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THIS MONTH IN CHEMICAL HISTORY

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

In a recent column I made a passing reference to a book that I might have included in my list of Great Books in Chemistry, a book on nomenclature. Upon mature reflection I have decided that the book I referred to in passing is, in fact, well worthy of inclusion in my list. It is the multi-authored "Methode de Nomenclature Chimique" by Guyton de Morveau, Antoine Lavoisier, Claude-Louis Berthollet, and Antoine-Francois Fourcroy, published in 1787. The authors are listed in order of seniority by age. Each of them contributed to the text, but the first listed author, Guyton, was the leading spirit of the enterprise.

Nomenclature may be considered by many as a rather dull subject. But no less an authority than M.M. Pattison Muir, a distinguished historian of chemistry, wrote in his "A History of Chemical Theories and Laws" (1907): "to write a full description of the origin, growth and misadventures of the language of chemistry is to write a history of the science." Full disclosure: I copied this quotation and its source from a marvelous historical work by Maurice P. Crosland titled "Historical Studies in the Language of Chemistry" published originally in 1962 and reprinted by Dover Books, with a new Preface, in 1978. It is out-of-print but worth pursuing in the on-line catalogs of used-book sales sources. Much of this column is derived from Crosland's book and also Volume III of J.R. Partington's "A History of Chemistry".

To understand the significance of the Methode (as I shall refer to it) we must look back to the language of chemistry before its publication, and by that I mean the language of alchemy and chymistry, precursors to the modern science of chemistry. That language abounds with names that refer to incidental properties of elements and compounds: quicksilver for mercury; oil of vitriol for sulfuric acid; sugar of lead for lead acetate; liver of antimony for antimony sulfide; – and the list goes on and on.

One impetus for the reform of chemical nomenclature was surely the reform of botanical nomenclature initiated by Carl Linnaeus in 1758. He introduced and elaborated the now familiar binary Latin names for plants that had previously borne common names not unlike those used by alchemists for chemical materials. The common garden pea becomes Pisum sativum; the ordinary beet is Beta vulgaris. This form of plant nomenclature is in use to this day. Torbern Bergman, a Swedish chemist who knew Linnaeus, was the first to see merit in applying a similar scheme to chemical compounds. He began to call fixed air (carbon dioxide) acidum aeratum (acid air) to describe a chemical property. But his approach lacked consistency.

And so we come to the Methode. Inspired in part by earlier articles by De Morveau it boldly proposes a complete reform of chemical nomenclature, particularly of inorganic compounds, introducing (in French, of course) the binary naming of compounds that we use to this day. Oil of vitriol becomes Acide sulfurique; Acide sulfureux contains less oxygen. Salts formed from the former are Sulfate; the latter Sulfite etc. About a third of the Methode is a comprehensive dictionary showing the equivalence of the new terms to those commonly in use. The new approach was presented to the Academie des Sciences in a lecture delivered by Lavoisier in April 1787 titled "On the necessity of reforming and perfecting the nomenclature of chemistry".

As is usual with any revolutionary idea the reform of nomenclature was not enthusiastically endorsed by many chemists. Resistance in the German speaking States, still holdouts for phlogiston, was especially strong. An interesting comment is contained in a letter written from Paris by Thomas Jefferson in July 1788: "One single experiment may destroy the whole filiation of his terms and his string of sulfates, sulfites…". Jefferson concluded that the reform was premature. Nevertheless as the oxygen theory began to prevail over phlogiston so the new nomenclature began to prevail over the old. And with the introduction of a new symbolism by Berzelius in the early 19th. Century the pathway to the modern expression of chemical names and formulas was beginning to open.

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THE Indicator

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CONTENTS

EDITORIAL DEADLINES

June	April 28
September	July 28
October	August 28
November	September 28
December	October 28
January 2022	November 28, 2021
February 2022	December 28, 2021
March 2022	January 28, 2022
April	February 28
May	March 28

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May Calendar

NEW YORK SECTION

Saturday, May 1, 2021
68th Annual Undergraduate Research Symposium (URS)
See pages 5-7.

Friday, May 7, 2021
Computers in Chemistry Topical Group
See page8 .

Wednesday, May 12, 2021
Westchester Distinguished Scientist 2021 and 2021Student Awards
See pages 9-10.

Thursday, May 20, 2021
Organic Topical Group
See page 10.

also

Fridays, June 4, September 10, November 19, 2021
New York Section Board of Directors Meeting
See page 5.

NORTH JERSEY SECTION

Monday, May 17, 2021
North Jersey Executive Meeting
See page 14.

also

Mondays, June 14, September 27, October 18, November 15, December 13, 2021
North Jersey Executive Meetings
See page 14.

