

THE Indicator

DECEMBER 2017

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Dr. Miriam Gulotta 2018 North Jersey Chair



See Chair's Message on page 5.

THIS MONTH IN CHEMICAL HISTORY

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

In continuing my columns about underappreciated scientists who happened to be women I am devoting this month's to the life and career of Ines Hochmut Mandl. Born Ines Hochmut in Vienna in April 1917 she grew up in a comfortable Jewish household. Her father was prominent in Austrian industry. After primary school she entered a gymnasium where she studied humanities and a little science. In 1936, at the age of 19, she married Hans Mandl, a colleague of her father. Austria in 1936 was not a safe environment for Jews. The Mandls left for England, but at the outbreak of World War II in September 1939, concerned that they might be interned as enemy aliens, they moved to Ireland where Ines enrolled at the National University at Cork. She studied biochemistry and received her diploma (in chemical technology!) in 1944. The Mandls joined Ines' parents in the U.S.A. in 1945.

Ines began to work with Carl Neuberg at the Interchemical Corporation soon afterwards. Neuberg is often called the father of biochemistry. At that time he had been a leading biochemist for 40 years and had founded the journal *Biochemische Zeitschrift*, for the title of which he had coined the term biochemistry! Neuberg was a Professor at New York University and a consultant at Interchemical. He encouraged Ines to go on for further study. She worked evenings at the Polytechnic Institute of Brooklyn with Herman Mark, a pioneer of polymer chemistry, earning a Master's degree in 1947, and becoming the Institute's first female Ph.D. in 1949.

She then accepted a position as a research associate at the Columbia University College of Physicians and Surgeons, and remained connected to Columbia for the remainder of her career. She was appointed to a faculty position in Microbiology in 1955, moving through the ranks to finish as a full professor. After work on sugar chemistry for her Master's degree, and photochemistry of peptides and enzymes for her Ph.D. she turned to research on collagenase developing a preparation that was used in the treatment of skin for third-degree burns, and herniated spinal disks. Ines then looked at other proteolytic enzymes, especially those involved with connective tissues in the lungs.

This research led naturally to an interest in the effects of smoking on lung tissue. She helped establish the biochemical causes of pulmonary emphysema in both mature adults and newborns. Her work led to new methods of analyzing lung damage. In 1972 she helped to found a new journal in her field, *Connective Tissue Research*.



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EDITORIAL DEADLINES

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www.TheIndicator.org

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

December Calendar

NEW YORK SECTION

Friday, December 1, 2017

NY/NJ Society for Applied Spectroscopy
See page 9.

Tuesday, December 5, 2017

Chemical Marketing & Economics Group
Leadership Awards
See pages 9 and 11.

Tuesday, December 5, 2017

Westchester Chemical Society
See pages 9-10.

Thursday, December 7, 2017

Long Island Subsection
See page 10.

also

TBD, 2018

NY/NJ Society for Applied Spectroscopy
See page 10.

Saturday, January 20, 2018

NY Sectionwide Conference
See page 8.

Tuesdays, January 30 and June 19, 2018

New York Nanoscience Discussion Group
See page 7.

Saturday, May 5, 2018

Undergraduate Research Symposium
See page 16.

NORTH JERSEY SECTION

Friday, December 1, 2017

NY/NJ Society for Applied Spectroscopy
See page 6.

Friday, December 8, 2017

Baekeland Symposium and Award
Celebration
See pages 6 and 7.

also

TBD, 2018

NY/NJ Society for Applied Spectroscopy
See page 6.



***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 January 2018 issue of
The Indicator is**

November 28, 2017

2018 North Jersey Chair's Message

To Members of the North Jersey Section:

Becoming the 2018 Chair of the North Jersey Section of the American Chemical Society (NJ-ACS) is an immense honor as well as a daunting responsibility. First, I want to thank all the people who participate in NJACS topical groups, symposia, SEED mentors/mentees, College Chapters, the Chemistry Olympiad, the Chemistry Olympics, ChemExpo and all the other NJACS involved events. It's you who are both the face and the strength of our section.

As a teacher, I view the world as a field of educational opportunities and being the chair of the NJ-ACS gives me the opportunity to encourage our over 4000 members to take full advantage of their NJ-ACS membership.

