around the world.

More information including slides and video recordings for selected presentations can be found on the NJACS Chromatography Topical Group website: www.NJCG.org



NEW YORK SECTION MEETINGS

http://www.newyorkacs.org/

2021 NEW YORK SECTION BOARD OF DIRECTORS MEETINGS

MEETING DATES FOR 2021

The dates for the Board of Directors Meetings of the ACS New York Section for 2021 were selected and approved. The meetings are open to all – everybody is welcome. All non-board members who would like to attend any of the meetings should inform the New York Section office by emailing Bernadette Taylor at btaylor@NewYorkACS.org or by calling the Section office at (732) 770-7324.

Dr. Rita K. Upmacis will chair all the meetings for 2021 which are held online. The board meetings will start at exactly 6:30 PM.

The Board Meeting dates for 2021 are:
Friday, September 10, 2021 Board Meeting
Friday, November 19, 2021 Board Meeting

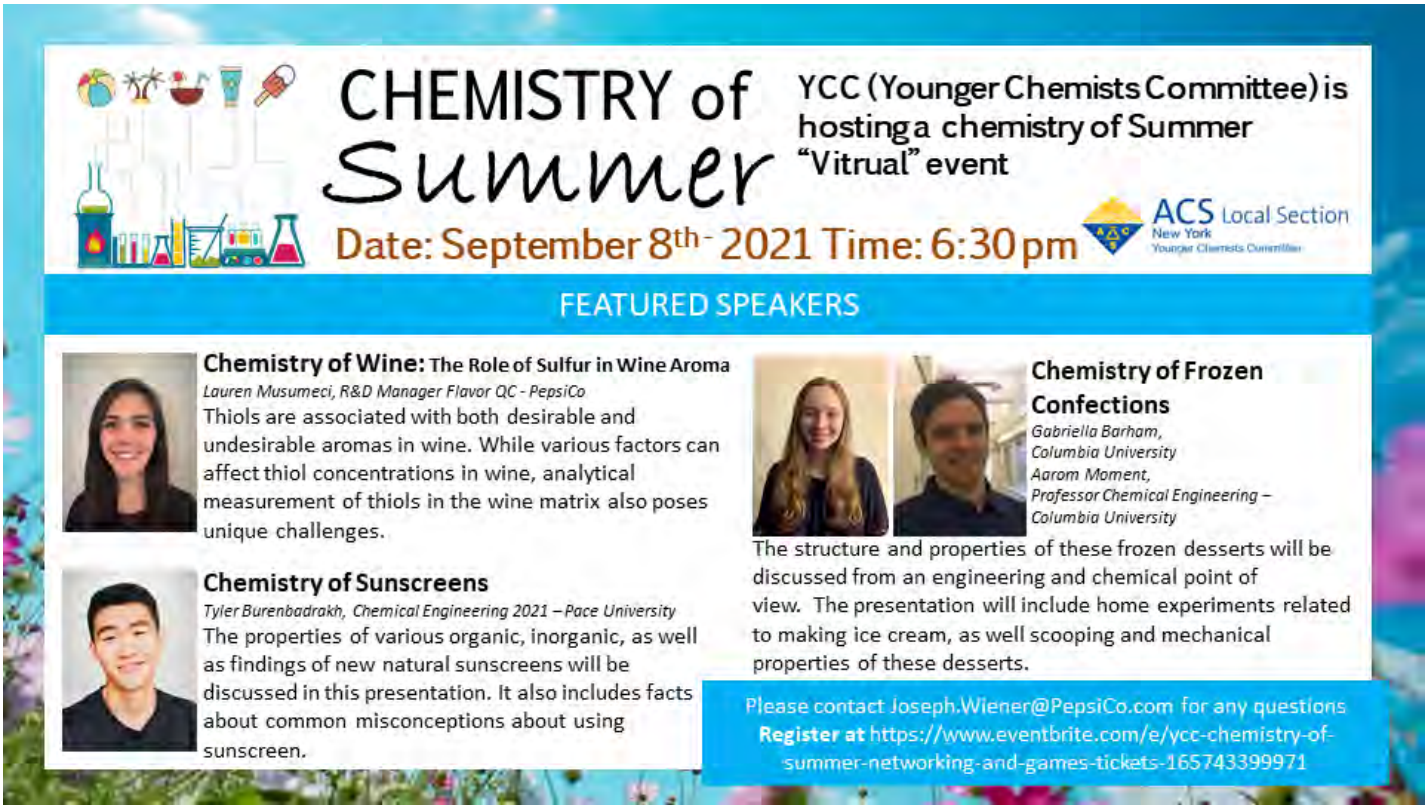
YOUNGER CHEMISTS COMMITTEE

The New York Section's Younger Chemists Committee, YCC, invites all chemists under age 35 to their September 8, 2021 virtual event entitled *Chemistry of* Summer. This event will feature fellow Younger Chemists discussing the Chemistry of Wine, the Chemistry of Sunscreens and the Chemistry of Frozen Confections as shown in the image below.

Meet and network with your colleagues as you dive into the exciting nuances of summer and chemistry, enjoy some fun ice breakers and games, and learn more about your Younger Chemists Committee. and how you can become involved in the NYACS.

Date: September 8, 2021
Time: 6:30 PM

Register here



NATIONAL CHEMISTRY WEEK – CALL FOR VOLUNTEERS & PARTICIPANTS

National Chemistry Week (NCW) is the premier American Chemical Society community outreach program to elementary and secondary school children that delivers positive messages about chemistry and encourages interest in the science, technology, engineering and math (STEM) disciplines. This community-based program unites local sections, student chapters, technical divisions, businesses, schools, and individuals in communicating the importance of chemistry to our quality of life and the role of STEM careers in economic development.

The New York Section NCW committee has is currently organizing its celebration of National Chemistry Week on Sunday October 24, 2021 and is looking for additional volunteers to help make this year's program successful.