Ad Index

The Indicator **is posted to the web around the 15th of the previous month at**
www.TheIndicator.org

Deadline for items to be included in the JUNE 2021 issue of *The Indicator* is
APRIL 28, 2021

To Comply With the Federal Regulations Regarding Social Distancing Necessitated by the COVID-19 Virus, it became imperative to cancel, postpone or "go viral" all Section Meetings for the past year.

Details of any relevant meetings will appear in the appropriate future issues of *The Indicator*.

New York Meetings

https://www.newyorkacs.org

ACS, NEW YORK SECTION BOARD OF DIRECTORS

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.

Dates of the meetings for 2021 are posted on the New York Section website at **https://www.NewYorkACS.org,** below, and monthly in *The Indicator*. Dr. Rita K. Upmacis will chair all meetings. The board meetings will start at exactly 6:30 PM. Until further notice, meetings will be held on-line. and will start at exactly 6:30 PM.

The Board Meeting dates for 2021 are:

Friday, June 4, 2021 Board Meeting
Friday, September 10, 2021 Board Meeting
Friday, November 19, 2021 Board Meeting

68th ANNUAL ACS UNDERGRADUATE RESEARCH SYMPOSIUM

Organized by the Student Activities Committee of the New Yofk Section

Keynote Addresses:

"Searching for the LEGOS of Life"

Speaker: Dr. Paul G. Falkowski
Rutgers University

and

"Venom to the Rescue: Advancing Biological and Chemical Diversity One Killer Snail at a Time"

Speaker: Dr. Mandë Holford
CUNY Hunter College

The Student Activities Committee of the New York Section of the American Chemical Society would like to invite you to attend the 68th Annual Undergraduate Research Symposium (URS). The symposium provides an excellent opportunity for undergraduate chemistry students in the New York Metropolitan Area to present the results of their research. A remarkable feature of this meeting is that some of the students are also engaged as moderators of the scientific presentations in a variety of chemistry disciplines. Due to the Covid-19 Pandemic, this year's symposium will be online. Presenters are asked to register as 'Student'. Students that wish to attend the event but are not presenting may register as 'Guests'.

Date: Saturday, May 1, 2021,
Time: 9:00 AM – 12:30 PM
Place: Online

Registration and Abstract Submission:
http://newyorkacs.online/URS/ (everyone who plans to attend must register)

Abstract Submission Deadline: April 2, 2021 (use template file)

Registration Deadline: April 16, 2021

Looking forward to seeing you at the 68th Annual URS!

Dr. Michele Vittadello
CUNY Medgar Evers College

Dr. Naphtali O'Connor
CUNY Lehman College

Dr. Pratikkumar Rathod
CUNY La Guardia Community College

Dr. Kevin Mark
CUNY La Guardia Community College

Co-Chairs, ACS NY Section,
Student Activities Committee

See flyers on pages 6 and 7 and Call for Abstracts on page 16.

ACS Chemistry for Life®

68th ANNUAL UNDERGRADUATE RESEARCH SYMPOSIUM

Organized by the Student Activities Committee of the New York Section of the American Chemical Society

Saturday, May 1st, 2021

9:00 a.m. – 12:30 p.m.

Register for the event at http://newyorkacs.online/URS/

Speaker

Dr. Paul G. Falkowski

Institute of Marine and Coastal Sciences
Department of Chemistry and Chemical Biology
Rutgers University

Paul G. Falkowski is the Bennett L. Smith Professor of Business and Natural Resources at Rutgers University. His research interests include evolution, paleoecology, photosynthesis, biophysics, biogeochemical cycles, symbiosis and sustainable energy. Born in 1951 and raised in New York City, Falkowski earned his B.S. and M.Sc. degrees from the City College of the City University of New York and his Ph.D. from the University of British Columbia. He has received numerous honors, including the 2018 Tyler Prize for Environmental Achievement (often described as the 'Nobel Prize for the Environment'), and is a member of the U.S. National Academy of Sciences. He has authored or coauthored over 360 papers in peer-reviewed journals and books. Together with John Raven, he is co-author of a textbook, Aquatic Photosynthesis (Princeton University Press), and the sole author of the popular science book, Life's Engines. He is the founding Director of the Rutgers Energy Institute and heads the Environmental Biophysics and Molecular Ecology program at Rutgers University.

Searching for the LEGOS of life

The black hole of chemistry is the origin of life. Over the past two centuries, many chemists have attempted to understand how molecules can both become replicative and catalytic, but we have, thus far failed to understand autocatalysis that can lead to a system of reactions far from thermodynamic equilibrium. In this talk I will discuss the distance between applied and theoretical chemistry, and most importantly, what questions each of us asked, and have answered, when we were six years old.