- Increase and update your knowledge by participating in technical topical groups including chromatography, mass spectroscopy, drug metabolism and organic chemistry and by attending scientific symposia like the upcoming Baekeland Symposium on December 8.
- Learn new ideas and discuss implementing the new standards by Interacting with other high school teachers by joining the teacher affiliates group, the American Association of Chemistry Teachers (AACT) and attending ChemTag meetings.
- Join a College level student chapter or high school club or agree to speak at one of their events or become a chemistry coach with a teacher.
- Bring your kids or someone else's to ChemExpo to celebrate National Chemistry Week (October).
- Mentor an economically disadvantaged high school student in your lab through project SEED or introduce younger kids from economically disadvantaged school districts to science through Community Nights at the Liberty Science Center.
- Become a judge and advise some great high school students at the NJIT Chemistry Olympics or become involved with the International Chemistry Olympiad.

My background with the ACS and my goals have always been and continue to be for greater outreach. I have two goals for my time as your chair:

1. Outreach from within. There were 4317 eligible voters in this year's NJACS election but only 11.7% or 507 people took the time to vote. Only a fraction of that group are members of topical groups and/or are participants in other 2017 events. If every active member could bring one nonactive member to an event we could vastly increase our ability to fulfill our mission: to advance the broader chemistry enterprise and its practitioners for the benefit of our communities. In 2018 I want to see increases in both active members and voters.

2. Outreach to economically disadvantaged communities: My involvement in education and outreach indicates that these kids lack opportunities and mentors but not enthusiasm or aptitude for science. In 2018, I want to initiate a relationship between NJACS and a Boys and Girls Club in one of these areas and to hold at least 1 lesson there.

Thanks to everyone in NJACS for giving me this amazing opportunity to serve. If you are interested in the NJACS and want direction on how to proceed or if you have any ideas or suggestions for us please contact me at mgulotta@njacs.org.

Dr. Miriam Gulotta

North Jersey Meetings

<http://www.njacs.org>

NORTH JERSEY EXECUTIVE COMMITTEE MEETING

There will be no North Jersey Executive Committee Meeting in December.



CAREERS IN TRANSITION MEETINGS

There will be no Careers in Transition Meetings until further notice.



BAEKELAND SYMPOSIUM

Date: Friday, December 8, 2017

See awardee's photo below and program flyer on page 7 for details.

NEW YORK/NEW JERSEY SOCIETY FOR APPLIED SPECTROSCOPY

CALENDAR 2017

"Materials testing at the Met: What display, shipping, and storage materials should or shouldn't be near the art."

Speaker: Eric Breitung

Date: Friday, December 1, 2017

Place: Metropolitan Museum of Art

CALENDAR 2018

"Vibrational spectroscopy applications understanding protein secondary structure or application in protein production using NIR"

Speaker: John Wasyluk

Date: to be determined

Place: BMS

For more information, visit our website at www.NYSAS.org.

NORTH JERSEY ELECTION RESULTS

The following are the results of the recent North Jersey election:

CHAIR-ELECT (2018)

Amjad Ali

SECRETARY (2018-2020)

Bettyann Howson

COUNCILORS/ALTERNATE COUNCILORS (2018-2020)

Councilors

Amanda Peterson Mann

Alan Cooper

Jacqueline Erickson

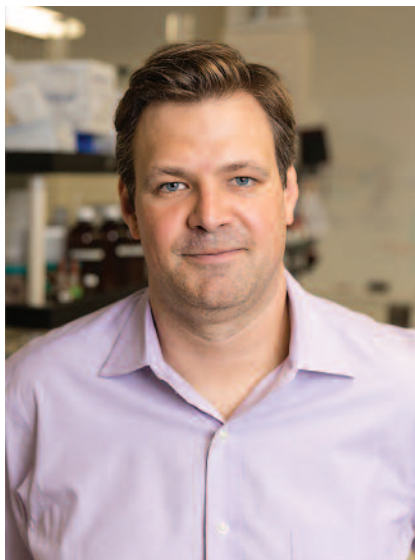
Alternate Councilors

Tomeka Saxon Thompson

Steven Silverman

Mohammed Elshaer

WILLIAM R. DICHTEL, PhD,
2018 Baekeland Awardee
(Program on next page.)



