

American Chemical Society North Jersey Section 2019 Baekeland Award Symposium



Friday, November 15, 2019 • 1:00 pm – 6:00 pm

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by the initiative, creativeness, leadership, and perseverance of the individual and indicated by published or unpublished evidence.

Agenda

- 1:00 Registration
- 1:30 **Welcome Address**
Dr Cecilia Marzabadi, *Baekeland Symposium Chair*
- 1:40 **Professor Sidney M. Hecht**
Protein Synthesis with Non-canonical Amino Acids In Vitro and In Vivo
- 2:20 **Professor Dinshaw Patel**
Structural Biology of CRISPR-Cas Surveillance Complexes
- 3:00 **Professor Amanda Garner**
Chemical Probing of Coding and Non-Coding RNA Biology
- 3:40 Break / Refreshments
- 4:10 **Professor James P. Collman**
From Theory to Practice: Invention of Reversible Respiration Inhibitors
- 4:50 **Remarks and Baekeland Award Presentation**
Dr. Katherine Lee, *ACS Director, District 1*
Dr. Amjad Ali, *NJ-ACS Section Chair*
- 5:00 **Keynote: Professor Neal K. Devaraj**
Exploring the Lipid World
- 5:50 **Closing Remarks**
Dr. Les McQuire, *NJ-ACS Awards Chair*

Speakers



Neal K. Devaraj, PhD
Professor of Chemistry
University of California, San Diego
Keynote Speaker
2019 Baekeland Award Winner



Sidney M. Hecht, PhD
Director, Bidesign Center for BioEnergetics
Professor, School of Molecular Sciences
Arizona State University



Dinshaw Patel, PhD
Professor and Abby Rockefeller Mauzé
Chair in Experimental Therapeutics
Memorial Sloan Kettering Cancer Center,
Sloan Kettering Institute



Amanda Garner, PhD
Assistant Professor of Medicinal Chemistry
College of Pharmacy,
University of Michigan



James P. Collman, PhD
George A. and Hilda M. Daubert
Professor of Chemistry, Emeritus
Stanford University



Registration Fee: \$15 professionals; \$5 students, retirees, unemployed
Online registration required by November 8, 2019 at www.njacs.org/baekeland due to limited seating.
Campus Directions: www.njacs.org/fdu-florham-directions

www.njacs.org

Questions? Contact Dr. Cecilia Marzabadi (emarzabadi@njacs.org), Chair of the 2019 Baekeland Award Committee

Organizing Committee: Miriam Gulotta, Alan Cooper, Jackie Erickson, Marilyn Gorman, Amjad Ali, Bettyann Howson, Ron Kong, Diane Krone, Les McQuire, Bill Suits, Mohammed Elshaer, Paul Tukey

www.theindicator.org
www.njacs.org www.newyorkacs.org

See article on page 5.

THIS MONTH IN CHEMICAL HISTORY

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

In a change of subject for this month's column I am setting aside the interesting volumes of Science Record for the early 1870s and turning to a pamphlet from 1899 that I recently acquired (to be honest – a reprint of that pamphlet). It is titled "The Elements of Blowpipe Analysis" and is by Frederick Hutton Getman (1877 – 1941). The author came from a comfortable family but chose to pursue science rather than follow his father into the lumber business. He obtained a doctorate in physical chemistry from Johns Hopkins University. He taught there and at Columbia. He authored a life of Ira Remsen, one of the leading chemists in the U.S. at the time, with whom he worked; He also co-authored a Table of Electrochemical Equivalents.

The reason why this pamphlet attracted my attention was that it recalled the many hours I spent as an adolescent practicing blowpipe analysis. And I'm not writing about the 19th. Century but rather the 1940s. I've always been interested in chemistry, and when I read about blowpipe analysis in a manual of mineralogy it occurred to me that it was the kind of thing I could do with only a modest investment. The basic equipment for this analytical method is a blowpipe, usually a curved metal tube with a small hole at its end; a substrate, usually a charcoal block (I couldn't afford platinum foil, even if it had been available); and a few simple chemicals including washing soda and borax. There was a pharmacy in my home town, well-known to all budding chemists and pyrotechnic wizards, that would supply, at modest cost, many kinds of chemicals and simple equipment. One further essential was, of course, a flame source. At the beginning of my investigations this was an alcohol lamp. Later, after (with my parents' blessing) we put in a T joint and tapped into the supply pipe to the gas heater in my bedroom, I graduated to a Bunsen burner that was much more satisfactory. It gave a hotter flame.

Blowpipe analysis dates from the early 18th. Century when it was introduced as an aid to mineral analysis. Significant contributors to the technique included Torbern Bergman, and Berzelius. Here's how you go about it systematically. The first step is to examine the effects of the blowpipe flame on the sample placed on a slight depression on the charcoal block. (It should be obvious, but for completeness I'll include it, that the samples under investigation are minerals or inorganic compounds.) Since this is a 20 page pamphlet, the brief comments I will be making are just a brief guide to its contents. Check for volatility; the test samples suggested are arsenious oxide (!) which is volatile; and aluminum oxide, which is not. Then check fusibility examining, for example, fusible silver oxide and infusible zinc oxide. After that look for alkaline reaction of any residue with moist litmus paper e.g. calcium oxide from calcium carbonate.

The second set of investigations uses the sample (about the size of a sesame seed) finely powdered with a pestle and mortar (I couldn't afford agate, the preferred material, and had to make do with ceramics) and mixed with 4 parts of powdered sodium carbonate before being subjected to the blowpipe flame. Some metal ores under these conditions give beads of the metal.

Of course a flame test is part of the systematic procedure and requires a platinum wire, obtained as mentioned below. The usual flame colorations indicate the presence of sodium – yellow; potassium – violet; barium – apple green; strontium – crimson; calcium – orange; and both copper and boron – green.

For me by far the most interesting part of the examination of mineral samples was the procedure using a borax bead. For this I saved up my pocket money for several weeks and purchased an inch or so of fine platinum wire. I sealed it into a glass rod and was ready to go. The heated platinum wire was dipped into powdered borax and subjected to the blowpipe flame to form a transparent borax bead. This was dipped into the powdered sample and re-heated when, in many cases, the sample dissolves in, and reacts with, the fused borax to give characteristic colors.

I don't have the space to go into detail about the borax bead results, and I haven't said anything about the different regions of the blowpipe flame that can be obtained, namely the oxidizing flame and the reducing flame. Briefly the outer, hotter, portion of the Bunsen flame is oxidizing and the inner blue cone is reducing. If the blowpipe is applied carefully to these separate parts it can be used to oxidize or reduce the sample either alone on charcoal, or in a borax bead.

I'll be returning to Science Record in some future columns. But reading about blowpipe analysis took me back many years to when I was beginning to get interested in chemistry. Hands-on blowpipe work whetted that interest. I sometimes wonder when we discuss the sophisticated instrumentation of modern analytical techniques whether we haven't lost something in abandoning some of these simple early methods. A sense of wonder, perhaps?

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<https://www.acs.org/editmyprofile>.

Address advertising correspondence to Advertising Manager. Other correspondence to the Editor.