Speaker

Dr. Mandë Holford
Department of Chemistry
Hunter College – CUNY

Mandë Holford is an associate professor of chemistry at Hunter College and the Graduate Center, CUNY, with scientific appointments at the American Museum of Natural History and Weill Cornell Medicine. Her joint appointments reflect her interdisciplinary research, which combines chemistry and biology to discover, characterize, and deliver novel peptides from venomous marine snails as tools for manipulating cellular physiology in pain and cancer. She is a World Economic Forum New Champion Young Scientist, as well as the recipient of the prestigious Camille Dreyfus Teacher-Scholar Award and an NSF CAREER Award. Holford is active in science education, advancing public understanding of science, and science diplomacy. She cofounded several initiatives, including KillerSnails.com, an award-winning learning-games company that uses extreme creatures as a conduit to advance scientific teaching and learning, and RAISEW.org, an NSF project to increase women's involvement in science.

Venom to the Rescue: Advancing Biological and Chemical Diversity One Killer Snail at a Time

Animal venoms are comprised of a diversity of peptides that manipulate molecular targets such as ion channels and receptors, however, identifying bioactive peptides still remains a significant challenge. Breakthrough technological advancements have enabled interdisciplinary studies using genomics, transcriptomics, and proteomics to expand venom investigation to animals that produce small amounts of venom or lack traditional venom producing organs. One group of non-traditional venomous organisms that have benefitted from the rise of -omic technologies is the Terebridae (auger snails). A venomics strategy has been applied to the discovery, characterization and optimization of Terebridae venom peptides, teretoxins. Venom peptides, like teretoxins, and the genes from which they are derived, are a resource for investigating biological processes pertaining to organismal evolution (adaptive radiation, diversification), gene development (duplication, neofunctionalization), and cellular physiology involving ion channels (activating/inhibitory ligands). This talk will demonstrate the scientific path *from mollusks to medicine* examining how venom evolved over time in the Terebridae and using this evolutionary knowledge as a roadmap for discovering and characterizing new compounds with therapeutic potential for treating pain and cancer.

SIGNIFICANT DATES FOR 68th URS

Deadline for Symposium Registration – April 16, 2021

2021 Co-chair
Dr. Michele Vittadello
Medgar Evers College - CUNY
mvittadello@mec.cuny.edu

2021 Co-chair
Dr. Naphtali O'Connor
Lehman College - CUNY
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2021 Co-chair
Dr. Pratikkumar Rathod
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2021 Co-chair
Dr. Kevin Mark
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Deadline for items tobe included in the JUNE 2021 issue of *The Indicator* is

APRIL 28, 2021

ACS Chemistry for Life®

American Chemical Society's New York Section, Inc.

NewYorkACS.org

Computers in Chemistry Topical Group

Spring 2021 Seminar Series via Zoom
Fridays monthly at 11:00am

Register in advance to receive the seminar link:
https://us02web.zoom.us/meeting/register/tZMldO6grDMoE9S-QaxgrYP62X3pqC4b0RGW

After registering, you will receive a confirmation email containing information about joining the meeting.

May 7th, 2021

Dr. Mateusz Marianski
Assistant Professor of Chemistry

2020 ACS NEW YORK SECTION TOPICAL GROUP – COMPUTERS IN CHEMISTRY

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DR. YOLANDA SMALL
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Co-Chair
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New Jersey City University
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Jersey City, NJ 07305
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WESTCHESTER CHEMICAL SOCIETY

Related to the next story, our Distinguished Scientist 2015, Dr. Kenrick Lewis, also of Momentive Performance Materials, was recently honored by a short, mostly scientific biography:

Paul J. Chiric, "Pioneers and Influencers: A Profile of Dr. Kenrick Lewis" on the Editor's Page in *Organometallics*, Vol. 40, pp, 459–462 (February 2021).

WESTCHESTER CHEMICAL SOCIETY

Distinguished Scientist Award and Student Achievement Awards Dinner Meeting:

"Trisiloxane Alkoxylates as Adjuvants for Agriculture"

Speaker: George A. Policello
Research Fellow
Momentive Performance Materials
769 Old Saw Mill River Road
Tarrytown, NY

DISTINGUISHED SCIENTIST 2021:

Mr. George Policello for *Contributions to the Development of Trisiloxane Alkoxylates in Agriculture.* Mr. Policello had been selected as our 2020 Distinguished Scientist. Because of the Covid-19 pandemic, the Westchester Chemical Society Board of Directors had to cancel the 2020 presentation of their Distinguished Scientist Award.

Abstract:
Trisiloxane-based surfactants have been used for over 35 years as spray adjuvants for agricultural applications. Relative to conventional adjuvants, trisiloxane surfactants provide an extremely low aqueous surface tension (~21 mN/m at 0.1%). This surface activity, coupled with a compact hydrophobe (trisiloxane portion of the molecule), makes these unique surfactants "Super-spreaders", where the spray droplet is transformed into a thin film on the leaf surface. Therefore, trisiloxane solutions easily wet almost any waxy leaf surface, and the overall coverage on a target plant is significantly increased. This results in spray volume reductions of up to 90%, benefiting areas where water is in short supply. Additionally, a reduction in water usage allows the grower to treat more acres per tank-load, thereby saving time, labor and energy.