The demonstration program will be held virtually and details of the event will follow in the October issue of The Indicator.

Email the Committee

In addition, the NY ACS will offer an illustrated poem contest to K-12 students. **The submission deadline is October 24, 2021**.

For more info

HUDSON-BERGEN CHEMICAL SOCIETY

Mechanisms of protein internalization and degradation at the lysosomes through the ESCRT pathway

Speaker: Dr. Sudeep Banjade
Weill Institute for Cell and Molecular Biology, Cornell University

Abstract: Cells constantly remodel and recycle their components to maintain homeostasis. Among the various mechanisms of this kind of cellular quality control, the multivesicular pathway (MVB) is one of them. Cells use the MVB pathway to transport membrane proteins to the lysosome for degradation and recycling. The ESCRT (endosomal sorting complexes required for transport) machinery is a family of proteins involved in the formation of multivesicular bodies (MVBs).

In addition, the ESCRT proteins are also involved in several other biological pathways beside the formation of MVBs, which include cytokinesis, virus budding, membrane repair and so on. Therefore, the ESCRT complexes work at several locations in the cell to maintain cellular homeostasis. In this talk I will discuss my recent work on understanding some of the physicochemical principles behind the assembly of the ESCRT machinery at membranes. I will also explain how multivalent interactions between one of the ESCRT components (ESCRT-0) and its substrate induces liquid-liquid phase separation (biomolecular condensation) of the components, and how this property may define the initiation of the formation of ESCRT assembly at membranes. The talk will also discuss how multivalent interactions in this system helps efficient ESCRT function in yeast organelles.

HUDSON-BERGEN CHEMICAL SOCIETY

Bio: Dr. Banjade, above, is a Postdoctoral Fellow at the Weill Institute for Cell and Molecular Biology, Cornell University, Ithaca, NY. His research interests include cellular quality control and cellular compartmentalization. He obtained his bachelor's degree at Fairleigh Dickinson University, where he was a Fairleigh S. Dickinson Scholar and an Honors student. He obtained his PhD in Molecular Biophysics at UT Southwestern Medical Center at the Department of Biophysics. His graduate work earned him the Kaluza Award from American Society of Cell Biology (ASCB). His postdoctoral work is supported by Damon Runyon Cancer Research Foundation.