November Calendar

NEW YORK SECTION

Thursday, November 7, 2019

Long Island Subsection

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Thursday, November 7, 2019

Westchester Chemical Society

See pages 12-13.

Friday, November 15, 2019

Board of Directors Meetings

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Tuesday, November 19, 2019

Society for Applied Spectroscopy

New York Section

See pages 13-14.

also

Thursday, December 5, 2019

Westchester Chemical Society - Special

Seminar - Joint Meeting with EIYH Water

Environment Association and Manhattan

College Chapter

See pages 14-15.

Thursday, December 5, 2019

Long Island Subsection Holiday Dinner

See page 15.

NORTH JERSEY SECTION

Friday, November 15, 2019

Baekeland Award and Symposium

See pages 1 & 5.

Wednesday, November 20, 2019

North Jersey Women's Chemist Committee

Breakfast and Session at EAS

(See pages 7-11)

Thursday, November 21, 2019

North Jersey Organic ToOpcal Group

See pages 5 & 6.

Monday, November 25, 2019

North Jersey Executive Meeting

See page 5.

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***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 December 2019 issue of
The Indicator is**

October 28, 2019

North Jersey Meetings

<http://www.njacs.org>

NORTH JERSEY EXECUTIVE COMMITTEE MEETING

Section officers, councilors, committee chairs, topical group chairs, and section event organizers meet regularly at the Executive Committee Meeting to discuss topics of importance to running the section and representing the membership.

All ACS members are welcome to attend this meeting and to become more involved in section activities.

Date: Monday, November 25, 2019

Time: 6:30 - 8:30 PM

Place: Merck-Kenilworth
2000 Galloping Hill Road, Bldg. 15
Conference Room K-15-F1074
Kenilworth, NJ 07033

Members may attend through:

Merck JoinWebEx meeting

Meeting number: 741 458 253

or:

Join by phone

+1 (443) 961-0100 US Toll

Access code: 741 458 253

For reservations please call NJACS secretary Bettyann Howson (973) 822-2575 or email chemphun@gmail.com or register online at <https://www.njacs.org> prior to **Wednesday, November 20, 2019.**

ACS NORTH JERSEY SECTION 2019 BAEKELAND AWARD SYMPOSIUM

Date: Friday, November 15, 2019

For details: www.njacs.org/baek-mtg



NORTH JERSEY WOMEN'S CHEMISTS COMMITTEE — IN CONJUNCTION WITH EAS

The North Jersey Women's Chemist Committee will present a session on **The Evolving Roles of Women in Science at the Eastern Analytical Symposium on Thursday, November 21, 2019.**

For details, see article on pages 7-11.



NORTH JERSEY ORGANIC TOPICAL GROUP

The North Jersey Organic Topical Group is hosting our annual symposium, titled, **Technology & Innovation in Organic Chemistry**, on **Thursday, November 21, 2019.**

For details, see flyer on page 6.



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NORTH JERSEY ORGANIC TOPICAL GROUP

Technology & Innovation in Organic Chemistry

Thursday, November 21, 2019

The Palace at Somerset Park, 333 Davidson Ave, Somerset, New Jersey



Prof. Tomislav Rovis
Columbia University

*Controlling Catalysis with
Visible Light*



**Dr. Subharekha
Raghavan**
Merck & Co.

*High-Throughput
Experimentation (HTE)
Capabilities at Merck
Enabling New Paradigms
in Drug Discovery*



Prof. Amie Boal
Penn State University

*New Experimental
Approaches to
Understand Control of
Reaction Outcome in
Aliphatic Halogenases*



Prof. Lee Cronin
University of Glasgow

*The Chemputer: A
Universal Programmable
Chemical Synthesis
Engine*



Prof. Song Lin
Cornell University

*Catalyzing Synthetic
Electrochemistry*



Dr. Matthew Bio
Snapdragon Chemistry

*Mighty Machines:
Integrated Design of
Chemical Processes and
Flow Reactor Systems*

Due to limited seating, registration and payment are required by November 12, 2019
Registration fee: Symposium (including breakfast and lunch) \$125.00. Students/Postdocs: \$15.00

Sign in will begin at 8:00 am, the symposium at 9:20 am, and lunch at 12:30 pm.

For information and on-line registration, please visit our website: <http://www.njac.org/organic.html>

Organizing Committee: Sue Zultanski (Chair, Merck), Ken Fraunhofer (Past-Chair, BMS), Enver Izgu (Rutgers University), Michael Smith (BMS), Yalan Xing (William Paterson University), Chunrui Sun (Merck), Joe Badillo (Seton Hall University)

THE EVOLVING ROLES OF WOMEN IN SCIENCE

The North Jersey Women's Chemist Committee in conjunction with the North Jersey American Chemical Society is hosting a breakfast and session on **The Evolving Roles of Women in Science at the Eastern Analytical Symposium**.

The Eastern Analytical Symposium & Exposition itself will be held on November 18-20, 2019. For more information on the event or to register please go to http://easinc.org/wordpress/?page_id=451

During the North Jersey Section's session, you will get the opportunity to hear each of these accomplished women in science share their experiences and stories.

Session Details:

The Evolving Roles of Women in Science Breakfast and Session on

Date: Wednesday, November 20, 2019

Times: Breakfast from 7:30 AM - 8:00 AM, followed immediately by the sessions from 8:30 AM - 11:30 AM

Place: Crowne Plaza Princeton-Conference Center
900 Scudders Mill Road, Plainsboro, NJ

Session Program

From Lab to Leadership: The Journey of an Analytical Chemist

Speaker: Caroline McGregor, PhD

Our Past and Bright Future

Speaker: Susan Olesik, PhD

An Industrial Chemist's Career: Expectations, Experiences, Opportunities and Surprises

Speaker: Mary Ellen McNally, Ph.D

Intrinsic Values: A Career Odyssey

Speaker: Susan Baker, PhD

Career Adventures: Aha Moments and the Joy of Navigating Two-Way Streets

Speaker: Adrienne Tymiak, PhD

Meet the Speakers

From Lab to Leadership: The Journey of an Analytical Chemist

Keynote Speaker: Caroline McGregor, PhD



Caroline McGregor has a First-Class Honors degree in Analytical Chemistry from the University of Strathclyde in Glasgow, Scotland and a PhD in Chemistry from the University of Cambridge. She has been a scientist and leader at Merck Research Laboratories for 18 years, first as an Analytical Development and Preformulation Scientist in the United Kingdom before relocating to the United States. Since making that decision 10 years ago she has had the opportunity to take on a variety of roles leading people and teams while still staying close to the science. Initially she stayed close to her early career training in pharmaceutical sciences

and at the interface between drug discovery and development first in Rahway, New Jersey before moving to Boston as the site lead for Discovery Pharmaceutical Sciences. In 2013 she returned to New Jersey and has since had the opportunity to return to her scientific roots leading Analytical Research & Development starting with a focus on synthetic small molecules but more recently with an expanded opportunity in biologics and vaccines. Her organization has a diverse range of capabilities across traditional analytical chemistry, solid state and materials science, cell-based assays, immunoassays and structure determination which they apply across the entire Merck pipeline from discovery through commercial supply. She has the enviable position of being able to work with an amazingly talented team of scientists applying these capabilities every day.