Another extraordinary property of trisiloxane surfactants is their ability to promote rapid uptake of spray solutions via stomatal flooding in as little as 20 seconds. Active ingredients taken up into the plant via this pathway become immediately rainfast (resistant to wash-off), thereby reducing waste, and in some cases allowing for a reduction in pesticide usage.

Silwet L-77 adjuvant was the first trisiloxane-based surfactant developed for agricultural applications. This unique class of "Super-spreading" wetting agents was introduced into agriculture in 1985, in response to the inability of many herbicides to control gorse (Ulex europaeus), a noxious invasive weed in New Zealand. Union Carbide, in collaboration with the Forest Research Institute in NZ, quickly realized that Silwet L-77 adjuvant significantly enhanced the performance of herbicides that were previously incapable of controlling gorse. In fact, only Silwet L-77 adjuvant had the ability to effectively wet the waxy surface of gorse, thereby enabling a 70% reduction in pesticide requirements, while delivering effective control.

This presentation will detail the historical development of "Super-spreading" trisiloxane-based wetting agents, including examples illustrating how commercial growers use such surfactants as a regular part of their spray program, including their use in organic farming.

Biography:
George Policello is a Technology Research Fellow with Momentive Performance Materials, in Tarrytown, NY. His primary responsibilities include the direction of new product development and platform technology research programs focused on agricultural applications that enable decreased agricultural spray volumes, reduced active ingredient dosage, and improved spray control and efficiency.

George began his career in 1980 with Union Carbide in Tarrytown, focusing on the synthesis of organomodified silicones for a broad range of applications, including coatings, textiles and personal care. In 1985 he joined Lever Research in Edgewater NJ, where he studied the interactions between polyether-modified silicone surfactants and conventional wetting agents. He rejoined Union Carbide in 1987 (subsequently Crompton Corporation, OSi Specialties, GE Silicones, and Momentive Performance Materials) where he has since been responsible for the development of silicone surfactants, specifically trisiloxane alkoxylates as agricultural

(continued on page 10)

WESTCHESTER CHEMICAL SOCIETY

(continued from page 9)

spray adjuvants. George has contributed to the understanding of the super spreading mechanism associated with these unique surfactants, as well as the role of spreading on the uptake and efficacy of agrochemicals on and into foliar surfaces. Additionally, his research on surfactant-pair interactions between trisiloxane alkoxylates and conventional surfactants has added to the understanding of how dynamic surface tension influences spray droplet adhesion on leaf surfaces.

George graduated from Mercy College in Dobbs Ferry, NY in 1979 with a Bachelor of Science degree in Biology. He holds more than 45 patents related to silicone surfactants and agricultural applications, and is the author of more than 70 external publications and presentations. Additionally George has been involved with the Silicones Environmental Health and Safety Council (SEHSC), and the Counsel of Producers & Distributors of Agrotechnology (CPDA).

Date: **Wednesday, May 12, 2021**
Time: Opens 6:45 PM EDT;
Meeting 7:00 (US and Canada)
Place: Cloud HD Video Meeting using a Zoom Cloud Platform
Cost: Free and open to the public

No password needed.
Join URL:
https://sunywcc-edu.zoom.us/j/81235674781

For further information: contact Rolande Hodel, Rolande Hodel, **rrhodel@aol.com**,

Or

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Phone 1-914-393-6940

ORGANIC TOPICAL GROUP — JOINT MEETING WITH THE NEW YORK ACADEMY of SCIENCES CHEMICAL BIOLOGY DISCUSSION GROUP

Chemical Biology Discussion Group Year-End Symposium

Organizers: Yael David, PhD
Memorial Sloan Kettering Cancer Center

Tania Lupoli, PhD
New York University

Allie Obermeyer, PhD
Columbia University

Barbara Knappmeyer, PhD
The New York Academy of Sciences

Sonya Dougal, PhD
The New York Academy of Sciences

Speakers: Matthew Bogyo, PhD
Stanford University School of Medicine

Shiva Malek, PhD
Genentech

The Chemical Biology Discussion Group brings together chemists and biologists interested in discussing the latest breakthroughs. This year, the annual year-end meeting features two keynote speakers: Dr. Matthew Bogyo of Stanford University and Dr. Shiva Malek of Genentech.

Date: **Thursday, May 20, 2021**
Time: 1:00 – 5:30 PM
Place: Virtual Symposium (Webcast)
The New York Academy of Sciences
7 World Trade Center
250 Greenwich Street – 40th Floor
New York, NY 10007

Abstract Submission Deadline:
March 19, 2021

Opportunities for Short Talks!

Cost: For full details on pricing, please visit **www.nyas.org/ChemBio2021**. ACS members may use the Priority Code ACS to avail of NYAS member pricing.