Date: **Thursday, October 21, 2021**
Time: 5:30 PM via Zoom
Cost: Complementary
(reservations required)

RSVP to Dr. Mihaela Leonida or Dr. Ish Kumar
by October 14, 2021

WESTCHESTER CHEMICAL SOCIETY

SPECIAL SEMINAR

Finding Origins of Life in Ancient Biological Electric Wiring

Speaker: Prof. Yana Bromberg, Ph.D.
Professor, Department of Biochemistry and Microbiology, Rutgers University
Adjunct Professor, Department of Genetics, Rutgers University
Hans Fischer Fellow, Institute for Advanced Study, Technical University of Munich
Vice President, Board of Directors of the International Society for Computational Biology

Abstract: How did life appear on our planet? Alexander Oparin's 1924 theory of abiotic evolution of carbon-based molecules in a primordial soup suggests a means to the end. However, the evolutionary path beyond formation of individual molecules remains one of the most profoundly unanswered questions in biology. Although the first self-replicating biological molecules were possibly the catalytic RNA fragments, *i.e.* ribozymes, propagating these ribozymes requires energy. Biologically catalyzed redox reactions, *i.e.* proton coupled electron transfer, drive the energy requirements of all life on Earth. This observation implies that redox reactions must have been among the first (if not *the* first) functionalities acquired by early life. Hence, understanding the evolution of oxidoreductases, *i.e.* the enzymes responsible for the catalysis of redox reactions, potentially can elucidate the origin of life.

WESTCHESTER CHEMICAL SOCIETY

We aimed to explore the patterns of evolution of oxidoreductases. We found that the peptide structures that bind transition metals, ubiquitous in redox, have similar topology across the full diversity of exiting proteins. Moreover, similarity between these structures reflects the environmental (read: Archaean Ocean) availability of key transition metals over geological time – a fossil record of sorts. It also strongly suggests that metal binding had a small number of common origins. We also observed that metal-binding structures central to our network of structural similarities came primarily from oxidoreductases, further confirming the idea that ancestral peptides facilitated electron transfer reactions. Finally, our results suggest that the earliest, biologically-functional peptides were likely available prior to the assembly of the first fully functional protein domains over 3.8 billion years ago.

The work that will be described in this session was performed under the auspices of the ENIGMA (Evolution of Nanomachines In Geospheres and Microbial Ancestors) project which was detailed by Tools of Science in a short YouTube video.

Date: **Wednesday, October 6, 2021**
Time: 7:00 PM
Modality: Hybrid or Zoom-only (TBD)
Cost: Complementary

RSVP by text or email to Rolande Hodel, Peter Corfield, or Paul Dillon for Zoom link

Bio: Dr. Yana Bromberg received her Bachelor degrees in Biology and Computer Sciences from the State University of New York at Stony Brook and a Ph.D. in Biomedical Informatics from Columbia University, New York. She is known for her seminal work on a machine learning-based method for screening for effects of genetic variation (SNAP). This work has led to Dr. Bromberg's current interests in the analyses of human genomes and associated microbial metagenomes for disease predisposition. Broadly, research in the Bromberg lab is focused on the molecular functional annotation of genes, genomes, and metagenomes in the context of specific environments and diseases. The lab also studies evolution of life's electron transfer reactions in Earth's history and as potentially applicable to other planets – a topic that she will discuss today. Dr. Bromberg is frequently invited to talk about her research in conferences all over the world and has, to-date, co-authored over 80 peer reviewed scientific articles. Her work has been recognized by numerous awards, including the NSF CAREER award, the Rutgers Board of Trustees Research fellowship for Scholarly Excellence, the PhRMA foundation young investigator research starter award, and the Hans-Fischer award for outstanding early career scientists. The work has also been funded by various agencies including the NSF, NIH, NASA, and a number of private foundations.

Next Westchester Chemical Society Meeting

Engineering Fluorinated Thermo-Responsive Assembled Protein (F-TRAP) for Theranostic Applications in Glioblastoma Multiforme
Wednesday, November 10, 2021

BIOCHEMICAL TOPICAL GROUP — JOINT MEETING WITH THE NYAS BIOCHEMICAL PHARMACOLOGY DISCUSSION GROUP

Redirected Immune Cell Therapies

Organizers:
Steven Hansel, PhD
Boehringer Ingelheim
Susanne Hipp, PhD
Boehringer Ingelheim
Lance Kam, PhD
Columbia University
Alison Carley, PhD
The New York Academy of Sciences