We are all shaped by our decisions and molded by our environment. In this talk, Caroline will share her own career journey as an analytical chemist, discussing how self-awareness,

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THE EVOLVING ROLES OF WOMEN IN SCIENCE

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authenticity, and a willingness to take different roles and make some tough choices along the way have allowed her to move from the lab to leadership, and to learn, to grow, and experience every day why she chose chemistry: to deliver science that helps people. optimize exposure and duration of action for preclinical PK, efficacy and toxicology studies. She has held positions of increasing responsibility during her tenure. She was Director & Site Lead for Discovery Pharmaceutical Sciences in Boston for 5 years and was Executive Director Discovery Pharmaceutical Sciences for 2 years prior to moving to Process Research & Development in 2015. Initially the scope of this role was leading Analytical Chemistry with a focus on analytical development for small molecule active pharmaceutical ingredients which was then expanded her current scope in Analytical Research & Development.

Caroline was educated at the University of Strathclyde in Glasgow, Scotland, where she graduated in 1998 with a BSc in Chemistry. In 2001, she received her PhD in Chemistry from the University of Cambridge for a thesis which focused on design of novel liposomal drug delivery systems for DNA and small molecules. She is the author of various publications in the fields of characterization of pharmaceutical materials and drug delivery.

* * * * *

Career Adventures: Aha Moments and the Joy of Navigating Two-Way Streets

Speaker: Adrienne Tymiak, PhD
Science and Technology Advisor
Retired BioPharma R&D Executive
7 East Prospect Street
Hopewell, NJ 08525



As a first-generation scientist, I had little in the way of role models. As a result, my career in the pharmaceutical industry took twists and turns and benefited from some luck along the way. But throughout my career journey, I followed my interests, practiced the discipline of continuous learning and used my talents to make a difference. We all have interests and talents that make us unique. In my case, the skills I developed while cooking, playing volleyball and beachcombing also applied in the professional setting and boosted my problem solving and my logistical, technical and people skills. As my career unfolded, I reflected on my circumstances and redirected my career based on personal insights and

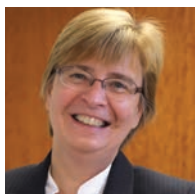
aha moments. Once I became the leader of a multi-site research team, I could see that every scientist offered unique superpowers. I also saw that diverse teams that worked together with open communications, coordination of efforts and cooperation were more innovative and efficient and had more fun in the process! Now, as an adviser for industry and academia and as a mentor for next generation leaders, I appreciate that each professional interaction is a “two-way street” where a scientist can both give and receive insights regardless of their career stage. My talk draws upon personal experiences and observations to reflect on the evolving role of women in science and the joy and potential rewards of actively navigating “two-way streets” throughout one’s career.

Biography

Dr. Adrienne Tymiak is the former Executive Director of the Bioanalytical and Discovery Analytical Sciences department at Bristol-Myers Squibb. With degrees in Biochemistry, Chemical Oceanography and Organic Chemistry, she began her career as a natural products chemist in drug discovery. Leveraging her broad experience in analytical chemistry, she designed, built and led a team of pharmaceutical R&D scientists focused on isolation, structure elucidation, conformational studies and quantitation of small molecules, biologics, metabolites and biomarkers. Her work has been presented at national and international conferences with more than 90 external presentations and posters, 65 peer reviewed publications, 9 book chapters and 3 patents. Today, Adrienne serves as a technology advisor for industry and academia, as a board member for nonprofit organizations serving youth (HiTOPS and Collective Success Network), and as a mentor for early career scientists and future leaders.

Our Past and Our Bright Future

Speaker: Susan Olesik
The Ohio State University
Department of Chemistry and Biochemistry
100 West 18th Avenue
Columbus, OH 43210



The proportion of women in Analytical Chemistry continues to increase in industry and academia. This talk includes data highlighting changes that have occurred in number of women analytical chemists. While the numbers of women analytical chemists have increased, the progress has been slow but nonetheless progress continues. As we look back, on how progress has occurred to facilitate the increasing numbers of women analytical chemistry, it becomes clear that Analytical Chemistry has its own “hidden figures” who made substantial discoveries to move our science forward. In addition, many of these women provided mentoring and career assistance that assisted others in joining the field and advancing into leadership positions. Taking note of the impact of these individuals, next the unique science of a few of our current leading female analytical chemists are described with illustrations of their accomplishments in the lab as well as their impact in assisting the next generation of women chemists. Finally, to the complete the presentation, examples of significant science that current analytical chemists need to address to define a bright future to next generation are discussed.

Biography

Susan Olesik received her A.S. from Vincennes University B.A. from DePauw University and her Ph.D. from the University of Wisconsin-Madison, under the auspices of James W. Taylor in field of analytical mass spectrometry. She held a postdoctoral fellowship for Milos Novotny at Indiana University followed by a postdoctoral fellow for Tomas Baer at University of North Carolina-Chapel Hill. After that she became a faculty member at The Ohio State University. She is currently the Dow Professor and Chair of the Department of Chemistry and Biochemistry. She continues as the Director of the Ohio House of Science and Engineering (OHSE), a K-16 science outreach center.

Her awards include: 2017 The Analytical Scientist top mentor award, 2016 one of the Top 50 women in Analytical Sciences, 2015 The Analytical Scientist -100 Most Influential Analytical Scientists, ACS 2014 Helen M Free Award for Public Outreach, 2014 ACS Award in Chromatography, 2012 AAAS Fellow, 2010 OSU Building Bridges Excellence Award, 2009 ACS Fellow, 2008 ACS National Award for Encouraging Disadvantaged Students into Careers in the Chemical Sciences; 2008 Stanley C. Israel Regional Award for Advancing Diversity in the Chemical Sciences; OSU Alumni Association Heinlen Award-2006; 2005 Columbus Technical Council (CTC) Technical Person of the Year; 2004 ACS, Columbus Section Award for Outstanding Achievement & Promotion of Chemical Sciences; 2000 AWISCO Woman in Science Award; and a commendation from NASA for Contributing GC Column to Cassini- Huygen's probe.

She is most known for research in three areas of separation science — Enhanced-fluidity Liquid Chromatography (EFLC), development of carbon stationary phases, and design of nano-scale materials for chromatography-mass spectrometry. Recent areas of study include studies of biologically relevant compounds and improving in efficiency in separation science and ionization efficiency in surface assisted laser desorption ionization (SALDI) using nanoparticle and nanofiber arrays and devices.

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THE EVOLVING ROLES OF WOMEN IN SCIENCE

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* * * * *

An Industrial Chemist's Career: Expectations, Experiences, Opportunities and Surprises

Speaker: Mary Ellen McNally
FMC Agricultural Solutions
Stine Research Center
1090 Elkton Road, S315/2224
Newark, DE 19711



Being a woman in science is no longer a rare occurrence but there are still times when you will find yourself as the only woman in the room. The goal of this presentation is to share career experiences in long term technical and managerial roles, career choices and opportunities. Discuss career road maps and detours, as well as via personal experiences how to make opportunities that might not be at first glance the best fit, into roles you desire. Although expectations are sometimes overturned because of circumstances, the unplanned alternate experiences can be more rewarding and rewarded. Discussions on planning your day to account for all your interactions, scheduled and unscheduled and how to make the most from both are included. This is an overview of decisions to be made that will help you focus the direction of your career as a woman scientist.