For more information and to register for the event, go to: **www.nyas.org/ChemBio2021**

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

CANDIDATES FOR THE NY SECTION 2021 ELECTIONS

At the January 2021 Section-wide Conference, the Nominating Committee presented the candidates for office for the 2021 elections. The biographies of the candidates will be posted on the New York Section website at **https://www.newyorkacs.org/documents/2021_Candidates.pdf**

The Board of Directors extends a sincere thank you to the following candidates for accepting the nomination to run for office, and encourages ACS New York Section members to vote for these worthy candidates.

Electronic ballots will be sent to the membership in mid-April using SurveyMonkey and voting will be conducted according to ACS guidelines for confidentiality and security. If your e-mail address has changed, please update it on the ACS website. If no e-mail address is associated with your membership number, a paper ballot will be sent to you automatically. Members that do have an e-mail address associated with their membership number will be asked in the email if they prefer a paper ballot.

To receive all electronic messages from your New York Section, please be sure that your e-mail account will accept messages from **elections@newyorkacs.org**. Also, if you have opted-out of SurveyMonkey in the past, please opt-in **by April 21, 2021** for the election.

Members requesting paper ballots will receive them by May 1, 2021. If any member does not receive voting materials **by May 1**, please contact the New York Section Office at 732-770-7324 or **btaylor@newyorkacs.org**

The Candidates are:

Chair-Elect for 2020 (Vote for 1)
Ping Furlan,
United States Merchant Marine Academy

Mary Virginia Orna,
College of New Rochelle

Treasurer for 2022 and 2023 (Vote for 1)
Rakhi Agarwal,
Nassau Community College

Brian Gibney,
Brooklyn College; The City University of New York

Director-at-Large for 2022 (Vote for 3)
Jaclyn Catalano,
Montclair State University

Ronald D'Amelia,
Retired

Nadja Grobe,
Supervisor Research Laboratory,
Renal Research Institute

Aaron Moment,
Columbia University

Joseph Ulichny,
Columbia University

Joseph Wiener,
PepsiCo.

Councilor for 2022-2024 (Vote for 3)
Donald Clarke,
Fordham University

Barbara Hillery,
SUNY Old Westbury

Pamela Kerrigan,
College of Mount Saint Vincent

Ruben Savizky,
The Cooper Union

Joseph Serafin,
St. John's University

Rita Upmacis,
Pace University

Alternate Councilor for 2022-2024 (Vote for 2)

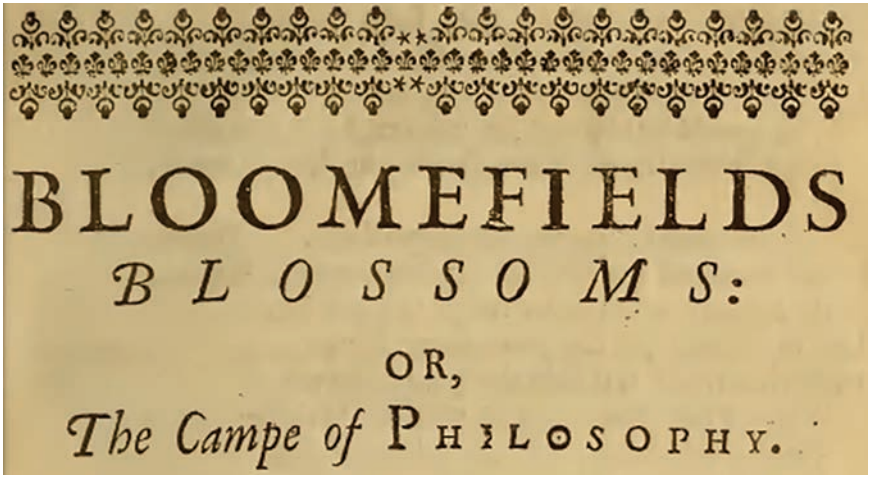
Robert Nolan,
CUNY Graduate Center

Anne O'Brien,
Retired

WESTCHESTER CHEMICAL SOCIETY

On Tuesday, April 6, 2021, the Westchester Chemical Society (WCS) held a remote (Zoom) meeting.