Speakers:
Keynote
Koustubh Ranade, PhD
Immunocore
Elham Azizi, PhD
Columbia University
Tal Danino, PhD
Columbia University
Saba Ghassemi, PhD
Perelman School of Medicine at the University of Pennsylvania
Morgan Huse, PhD
Memorial Sloan Kettering Cancer Center
Ning Jenny Jiang, PhD,
UT Austin
Paul Parren, PhD
Lava Therapeutics

Emerging science highlights the expanding repertoire of potentially therapeutic immune cells—for example, macrophages and Natural Killer (NK) cells—as well as the strategies employed for immune cell redirection through innovative format design. This symposium will explore basic insights regarding immune-cell trafficking and immunological signaling; multispecific antibody design features enabling optimal biodistribution and activity in target tissues (e.g. solid tumors); and experimental and pharmacokinetic/pharmacodynamic models for more confident clinical translation.

Date: **Tuesday, September 14, 2021**
Time: 10:30 AM – 5:30 PM (reception to follow)
Place: The New York Academy of Sciences Virtual Symposium vie Webcast
Cost: This event has **reduced-rate registration** for ACS and NYAS members, at $85 or $30 (for students and post-docs). Please select the appropriate non-member Registration Category and use the **Priority Code ACS.** Non-members may attend for a fee of $130 (corporate), $105 (non-profit or academic) or $40 (students and post-docs).

For more information and to register for the event, go to: www.nyas.org/redirectimmune

To become a Member of the Academy, visit www.nyas.org/benefits

Future Biochemical Topical Group Meetings

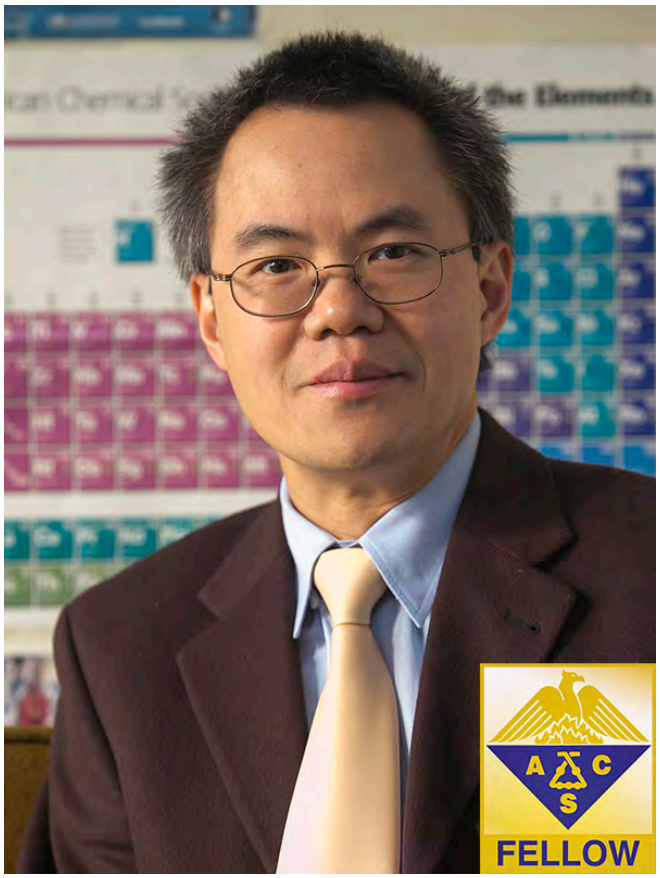
Pulmonary Hypertension: Beyond Vasodilators
Tuesday, October 12, 2021

Covalent Modification: Chemical Biology and Therapeutic Applications
Tuesday, November 9, 2021

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!

STANISLAUS S. WONG, PH.D. NAMED AMERICAN CHEMICAL SOCIETY FELLOW



Join the New York ACS in congratulating our fellow member, Distinguished Professor Stanislaus S. Wong of Stony Brook University and Brookhaven National Laboratory, upon his selection as an American Chemical Society Fellow. This honor recognizes Prof. Wong's outstanding achievements in and contributions to the science and the profession and his equally exemplary service to the Society

An recognized world expert in the practical applications of nanotechnology tailored for energy applications, Prof. Wong has made seminal contributions in controlled chemical functionalization of carbon nanotubes and green synthesis of monodisperse nanostructures of perovskite oxide materials. In addition, he has served in the leadership of two the divisions, Inorganic Chemistry & Energy and Fuels, and several ACS journals including his current efforts as an Executive Editor of ACS Applied Materials & Interfaces.