Biography

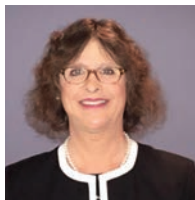
Dr. McNally is a Global R&D Fellow at the Stine Research Center for FMC Corporation. Mary Ellen was employed by DuPont for 33 years before joining FMC. McNally has led teams on New Emerging Technologies and a team of inter-disciplinary scientists from three universities and DuPont on a NSF GOALI project. Dr. McNally was named to the Analytical Scientist Power List, as one of the Top 50 most influential women in the analytical sciences. In addition, she has received the American Microchemical Society Steyermark Award in the field of microanalysis, the Chromatography Forum of Delaware Valley Award for contributions to theory, instrumentation and applications to the field of chromatography and service to the organization. Mary Ellen has been recognized for her contributions to the field of supercritical fluids by the Midwest Supercritical Fluid Chromatography Discussion and the Tri-State Analytical Supercritical Fluid Discussion Groups. Dr. McNally is a member the editorial advisory board for LC-GC magazine and a former member of the Instrumentation Panel and the Advisory Board for the journal of Analytical Chemistry and the editorial board of Talanta. She has been a long-standing board member of the Chromatography Forum of Delaware Valley, CFDV, serving as the President and Program Chair twice and is currently chairman of the Audit, Nominating and Dal Nogare award committees. McNally is a member of the Executive Committee of the Eastern Analytical Symposium and was the president in 2018, she has also served as the Program Chair, Secretary, Treasurer and Vice-President.

While at DuPont, Dr. McNally has received DuPont Crop Protection's Scientific Leadership Award a peer nominated and selected award. This award afforded her the opportunity to work at the Imperial College in London in capillary electrochromatography as well as LC and CE on a microchip and at the Molecular Engineering Cooperative Research Center of CSIRO in Sydney Australia working in the area of biosensors. She has also been the recipient of DuPont's highest awards for Engineering Excellence, Marketing Excellence and Environmental Stewardship for her contributions to the development and detection of Crop Protection Products.

Specialties: Separations, sample preparation and sensors focused in environmental fate of agricultural products, ultra-trace level analysis and detection. Current focus is analysis associated with manufacturing and process development.

Intrinsic Values: A Career Odyssey

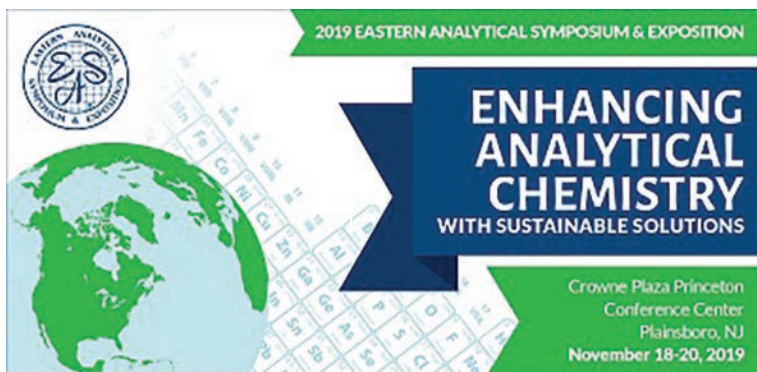
Speaker: Susan Baker
Janssen R&D
302 Watkins Road
Pennington, NJ 08534



When most of us choose a field and begin our education, we have the intention to pursue a career in our direct area of study. Many of us, including myself, ultimately land in a vocation that is quite different from where we started or even far outside our training. In retrospect, careers are often shaped more significantly by our intrinsic values than our training. Synergy may or not exist between the two. Our intrinsic values interact with evolving extrinsic political, social, and corporate cultures at key points in our career development. The outcomes are often additionally shaped by traditional privilege and bias categories such as age, gender, and race. Bias categories are subject to, in principle, laws and policies which also evolve. Culture and privilege have historically made it difficult for women and other demographic groups to succeed in science, technology, engineering and math (STEM) fields. While the environment is changing, difficulties still exist. From conversations with others, self-education, and my own experiences, I share insights I have learned along the way. I was originally motivated to study engineering by the space program but quickly switched to Analytical Chemistry as an undergraduate and after a few years as an industrial chemist shifted to Quantum Chemistry in grad school. Roll forward, the odyssey evolved far from the Physical Sciences into career as a Clinical Development Scientist and Director in Neurodegeneration.

Biography

Dr. Susan Baker is currently a Director at Janssen R&D with over 25 years' experience in scientific research and management predominantly in the Pharmaceutical sector. She additionally completed a rotation as a Scientific Advisor to the National Center for Toxicology Research (NCTR/FDA) covering Bioinformatics and biomarker platforms and is presently on the Editorial Advisory Board for Alzheimer's and Dementia: Translational Research & Clinical Interventions. Her activities have spanned Discovery, Informatics, and Clinical disciplines with a strong emphasis on biomarkers and big data analytics. She has worked across therapeutic areas but for the last eight years has directed collaborative research aimed at discovering and developing a biosignature of preclinical Alzheimer's pathology. Current clinical work is focused on utilizing deeply phenotyped observational cohorts to evaluate diagnostic platforms and to develop disease progression models which can be used to power clinical trials. Susan's PhD was in Quantum Chemistry from the Quantum Theory Project at the University of Florida followed by a Postdoc in Applied Spectroscopy targeting natural product isolation and structure elucidation. Susan is also active in Diversity & Inclusion initiatives as well as local nonprofit board membership. When not working you will most likely find Susan cycling or on a ballroom floor.



New York Meetings

<https://www.newyorkacs.org>

ACS, NEW YORK SECTION BOARD OF DIRECTORS

MEETING DATES FOR 2019

The dates for the Board of Directors Meetings of the ACS New York Section for 2019 have been 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 Mrs. Marilyn Jespersen at njesper1@optonline.net or by calling the Section office at (516) 883-7510.

Dates and locations of the meetings are posted below and on the New York Section website at <https://www.NewYorkACS.org>. Prof. Justyna Widera-Kalinowska will chair all meetings. Refreshments will be available starting at 6:00 PM and the board meetings will start at exactly 6:30 PM.

The Board Meeting date and location for the last meeting of 2019 are:

Friday, November 15, 2019

Adelphi University
1 South Avenue
Garden City, NY 11530

Directions

<https://visit.adelphi.edu/travel-info/directions>



LONG ISLAND ACS 2019 FALL SEMINAR PROGRAM

Spatial and Temporal Variability of Nutrient Concentrations in Long Island Sound

Speaker: Dr. Paul Marchese
Professor of Physics
Queensborough Community
College

Abstract: Hypoxia is a problem that plagues many estuaries. Anthropogenic nutrients (in the form of Nitrates and Phosphates) from sources such as sewage treatment plants, agricultural fertilizers, and urban runoff are introduced into the water which results in excess algae growth. When the algae sink and decompose there is an increase in the demand for oxygen putting stress on the bio-

logy. This condition is exacerbated during the summer when solar heating and increased fresh summer melt result in lower water density at the surface; creating density stratification of the water column and preventing the ventilation of bottom waters. This study analyzed the spatial and temporal variability of nutrients in Long Island Sound. Nutrient concentrations are highly dependent on seasonal variability and density stratification. Since 1995, Nitrogen concentrations have decreased while Phosphorus has continued to increase affecting the chemical balance of the Sound.