Jennifer M. Rampling, Ph.D., an Associate Professor of History, at Princeton University, Princeton, NJ spoke on "How to Make Gold and Influence People: Prisons as Sites of Alchemical Practice in Early Modern Europe." Dr. Rampling's talk explored a neglected but fascinating theme in the history of alchemy—the strategies used by alchemical practitioners to extricate themselves from prison. In early modern Europe, alchemists found themselves incarcerated for various reasons. Although basically illegal (because fears that cheap and/or bogus coinage metals could debase coinage), alchemists were not generally jailed for the practice of alchemy. Some failed to make good on their gold-making promises, some were suspected of practicing magic (although some alchemists were also interested in magic, alchemical practice was usually physical, i.e. natural not supernatural), and others simply fell into debt. Some were jailed for using bogus coinage metals to counterfeit coins, often interpreted as treason. Once confined, some drew on their practical and rhetorical skills to write their way out of trouble, addressing petitions and alchemical treatises to princes and highly-placed figures in government. Perhaps surprisingly, they often ended up being released. Often, monarchs hoped to increase their wealth with alchemically derived coinage metals. Dr. Rampling focused on English practitioners, starting in the fourteenth century when John of Walden fell foul of Edward III, and moved into the sixteenth century, when at least two alchemists were arrested as suspected conjurors under Henry VIII. Finally, the notorious Edward Kelley, best known for his collaboration with the mathematician John Dee, wrote a series of elaborate treatises to Emperor Rudolf II while imprisoned in Bohemia. Although Kelley's "prison writings" have not been previously studied, they offer new evidence for his alchemical experiments—and show how the promise of transmutation might offer a "get out of jail free" card for beleaguered alchemists. Kelly, although a commoner, had passed himself off as of noble birth and was, for a time, on the Privy Council of the Holy Roman Empire. Of great interest during the talk, Dr. Rampling had photos of alchemical treatises and letters, some done in prison. She even had the cover and extracts from a book of alchemical poetry, "Bloomfield's Blossoms Or, The Camp of Philosophy", by an English Alchemist, William Bloomfield:


BLOOMEFIELDS

BLOSSOMS:

OR,

The Campe of PHILOSOPHY.

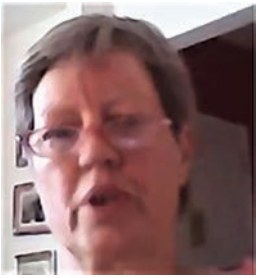
The Cover of Bloomfield's Blossoms

Dr. Rampling studies the history of late medieval and early modern science and medicine, specializing in alchemy. She is the author of "The Experimental Fire: Inventing English Alchemy, 1300–1700" (Chicago, 2020, available on Amazon and Barnes & Noble), as well as numerous articles on alchemical theory and practice, including that of George Ripley (fl. 1470s) and John Dee (1527–1609). From 2013–17 she edited the history of chemistry journal, Ambix.

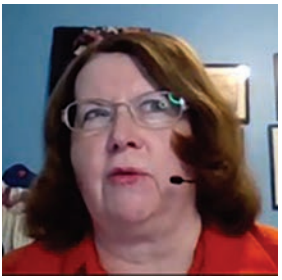
After the talk, there was an enthusiastic and very informative question and answer period. One of the attendees praised and recommended Dr. Rampling's book.

Below are screen shots (all courtesy of Paul Dillon) of the speaker, Jennifer Rampling, Ph. D., the Westchester Chemical Society (WCS) co-chairs, Paul Dillon, Ph. D. and Rolande Hodel, Ph.D., the WCS treasurer and education secretary, Peter Corfield, Ph. D., the WCS recording secretary, Kay Whiten, M.S. the WCS assistant program director, Jason Poland, M.S., and a WCS director-at-large, Sr. Mary Virginia Orna, Ph.D., followed by a gallery shot of those attending with video cameras on. Some of the screen shots were taken during the meeting and some from its recording (courtesy of Rolande Hodel).

Jennifer Rampling



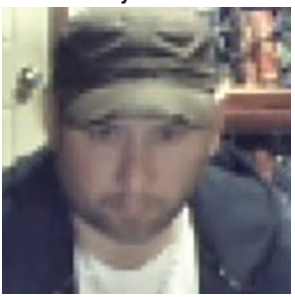
Rolande Hodel



Kay Whiten

Paul Dillon

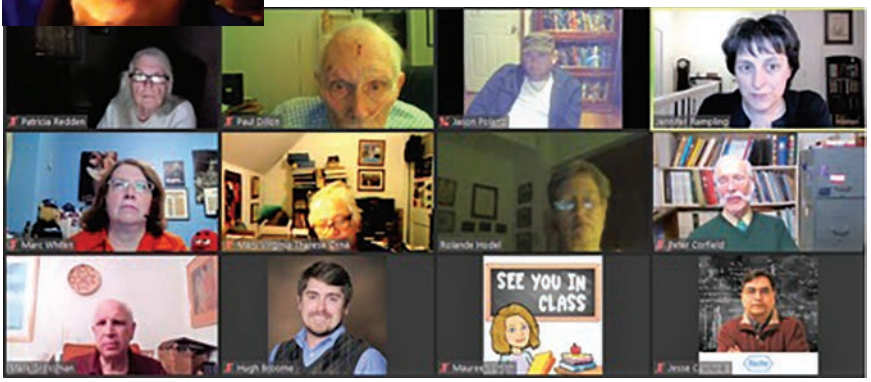
Peter Corfield



Jason Poland

Mary Virginia Orna (left)

Gallery shot of participants (below)



North Jersey 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 below table for the 2021 meeting dates. All ACS 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**.