More online

JOSEPH M. SERAFIN, Ph.D. HONORED WITH 2021 VOLUNTEER OF THE YEAR AWARD FOR THE NEW YORK SECTION

Associate Professor & Chemistry Department Chair Joseph Serafin, Ph.D., of St. John's University has been named the ACS Volunteer of the Year (#ACSVoty) recipient for the New York Local Section. Joe is being recognized for organizing a series of symposia on online teaching and learning in response to the COVID pandemic.

More online

"When you can connect energetic professional volunteers with opportunities to talk about science the sky is the limit."

~Joseph Serafin

Date: Wednesday, September 22, 2021 @ 2-3pm ET
Speakers: Patricia Redden, Saint Peter's University / Joey Ramp, Empower Ability Consulting, LLC / Ashley Neybert, Independence Science
Moderator: Partha Basu, Indiana University-Purdue University Indianapolis

Register for Free!

What You Will Learn:

- What does the Americans with Disabilities Act cover regarding access rights for service dogs
- How is a service dog selected for certain jobs or disabilities, and what type of training is required
- What types of service dogs exist and what is the process to obtain one

Co-produced with: Chemists with Disabilities (CWD) Committee, ACS Department of Diversity Programs, and ACS Diversity, Inclusion & Respect Advisory Board

THINKING ABOUT GRADUATE SCHOOL? FIVE THINGS TO KNOW

1. There are diverse opportunities for graduate studies in chemistry, biochemistry, materials science and engineering that are tailored to different careers. These include the professional science masters, the masters degree, and the doctoral degree.

2. Self-assessment is key. The ChemIDP to a valuable self-assessment tool to evaluate your skills, skill needs, and motivation for graduate study.

3. The Don't panic! Getting into grad school interactive workshop will demystify the types of graduate programs, their application processes, educational experience and career outcomes.

4. Undergraduate research and/or industrial experience can improve your application, but neither is required for admission to graduate school.

5. Students from underrepresented groups in science may also apply for graduate study via the ACS Bridge Program.

STUDENT MEMBERSHIP DRIVE

As part of the its efforts to improve its climate with respect to the diversity, equity, inclusion and respect (DEI&R), the New York Section is inviting its most diverse population – our students – to join the ACS free of charge. Faculty advisors may apply for up to six complementary ACS student memberships to build or strengthen their student chapters.

Apply here by September 15, 2021

This program is supported by a DEI&R grant from the ACS Local Section Activities Committee.

MEET CHEMISTRY PROFESSIONALS AT THE VIRTUAL ICE CREAM NETWORKING EVENT

Being held **Sunday September 12, 2021**, this event allows undergraduates and graduates an opportunity to chat one-on-one with chemistry professionals about their career experiences, areas of expertise, alternative careers, and resources.

More Info

Call for Nominations

OUTSTANDING COLLEGE CHEMISTRY TEACHING AWARDS CALL FOR NOMINATIONS

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

Outstanding Two-Year College Chemistry Teaching Award

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

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

Nominations are due **October 15, 2021**. Candidates need not be members of the ACS. Awardees will be recognized with a major award plaque at the Sectionwide Conference in January 2022. Unsuccessful nominations remain active for three years and updating is encouraged. For more information about the award and the list of former award recipients, please visit the website.

RICHARDS MEDAL NOMINATIONS SOUGHT BY THE NORTHEASTERN LOCAL SECTION OF THE AMERICAN CHEMICAL SOCIETY

Named for the first U.S. chemistry Nobel laureate and given biannually by the Northeastern ACS since 1932, the Theodore William Richards Medal Award honors Conspicuous Achievement in any area of Chemistry. 2017 William H. Nichols Medalist Prof. Chad Mirkin received the last Richard Medal awarded in 2018.

Nominations due **October 31, 2021.**

More info online

ETHICS CHEMLUMINARY AWARD

The ACS Committee on Ethics wants to promote the visibility of the **Outstanding Local Section Programming Related to the Promotion of Ethics in Chemistry** ChemLuminary Award. Their goal is to increase the amount of local section programming involving ethics and the number of nominations received each year.