Date: Thursday, November 7, 2019

Times: 6:00 PM to 8:00 PM
(Refreshments start at 5:30 PM)

Place: Queensborough Community
College, Science Building, S-112
222-05 56th Avenue
Queens, NY 11364

Cost: Dinner follows Seminar at a nearby
restaurant, \$25 per person)

<http://www.qcc.cuny.edu/about/getting-here.html> for directions.



WESTCHESTER CHEMICAL SOCIETY

Note that this meeting had been scheduled for February 12, 2019 but had to be rescheduled because of inclement weather.

Special Seminar – “Tripodal Ligands in Bioinorganic and Organometallic Chem- istry: Carbon Dioxide Functionalization and Mercury Detoxification”

Speaker: Gerard Parkin, D.Phil.
Professor, Dept. of Chemistry
Columbia University
New York, NY

Abstract: Despite the fact that certain metal ions are essential for life, some are highly poisonous. For example, while zinc is essential for humans, as exemplified by its roles in carbonic anhydrase and liver alcohol dehydrogenase, its congeners, cadmium and mercury, are most toxic. Synthetic analogues, i.e. small molecules that mimic the structure and function of enzymes, provide an important means to afford insight into the natural systems. Tripodal ligands provide a means to obtain such analogues and the research described will focus on the application of tripodal ligands in the chemistry of zinc and mercury. In addition, these ligands pro-

vide access to novel hydride compounds of zinc and magnesium that are capable of a variety of catalytic transformations. For example, these catalysts are capable of functionalizing carbon dioxide, a transformation that is of particular interest considering that carbon dioxide is a ubiquitous and typically inert compound.



Biography: Gerard Parin received his B.A., M.A., and D.Phil degrees from the Queen's College, Oxford University, where he carried out research under the guidance of Professor

Malcolm L. H. Green. In 1985, he moved to the California Institute of Technology as a NATO postdoctoral fellow to work with Professor John E. Bercaw. He joined the faculty of Columbia University as Assistant Professor in 1988 and was promoted to Associate Professor in 1991 and to Professor in 1994. He served as Chairman of the Department from 1999 – 2002. He has also served as Chair of the New York Section of the American Chemical Society, Chair of the Inorganic Chemistry and Catalytic Science Section of the New York Academy of Sciences, Chair of the Organometallic Subdivision of the American Chemical Society Division of Inorganic Chemistry, and Chair of the Gordon Research Conference in Organometallic Chemistry.

He is an elected Fellow of both the American Chemical Society and the Royal Society of Chemistry and is the recipient of a variety of international awards, including the ACS Award in Pure Chemistry, the ACS Award in Organometallic Chemistry, the RSC Corday Morgan Medal, the RSC Award in Organometallic Chemistry, the RSC Ludwig Mond Award, and the RSC Chem Soc Rev Lecture Award. He is also the recipient of the United States Presidential Award for Excellence in Science, Mathematics and Engineering Mentoring, the United States Presidential Faculty Fellowship Award, the Columbia University Presidential Award for Outstanding Teaching, and the Lenfest Distinguished Columbia Faculty Award.

His principal research interests are in the areas of synthetic, structural, and mechanistic inorganic chemistry

Date: Thursday, November 7, 2019

Times: Refreshments: 5:30 PM

Lecture: 6:00 PM

Place: Westchester Community College
Gateway Building Room 110
75 Grasslands Road
Valhalla, NY 10595

Cost: Free and Opened to the Public

For further information contact Paul Dillon
E-Mail PaulWDillon2@hotmail.com
Phone 1-914-393-6940

Inclement weather: The WCC information number for closures: 1-914-606-6900

RSVP: Appreciated but not necessary.



NEW YORK SECTION SOCIETY FOR APPLIED SPECTROSCOPY

Gold Medal Award Announcement - 2019

The Society for Applied Spectroscopy New York Section is announcing that the Gold Medal Award recipient for 2019 is **Prof. John R. Lombardi**, Center for Analysis of Structures and Interfaces (CASI), Department of Chemistry, The City College of New York. Prof. Lombardi is a world-renown laser spectroscopist whose expertise in the fundamental theory of surface enhanced Raman spectroscopy has been applied to critical forensic problems in art and criminal justice. He has authored 255 publications that garnered over 5400 citations and is the recipient of numerous awards.

Gold Medal Award Session

Organizer: Dana Garcia

Symposium Speakers:

“Ag and Semiconductor Nanoclusters in Modeling SERS Enhancement”

Ronald Birke
The City College of NY

“Fiber Optic Light Micro-Spectrophotometry and Confocal Raman Micro-Spectrometry (with SERS) Applied to the Analyses of Traces of Forensic Import”

Thomas Kubic
John Jay College of Criminal Justice

“Surface Enhanced Raman Spectroscopy in Art and Archaeology”

Marco Leona
Metropolitan Museum of Art

“Interaction of Theory with Applications in Surface-Enhanced Raman Spectros-

(continued on page 14)

NEW YORK SECTION SOCIETY FOR APPLIED SPECTROSCOPY

(continued from page 13)

copy (SERS). How to Optimize the Performance of Molecular SERS Sensors”

John R. Lombardi,
The City College of NY

The Gold Medal Award was established in 1952 to recognize outstanding contributions to the field of Applied Spectroscopy.

The Eastern Analytical Symposium will be held Monday, November 18 through Wednesday, November 20, 2019. We hope to see our members attend this prestigious award session.

Date: Tuesday, November 19, 2019

Time: 8:30 AM - 11:30 AM

Place: Eastern Analytical Symposium
Princeton, NJ

To submit a nomination for future Gold Medal awards, please see instructions at the NYSAS website:

https://www.nysas.org/index.php?p=1_2_2_Gold-Medal-Nominations

Chairs: Debbie Peru/Howard Mark
Past Chair: Kathryn Lee
Chair-Elect: Dana Garcia
Treasurer: Howard Mark
Webmaster: Debbie Peru
Secretary: Debbie Peru

Website: <https://www.sasinc.org>



EMPLOYMENT AND PROFESSIONAL RELATIONS COMMITTEE OF THE NEW YORK SECTION

To Human Resources Departments in Industry and Academia

The Employment and Professional Relations Committee maintains a roster of candidates who are ACS members seeking a position in the New York metropolitan area. If you have job openings and would like qualified candidates to contact you, please send a brief job description and educational/experience background required to hessytaft@hotmail.com.

Candidates from our roster who meet the requirements you describe will be asked to contact you.