There are no other Subsection meetings scheduled for March.

2021 ACS North Jersey Local Section Executive Committee Meetings (virtual) Schedule

Month	Meeting Date Time: 7-9 PM EST (virtual)
May	Monday, May 17, 2021
June	Monday, June 14, 2021
September	Monday, September 27, 2021
October	Monday, October 18, 2021
November	Monday, November 15, 2021
December	Monday, December 13, 2021

Deadline for items to be included in the JUNE 2021 issue of *The Indicator* is APRIL 28, 2021

Call for Nominations

COMMITTEE ON THE HISTORY OF THE NEW YORK 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 Home Page at **http://newyorkacs.online/history/** 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 supporting documentation, to the Chair of the Committee, Dr. Neil Jespersen, at **jespersn@stjohns.edu**

ACS NEW YORK SECTION'S OUTSTANDING SERVICE AWARD FOR 2021

Each year the New York Section presents the Outstanding Service Award to a very deserving member of the section. Many members of the New York Section provide their time, leadership, talent and educational skills to the New York Section. The tradition of excellence of the New York Section is attributable directly to the cumulative effect of these individuals. Please help the New York Section to recognize the efforts of our colleagues by nominating them for this award.

Nominations will be reviewed by a committee consisting of the previous five winners of the award. The Outstanding Service Award for 2021 will be presented at the New York Section's Sectionwide Conference in January 2022.

A Nomination letter with including up to two letters of recommendation per nominee should be emailed to the Office Administrator, Ms. Bernadette Taylor at **btaylor@newyorkacs.org**

For more information about the award along with a list of former award recipients, please visit the ACS New York Section's website: **https://newyorkacs.online/osa/**

THE WILLIAMH. NICHOLS MEDAL AWARD FOR 2022

The New York Section is accepting nominations for the William H. Nichols Medal Award for the year 2022. This distinguished award, established in 1902 by Dr. William H. Nichols, for the purpose of encouraging original research in chemistry, is the first award authorized by the American Chemical Society. It is presented annually in recognition of an outstanding contribution in the field of chemistry, and consists of a gold medal, a bronze replica and a cash award. The medals are presented at the William H. Nichols Meeting that consists of a Distinguished Symposium related to the medalist's field of expertise and a Medal Award dinner.

Investigators who have published a significant and original contribution in any field of chemistry during the five calendar years preceding the presentation meeting are eligible for consideration by the Nichols Medal Jury. Each nomination requires a completed Nomination Form, biographical and professional data, and seconding letters. Since the nomination procedure will now utilize the New York Section website, please access the forms and instructions here: **https://newyorkacs.org/documents/Nichols_Nomination_Form.doc**

Nominations must be received by May 31, 2021.

The Nichols Medal Award Jury will meet in June 2021 to select the Nichols Medalist for 2022.

Nominations remain active for a period of five years and additions may be made during that time. After five years, a new nomination is required. The list of previous Nichols Medal recipients can be found on our website: **https://www.newyorkacs.org/nicholsmedalists.html**

Questions regarding the nomination procedure should be directed to **Nichols_medal@newyorkacs.org**

AMERICAN CHEMICAL SOCIETY'S NEW YORK SECTION, INC. — NICHOLS FOUNDATION HIGH SCHOOL CHEMISTRY TEACHER AWARD FOR 2021

The New York Section of the American Chemical Society invites high school principals, science supervisors, and teachers in the greater New York area to nominate a candidate for the 2021 Nichols Foundation Chemistry Teacher Award. The New York Section, through the generosity of the Nichols Foundation, Inc., presents a cash award and an ACS plaque to a teacher who has made an outstanding contribution to chemical education at the high school level. The award will be presented at the ACS, New York Section's Section-wide Conference in early 2022.

NOMINATE A COLLEAGUE – DEADLINE JUNE 15, 2021

Information about the award and nomination details can be found at the New York Section website at: **https://newyorkacs.online/nichols_high_school_teacher/**

We invite you to nominate a deserving chemistry teacher by filling in the nomination form at

https://forms.gle/3EYtpdaM3ttn61oZ8

For more information contact:

Stephen Radice
Chair Nichols Award for High School Teaching, **chemone@hotmail.com**

(continued on page 16)

CALL FOR NOMINATIONS

(continued from page 15)

2021 UNDERGRADUATE AND GRADUATE STUDENT AWARDS IN APPLIED SPECTROSCOPY

Society for Applied Spectroscopy, New York/New Jersey Section

The New York/New Jersey Section of the Society for Applied Spectroscopy (NYSAS) is pleased to announce the Undergraduate and Graduate Student Awards program for Academic Year 2020 - 2021. The NYSAS is seeking nominations for its annual Student Awards that recognize excellence in the field of Applied Spectroscopy. The field of Applied Spectroscopy is broadly defined, and includes the use of traditional atomic and molecular spectroscopic techniques as well as the use of spectroscopic detectors in hyphenated instruments, microscopy, imaging and related fields.