Nominations due **February 15, 2022.**

More info online

Call for Volunteers

Volunteer Opportunity for ACS Members
Serve as a Virtual Mentor with Students 2 Science!

Can you spare a few minutes of your time? Would you like to inspire students to pursue STEM college and career paths? Students 2 Science is seeking Virtual Mentors to support its signature remote-learning program, the V-Lab program. As a Virtual Mentor, you will live stream into a V-Lab session and talk to students about where you work, your role, the value of STEM in your company, & the value of STEM for the students' future. It's a wonderful way to give back and requires only a few minutes of time commitment via commonly used virtual platforms.

Email for more info

Jobs Board

Starting your career or looking for the next challenge? Have a look at the New York ACS Jobs Board where employment opportunities are posted.

Director, Chemistry, Volastra Therapeutics

Apply here

Sr. Research Scientist I (Associate Director), Process Development, Gilead Sciences

Apply here

Tenure-track Assistant Professor of Chemistry (Analytical) at St. John's University

Apply here by October 1, 2021

Laboratory Technician at St. John's University

Apply here

Sloan Kettering Institute Faculty Recruitment in Chemical Biology

Apply by October 15, 2021

Have a position you need to fill? Email the job posting to Jobs@NewYorkACS.org

CHEMISTRY TEACHERS' CLUB

The Chemistry Teachers' Club and Physics Club of New York will present a series of Zoom talks from September through April.

24 September: Dr. Geoff Raynor-Canham, Grenfell Campus, Memorial University, Newfoundland: "A Novel Course on Women in Science".

8 October: Stephen Cohen, Science and Technical Writer,
"Buried Scientific Treasures"

If you are interested, please contact Dr. John Roeder for Zoom information a week prior to each talk.

COMMITTEE ON THE HISTORY OF THE NEW YORK LOCAL SECTION

Over the past twenty-three years the New York Section has participated in the designation of seven National Historic Chemical Landmarks and four New York Section Historic Chemical Landmarks. A brief description of these National and local section landmarks may be found on the NY Section website under the Committee on the History of the NY Section. These landmark programs recognize achievements in the chemical sciences and related areas, in order to enhance public appreciation for the contributions of the chemical sciences to modern life.

Please consider making a nomination for an historic chemical landmark. The Committee on the History of the NY Section will consider all nominations. In addition to a particular achievement, an historic library, building or association may be worthy of this distinction.
Please send your nomination, with sup porting documentation, to the Chair of the Committee, Dr. Neil Jespersen.

The ACS National Spring Meeting will take place **March 20-24, 2022**, in **San Diego, California**. The meeting will be held in-person and virtual.

Abstracts due October 11, 2021

INNOVATIVE PROJECT GRANT AWARDED TO NEW YORK SECTION FOR THE CHEMISTRY OF LOVE

The IPG funds will support a New York Section program entitled 'The Chemistry of Love' to be held on Valentine's Day 2022. Details will follow in a future issue of The Indicator.

Grant Opportunities

ACS PETROLEUM RESEARCH FUND

Proposals for fundamental research in the petroleum field will be accepted starting on September 20, 2021.

DUE OCTOBER 15, 2021
Learn more

SCIENCE CAFÉ MINI-GRANTS

Local Sections may request $500 to host 2022 Science Cafés in their communities.

DUE OCTOBER 15, 2021
Learn more

NEWS FROM OUR PARTNERS

PROACTIVE MENTORSHIP AND NETWORKING

This Zoom webinar will focus how to grow and manage your professional network, and as well as manage mentor relationships. Attendees will review mentorship do's and don'ts for effective mentor-mentee relationship and how to find and connect with a mentor through meaningful networking strategies. Attendees will also learn how to be proactive in managing relationships and mentorships in order to benefit their professional career development.

More detail here

Biocatalysis and Protein Engineering Meetup

Three rapid-fire talks on the latest research about new exciting enzymes and biocatalytic cascades.

Date: September 23, 2021
Time: 11:00 AM

RSVP

EARLY REGISTRATION DEADLINE – OCTOBER 15, 2021