WESTCHESTER CHEMICAL SOCIETY – JOINT MEETING EIIH NY WATER ENVIRONMENT ASSOCIATION AND MANHATTAN COLLEGE CHAPTER

***** SPECIAL SEMINAR *****

“Pharmaceuticals in the Environment – the Chemical Basis for the Problem and Potential Solutions”

Speakers: Daniel W. Elliott, Ph.D., BCCEM
Senior Consultant
Geosyntec Consultants, Inc.
Princeton, NJ

Joseph G. Cleary, P.E., BCEE
Senior Consultant
Geosyntec Consultants, Inc.
Lyndhurst, NJ, and

Matthew R. Basso, CHMM, IHIT
Senior Consultant
Geosyntec Consultants, Inc.
Lyndhurst, NJ

Abstract: Microconstituents in process wastewaters, surface waters, and groundwater include a wide array of biologically-active pharmaceutical compounds which can exert significant deleterious environmental impacts to receptors. These emerging contaminants, known as active pharmaceutical ingredients (API) can elicit or contribute to serious environmental consequences such as anti-microbial resistance and feminization of fish. This lecture, featuring three environmental consulting practitioners that specialize in this area, will focus on the growing global concern over the pharmaceuticals in the environment (PiE) issue and delve into the chemistry which underscores the reasons that this problem has emerged as well as the strategies which may represent the solution.

Biographies:



Daniel W. Elliott received his A.B. degree in Chemistry from Vassar College, an M.S. in Environmental Science and Engineering from the University of North Carolina at Chapel Hill, and a Ph.D. in Environmental Engineering from Lehigh

University. Dan is a highly experienced environmental engineer with more than 25 years of environmental affairs experience from the diverse perspectives of industry, consulting, and a major research university. At Merck &

Co., Inc., he managed the 1.5 MGD industrial wastewater pre-treatment program for the Merck Chemical Manufacturing Division (MCMD) complex in Rahway, NJ which featured 5 full-scale API manufacturing facilities for human and animal health pharmaceuticals. He also served as Corporate Environmental Engineer for American Standard Inc., managing environmental affairs for 100 manufacturing sites around the globe. As a consultant, he works for Clients in the chemical and pharmaceuticals industries. Dan is a board-certified Environmental Engineer (BCEEM) by the American Academy of Environmental Engineering.



Joseph Cleary received his B.S. degree in Civil Engineering and his M.S.E. in Environmental Engineering from Manhattan College. Joe is a national leader regarding microconstituents in wastewater and has more than 40 years'

experience in environmental engineering consulting specializing in industrial wastewater treatment and hazardous waste remediation. He has directed projects from treatability studies, process selection and design through engineering design and construction, plus operation and maintenance services. His wastewater experience includes many major pharmaceutical, refinery, food and beverage, paper and electric and gas utility clients. He is a professional engineer in several states and is a board-certified environmental engineer (BCEE) by the American Academy of Environmental Engineers.



Matthew R. Basso received his B.A. in Environmental Science from St. Michael's College and his M.A. in Environmental and Occupational Health from the City University of New York. Matt has extensive experience in all phases of

Environment, Health, and Safety (EHS) as a Corporate EHS Manager at American Cyanamid, American Home Products, and Pfizer. Matt is extremely well versed on pharmaceuticals manufacturing, environmental compliance and permitting, clean-up of contaminated sites, and global auditing. Matt brings extensive global experience with the

PIE issue to Geosyntec's cadre of practitioners.

Date: **Thursday, December 5, 2019**

Times: Refreshments 5:30 PM
Lecture 6:00 PM

Place: Westchester Community College
Gateway Building Room 110
75 Grasslands Road
Valhalla, NY 10595

Cost: Free and Open to the Public

For further information: contact Paul Dillon

E-Mail PaulWDillon2@hotmail.com

Phone 1-914-393-6940

Inclement weather:

The WCC information number for closures: (914) 606-6900

RSVP: Appreciated but not necessary.



LONG ISLAND ACS 2019 HOLIDAY DINNER

**Celebrating the International Year
of the Periodic Table (IYPT 2019)**

"Mendeleev and the Periodic Table"

Featured Speaker: Dr. Paris Svoronos
LIACS History
Committee Chair
Professor of Chemistry
Queensborough
Community College

Abstract The United Nations General Assembly and UNESCO have declared 2019 as the "International Year of the Periodic Table". Dmitri Mendeleev is considered to be the discoverer of the periodic trend of elements which he first declared in 1969. A historical upgrading of the table will be presented highlighting important element discoveries and the scientists associated with their isolation. The significance of Mendeleev's classification will be emphasized in view of the fact that many of the elements in the current table were not even known at the time.

Date: **Thursday, December 5, 2019**

Time: 6:00 PM to 8:00 PM

Place: Nassau Community College
CCB Building, Room 251/252
Garden City, NY

Directions: <https://www.ncc.edu/campuservices/parkingandsafety/mapanddirections.shtml>

PROFESSOR KRZYSZTOF MATYJASZEWSKI IS THE WILLIAM H. NICHOLS MEDALIST FOR 2020



The ACS, New York Section is pleased to announce that the Nichols Award Jury has chosen Professor Krzysztof (Kris) Matyjaszewski to be the William H. Nichols Medalist for 2020. Professor Matyjaszewski is

the J. C. Warner Professor of Natural Sciences at Carnegie Mellon University and a director of the Center for Macromolecular Engineering. He is being honored for his outstanding work on atom transfer radical polymerization (ATRP).” The Nichols Medal Award will be presented at the Nichols Award Dinner that follows the Distinguished Symposium.

The Nichols Distinguished Symposium and Medal Award Dinner are planned for Friday, March 27, 2020 at the Crowne Plaza Hotel, 66 Hale Avenue, White Plains, NY. The symposium title is “Nanostructured Polymers by Macromolecular Engineering Using ATRP.” It will feature four internationally known chemists: Dr. Jeffrey Pyun from the University of Arizona; Professor Alan J. Russell from Carnegie Mellon University; Professor Brent S. Sumerlin from the University of Florida, Professor David A. Tirrell from the California Institute of Technology and Professor Matyjaszewski, Nichols Medalist. Professor Tirrell will also introduce Professor Matyjaszewski at the award dinner.

Professor Rita Upmacis from Pace University and Chair-elect of the ACS New York Section in 2020, will conduct the Distinguished Symposium. ACS New York Section Chair in 2020 Professor Ruben Savizky from the Cooper Union will host the Medal Award Banquet and present the Nichols Gold Medal Award to Professor Matyjaszewski.

The entire program and reservation form will be published in the January, February, March Indicators and on the New York Section website at <http://www.NewYorkACS.org>

Congratulations Professor Matyjaszewski!

ROLANDE HODEL ADDRESSES FALL ACS MEETING IN SAN DIEGO

At the invitation of Chemists Without Borders, Dr. Rolande Hodel presented her work with AIDSfreeAFRICA at the 2019 Fall meeting of the American Chemical Society in San Diego. The symposium marked the 15th anniversary of scientific humanitarian collaborations. It was a great morning of sharing updates and ideas about using chemistry for the benefit of humanity. Speakers discussed water, education, and environmental projects in South and East Asia, Africa and Latin America. Dr. Hodel focused on AIDSfreeAFRICA's efforts to establish chemistry laboratories and to help with the practical aspects of Chemistry education in Cameroon. These efforts will have direct impact on the pipeline of technicians able to produce pharmaceutical drugs locally. AIDSfreeAFRICA encourages Chemists and Chemistry teachers to travel to Cameroon to teach laboratory techniques and conduct experiments. For more information, go to www.AIDSfreeAFRICA.org and send us a message via the contact provided on the web site.