One graduate and up to five undergraduate awards will be presented. Each candidate should be an undergraduate in at least their junior year or a graduate student majoring in science or engineering. The graduate awardee will receive a $250 cash award, a plaque and a one-year membership to the SAS. Each undergraduate awardee will receive a $100 cash award, a plaque and a one-year membership to the SAS.

Applications must include the following items:

a) A letter of nomination from the student's research advisor or from an authorized representative of an industrial sponsor of the student's research. (Students are not permitted to self-nominate.)

b) Letters of recommendation from at least one additional faculty member or other scientists who are familiar with the quality of the student's work.

c) Transcripts that document all university credits (unofficial transcripts are acceptable).

d) A one-page summary of the research project written by the student including reference to any of the student's published work, demonstrating applicability of the research to the field of applied spectroscopy.

e) Telephone numbers, addresses and e-mail addresses of both the student & research advisor.

Electronic submission is preferred. Please use the subject line **"NYSAS Award: Last name"**

The deadline for receipt of completed applications is **Friday, May 21, 2021**.

Please email nominations directly to:

Michael Cutrera, NYSAS Student Award Committee email:
miterconsultants@verizon.net

Call for Abstracts

68th ANNUAL ACS UNDERGRADUATE RESEARCH SYMPOSIUM

Organized by the Student Activities Committee of the New Yofk Section

Keynote Addresses:

"Searching for the LEGOS of Life"

Speaker: Dr. Paul G. Falkowski
Rutgers University

and

"Venom to the Rescue: Advancing Biological and Chemical Diversity One Killer Snail at a Time"

Speaker: Dr. Mandë Holford
CUNY Hunter College

Date: Saturday, May 1, 2021,
Time: 9:00 AM – 12:30 PM
Place: Online

Registration and Abstract Submission:
http://newyorkacs.online/URS/ (everyone who plans to attend must register)

Abstract Submission Deadline: April 2, 2021 (use template file)

Registration Deadline: April 16, 2021

Looking forward to seeing you at the 68th Annual URS!

See complete materials on pages 5-7.

Call for Volunteers

OPPORTUNITY FOR ACS MEMBERS TO AID STUDENTS 2 SCIENCE IN A HYBRID VIRTUAL LAB PROGRAM

Can you spare a few hours of your time? Do you like working with students and would you like the opportunity to share your science knowledge in a classroom? Students 2Science (S2S) is seeking volunteers to support its V-Lab program. S2S has a series of elementary, middle, and high school experiments that run in various schools across New Jersey. Members are especially needed to mentor students in participating schools to help with experiments. It's great fun, a wonderful way to give back, and only requires

1-2 hours of your time. Experiments include CO_2 to the Rescue, Curious Crystals, Mystery of M&Ms, Thermochemistry: *Exothermic and Endothermic Chemical Reactions, and Glow it Up: The Chemistry of Luminol.* All are age-appropriate and volunteers are provided with instructions on how to support in the classroom prior to your scheduled volunteer day.

For more information, contact Cyndi Roberson, Director of Corporate Relations, at (973) 947-4880 ext. 516 or visit the website to register for the upcoming school year: **https://www.students2science.org**.

SEMINAR SPEAKERS WANTED

The New York Section of the ACS is in search of speakers that we can add to our Speakers Bureau database of interested local area 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 contact the New York Section Office at (732) 770-7324 or send an email to Bernadette Taylor **btaylor@NewYorkACS.org** with the following information that will be posted on the Section's website: your name, affiliation, a 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 our other members!

Call for Applications

FREDDIE AND ADA BROWN AWARD

This Award recognizes and encourages high achieving middle- and high-school students, of African American and Native American heritage, to further develop their academic skills, with views on careers in the chemical sciences.

Award Amounts

Middle School $100.00 Check and $50.00 gift certificate : High School $200.00 Check and $100.00 gift certificate.

Who is Eligible

Middle School students enrolled in a science class : High School students who have completed a chemistry course

Grades

Middle School B Average or better in Science, B Average overall : High School B Average in Chemistry, B Average overall

Letter of Recommendation

Math or Science/Chemistry Teachers or Guidance Counselor

Statement

Middle School “Why I Like Science” : High School “Why I Like Chemistry”

Selection Criteria

Applicants must be African American (Black) or Native American (including Pacific Islander) or of mixed race.

Transcript

Official transcript required.

Financial Need

Not Required.

Applications available on the web: **www.njacs.org/freddieadabrown** or from your school guidance office.

Return Application To

Freddie and Ada Brown Award, NJACS Section Office, 49 Pippens Way, Morristown, NJ 07960

Due Date

Completed Applications must be postmarked no later than **March 31 Annually**

Questions: Contact Jeannette Brown **Jebrown@infionline.net** or (908) 239-1515.