(Photos courtesy of Adam Cooper, CWB)

(More pictures on next page)



**Rolande Hodel and founder of “CWB,
Bego Herber.**

(Photos courtesy of Adam Cooper, CWB)



Symposium speakers, left to right: Nathan Leigh, Alexis Mackintosh, Bego Gerber, Kimberly Prather, Rolande Hodel, Steven Chambreau, Ronda Grosse, Ray Kronquist.

(Photo courtesy of Rolande Hodel, AIDSfreeAFRICA)



NEW YORK SECTION HONORS MARILYN JESPERSEN FOR 26 YEARS OF FAITHFUL SERVICE

The ACS New York Section will truly miss Marilyn Jespersen who is retiring from her position of Office Administrator at the end of the year. In her 26 years of service, Marilyn has worked with countless members, volunteers, Nichols Awardees, and Section leaders who appreciated her personal touch and kindness even as she prodded them to submit their annual reports. Marilyn was feted over dinner that took place on Saturday, September 21, 2019 at the Crown Plaza Hotel in White Plains, NY, the site of over 20 William H. Nichols Distinguished Symposia and Award Dinners that she organized. NY ACS Chair Justyna Widera-Kalinowska, on behalf of the New York Local Section, thanked Marilyn for her many years of dedication to NY ACS, outstanding service and great professionalism. She helped 26 chairs of the NY ACS to smoothly run successful terms and achieve great programming of the Section. Marilyn has been such an important part of the success and activities of the New York Section. She was inspirational in her dedication to getting the best out of everybody. All the volunteer officers received maximum support from Marilyn and she provided the help with kindness as well. Among the attendees of the dinner party, there were eighteen NY ACS Section Chairs as well as Section Secretary Daniel Amarante, Long Island Subsection Chair Ping Furlan and Westchester Chemical Society Chair Rolande Hodel.

We wish Marilyn all the best in her retirement with plenty of health, happiness and fun.

Marilyn, you will be sorely missed.

Many congratulations! Have a Happy Retirement!



Standing from left (Chair year): Rita Upmacis (2021), Frank Romano (2010), Joseph Serafin (2018), Anne O'Brien (1986), Peter Corfield (1999), Marc Walters (2008), Alison Hyslop (2016), Hiroko Karan (2011), Brian Gibney (2017), Patricia Redden (1993), Jill Rehmann (2006), Philip Mark (2013), Ruben Savizky (2020), Gerard Parkin (2003), Justyna Widera-Kalinowska (2019)

Seated from left: Jean Delfiner, Pamela Kerrigan (2014), Marilyn Jespersen, Neil Jespersen (1991), Joan Laredo-Liddell (2007)

(Photo courtesy of Brian Gibney)

IRAD – AGRICULTURAL RESEARCH INSTITUTE FOR DEVELOPMENT

irad.cm

The Agricultural Research Institute for Development (IRAD) is a public administrative institution of scientific and technical status, with legal personality and financial autonomy. As the secular arm of the Cameroonian state in agricultural development, IRAD is supervised technically by the Ministry of Scientific Research and Innovation and financially by the Ministry of Finance.

Dr. Rolande Hodel, Founder and President of AIDSfreeAFRICA, never wavers when it comes to her life's goal. In 2003, she declared that countries ought to have the right to produce pharmaceutical drugs locally. She declared to bring an end to decades of dependency on imports. Focusing her energy on Cameroon, West Africa she consulted seven start up companies. Cameroon now produces pharmaceuticals. However, the infrastructure is fragile and with many challenges that still need solutions.

Today, AIDSfreeAFRICA, Dr. Hodel's 501(c)(3) non-profit organization, focuses on building chemistry laboratories to teach technicians and students laboratory techniques. Over time, this will provide the budding pharmaceutical industry with skilled labor. Cameroon lacks laboratory equipment and chemicals thus limiting teaching to theory, and we Chemists know how important it is to be trained hands-on in a laboratory.



AIDSfreeAFRICA few chemicals available.


*(Photos courtesy of R. Hodel
AIDSfreeAFRICA)*

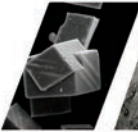


AIDSfreeAFRICA invites the chemistry community to contribute and participate. Of course, we need cash donations, but equally important, we need equipment, and are seeking Scientists and Science teachers to come to Cameroon to teach the use of a particular piece of equipment or experiment. Ideally, you, the scientist will bring the necessary equipment and chemicals and after a couple of exciting weeks will be leaving these as gifts to Cameroon teachers who follow in your foot steps.

Please consult our web site
<https://www.AIDSfreeAFRICA.org> and write us via the contacts provided there. Thank you.

(More photos on next page.)




micron inc.

Analysis:

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Polymers		Castings
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IRAD – AGRICULTURAL RESEARCH INSTITUTE FOR DEVELOPMENT

(continued from page 19)



Top: AIDSfree AFRICA technicians.

Bottom: Hodel with AIDSfree AFRICA training organizers.



WESTCHESTER CHEMICAL SOCIETY

Sr. Mary Virginia Orna Receives Radding Award



Sr. Mary Virginia Orna, Ph.D., a member of the Westchester Chemical Society (WCS) board of directors was honored with the R e d d i n g Award for

demonstrated service to ACS, at all organizational levels, and for having made substantial contributions to our science (Chemical and Engineering News, Vol. 97, No. 27, September 23, 2019, p. 32). Sr. Orna is professor emerita of Chemistry at the College of New Rochelle. She, along with another WCS board member, Sally Mitchell, ran, on October 5, 2019 a Science Café, Periodic Table People, in honor of the International Year of the Periodic Table at St. John's University, Queens, NY. She is also a co-author, along with Marco Fontani and Mariagrazia Costa, of a most interesting book, "The Lost Elements: The Periodic Table's Shadow Side" (Oxford University Press, 2015) about elements "discovered" that really weren't.

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 <https://www.newyorkacs.org> 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.

Please reach out to your members to consider sending recommendations for this award. All nominations must be submitted by the Division or Committee, after approval from the respective Chair.



NORTH JERSEY SECTION

Do You Know of Someone in the North Jersey Section of ACS Who Should Be Recognized as an ACS Fellow?



The American Chemical Society (ACS) Fellows Program was created by the ACS Board of Directors in December 2008 to recognize members of ACS for outstanding achievements in and contributions to the science, the profession, and the Society. To learn more about the program go to www.acs.org/fellows.

The North Jersey Section of ACS has outstanding members who have made exceptional contributions to the science, or their

profession and have provided excellent volunteer service to the ACS community. The section can nominate up to 9 of its members for this distinction. We are asking for your help in identifying these outstanding members of our section by filling out a short survey **by November 30, 2019**.

The survey can be found at <http://tinyurl.com/y4x4arwc>. Someone from the NJACS Awards Committee will contact you after we receive your nomination.

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 CO₂ 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

(continued on page 22)

CALL FOR VOLUNTEERS

(continued from page 21)

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 (516) 883-7510 or send an email to njesper1@optonline.net 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!

Positions Available

EMPLOYMENT OPPORTUNITIES — SETON HALL UNIVERSITY, NEW JERSEY

Careers at Seton Hall

Thank you for your interest in working with Seton Hall University. All applicants must create an online application to be considered for any open position. jobs.shu.edu



NEW JERSEY INSTITUTE OF TECHNOLOGY

Biological Chemistry

Department of Chemistry and Environmental Science

The Department of Chemistry and Environmental Science (CES) at the New Jersey Institute of Technology (NJIT) invites applications for a tenure-track faculty position at the Assistant Professor level in Biological Chemistry, preferably with a leading interest in gene and cell therapy science, starting in the Fall of 2020. The CES Department at NJIT, within the College of Science and Liberal Arts, is committed to exceptional core education in the liberal arts and excellence in research and scholarship. Many resources, facilities, and collaboration opportunities exist

within the Department, College, University, and neighboring institutions. Competitive salary, startup funds, and laboratory space will be provided. Minimum qualifications are a PhD in chemistry, molecular biology, chemical/biochemical engineering, or a closely related field from an accredited institution, and relevant postdoctoral research experience. The successful candidate is expected to establish an active, externally funded research program and to demonstrate excellence in graduate and undergraduate teaching, particularly in biological and pharmaceutical chemistry-related courses.

The successful candidate will have the opportunity to collaborate with NJIT's recently established Cell and Gene Therapy Development Center. This center enables companies and researchers to access and utilize state-of-the-art equipment to develop cutting-edge cell and gene therapy products in a cost- and time-effective manner. In the accelerating race to improve products and gain FDA approval, biopharmaceutical companies and researchers will greatly benefit from an industry-agnostic platform that offers a variety of resources and services in the field of cell and gene therapy.

CES (<http://chemistry.njit.edu>) at NJIT is in a dynamic growth phase, with ten new hires in the past five years, and a recent renovation and expansion of facilities. CES offers degree programs in Biochemistry, Chemistry, Environmental Science, Forensic Science, and Pharmaceutical Chemistry. NJIT is an R1 Doctoral University, conveniently located in the New York metropolitan area. With an enrollment of nearly 12 thousand students, it is continuing to build internationally-recognized programs in chemical and environmental sciences.

Applicants must apply online at <http://njit.csod.com/ats/careersite/JobDetails.aspx?site=1&id=1741> and submit a letter of application, curriculum vitae, maximum five-page description of research plans, one-page description of teaching philosophy and interests, and names and contact information of at least three references. Review of applications will begin on November 1, 2019, and continue until the position is filled. Inquiries can be sent to sadik@njit.edu. Additional positions available in our Department are posted at <http://jobs.njit.edu>.

As an EEO employer, NJIT is committed to building a diverse workforce and encourages applications from individuals with disabilities, minorities, veterans, and women.

Inorganic Chemistry

Department of Chemistry and Environmental Science

The Department of Chemistry and Environmental Science (CES) at the New Jersey Institute of Technology (NJIT) invites applications for a tenure-track faculty position at the Assistant Professor level in Inorganic Chemistry, preferably with a leading interest in energy-related applications, including photovoltaic materials and solar cells, starting in the Fall of 2020. CES at NJIT, within the College of Science and Liberal Arts, is committed to exceptional core education in the liberal arts and excellence in research and scholarship. Many resources, facilities, and collaboration opportunities exist within the Department, College, University, and neighboring institutions. Competitive salary, startup funds, and laboratory space will be provided. Minimum qualifications are a PhD in Chemistry, Chemical Engineering, Material Science or a closely related field from an accredited institution, and relevant postdoctoral research experience. The successful candidate is expected to establish an active, externally funded research program and to demonstrate excellence in graduate and undergraduate teaching, particularly in Inorganic Chemistry related courses.

CES (<http://chemistry.njit.edu>) at NJIT is in a dynamic growth phase, with ten new hires in the past five years, and a recent renovation and expansion of facilities. CES offers degree programs in Biochemistry, Chemistry, Environmental Science, Forensic Science, and Pharmaceutical Chemistry. NJIT is an R1 Doctoral University, conveniently located in the New York metropolitan area. With an enrollment of nearly 12 thousand students, it is continuing to build internationally- recognized programs in chemical and environmental sciences.

Applicants must apply online at <http://njit.csod.com/ats/careersite/JobDetails.aspx?site=1&id=1743> and submit a letter of application, curriculum vitae, maximum five-page description of research plans, one-page description of teaching phi-

losophy and interests, and names and contact information of at least three references. Review of applications will begin on November 1, 2019, and continue until the position is filled. Inquiries can be sent to mitra@njit.edu. Additional positions available in our Department are posted at <http://jobs.njit.edu>.

As an EEO employer, NJIT is committed to building a diverse workforce and encourages applications from individuals with disabilities, minorities, veterans, and women.

University Lecturer – Chemistry

Department of Chemistry and Environmental Science

New Jersey Institute of Technology (NJIT) has an opening for a University Lecturer - Chemistry with both lecture and laboratory teaching capabilities in the Department of Chemistry and Environmental Science (CES). The position will start in Fall 2020, with responsibilities starting in late August 2020.

The University Lecturer - Chemistry position is a 10-month full-time non-tenure-track faculty position. The successful candidate will have capabilities in teaching general chemistry as well as one or more of the following: physical chemistry lecture and general and physical chemistry laboratories. The ideal candidate will have a PhD in Chemistry or a related field, and experience teaching college-level chemistry.

The successful candidate will be expected to:

- Teach freshman chemistry courses
- Teach physical chemistry and related courses
- Teach laboratory classes in general and physical chemistry
- Participate in Department and University service through committees and workgroups

CES (<http://chemistry.njit.edu>) at NJIT, within the College of Science and Liberal Arts, is in a dynamic growth phase, with fourteen tenured and tenure-track faculty. It has diverse teaching, and research interests and a strong commitment to the success of our approximately 170 students enrolled in the department's degree programs in Biochem-

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POSITIONS AVAILABLE

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istry, Chemistry, Environmental Science, Forensic Science, and Pharmaceutical Chemistry. NJIT, which is conveniently located in the New York metropolitan area, is a top-tier research university ranked 97th in the National Universities category by *U.S. News & World Report Best Colleges*. More than 11,000 students (about 8,000 undergraduates and 3,000 graduates) are enrolled in the University's campus in downtown Newark.

Applicants must apply online at

<http://njit.csod.com/ats/careersite/JobDetails.aspx?site=1&id=1752> and submit a letter of application, curriculum vitae, comprehensive statement of teaching experience (including summary student evaluations), and the names and contact information of at least three references. Review of applications will begin November 1, 2019, and continue until the position is filled. Inquiries can be sent to gilbert@njit.edu. Additional positions available in our Department are posted at <http://jobs.njit.edu>.

As an EEO employer, NJIT is committed to building a diverse workforce and encourages applications from individuals with disabilities, minorities, veterans, and women.



See article on pages 7 to 11.

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is October 28, 2019.