American Chemical Society North Jersey Section 2017 Baekeland Award Symposium



Friday, December 8, 2017 • 12:00 noon – 5:00 pm
Rutgers University Inn & Conference Center
178 Ryders Lane, New Brunswick, NJ 08901



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

- 12:00 Registration / Snacks
- 12:30 **Welcome Address**
Dr. Miriam Gulotta, Baekeland Symposium Chair
- 12:40 **Professor Christopher A. Alabi**
Coupling Molecular Design to Structure and Activity of Sequence-Defined Macromolecules
- 1:20 **Professor Natalia Shustova**
Fullerene Materials for Directional Energy Transfer
- 2:00 **Professor Jeffrey S. Moore**
Organic Chemistry at the Interface of Materials and Mechanics
- 2:40 Break / Refreshments
- 3:20 **Professor Timothy M. Swager**
Dynamically-Reconfigurable Complex Emulsions
- 4:00 **Baekeland Award Presentation**
Dr. Landon Greene, NJ-ACS Section Chair
- 4:10 **Keynote: Professor William R. Dichtel**
Covalent Organic Frameworks as a Platform for Molecular Assembly
- 4:50 **Closing Remarks**
Dr. Les McQuire, NJ-ACS Awards Chair

Speakers



William R. Dichtel, PhD
Robert L. Letsinger Professor of Chemistry
Northwestern University
Keynote Speaker
2017 Baekeland Award Winner



Timothy M. Swager, PhD
John D. Mac Arthur Professor
of Chemistry
Massachusetts Institute of Technology



Jeffrey S. Moore, PhD
Murchison-Mallory Professor
of Chemistry
University of Illinois
at Urbana-Champaign



Natalia Shustova, PhD
Assistant Professor of Chemistry
and Biochemistry
University of South Carolina



Christopher A. Alabi, PhD
Assistant Professor and Nancy and
Peter Meinig Family Investigator
in the Life Sciences
Cornell University



Registration Fee: \$15 professionals; \$5 students, retirees, unemployed
Online registration required by November 22, 2017 at www.njacs.org/baekeland due to limited seating
Note: Students will be refunded \$5 at the symposium, so their registration will be effectively free

www.njacs.org

Questions? Contact Dr. Miriam Gulotta (mgulotta@njacs.org), Chair of the Baekeland Award Committee
Organizing Committee: Miriam Gulotta (Chair), Alan Cooper, Jackie Erickson, Marilyn Gorman, Landon Greene, Bettyann Howson, Ron Kong, Diane Krone, Les McQuire, Monica Sekharan, Bill Suits

AMERICAN CHEMICAL SOCIETY'S NEW YORK SECTION 2018 SECTION-WIDE CONFERENCE

PLEASE REGISTER AT

<http://www.newyorkacs.org/meetings/sectionwide/sectionwide2018.php>

Date: SATURDAY, JANUARY 20, 2018

Times: 10:30 AM – 2:00 PM

Place: PACE UNIVERSITY, NYC Campus – Bianco Room

Enter Through Schimmel Theatre Entrance

Directions to Pace University - [https://studentit.pace.edu/about-us/](https://studentit.pace.edu/about-us/directions-to-all-campuses/nyc-campus)

[directions-to-all-campuses/nyc-campus](https://studentit.pace.edu/about-us/directions-to-all-campuses/nyc-campus)

Directions to Schimmel Theatre - <http://schimmelcenter.org/directions>

Cost: FREE TO ALL

✿ PROGRAM ✿

10:30 AM ARRIVAL AND REFRESHMENTS.

11:00 AM GREETINGS FROM THE ACS NEW YORK SECTION 2018 CHAIR. Dr. Joseph M. Serafin
St. John's University

11:10 AM AWARD PRESENTATIONS. Dr. Brian R. Gibney
Service Plaque and Pin to the 2017 New York Brooklyn College and
Section Chair Graduate Center of CUNY

New York Section Outstanding Service Award for 2017 Dr. JaimeLee I. Rizzo
Pace University

Nichols Foundation H.S. Chemistry Teacher Award for 2017 Ms. Carol E. Conti
Briarcliff High School

11:30 AM PRESENTATION OF CANDIDATES FOR THE 2018 ELECTIONS. Dr. Joseph M. Serafin
2018 Chair ACS New York Section

11:45 AM KEYNOTE SPEAKER: ROBERT ENGEL
PROFESSOR, QUEENS COLLEGE, CUNY

“ADVENTURES IN CHEMICAL ARCHITECTURE”

For some years our laboratory has been engaged in the investigation of the syntheses and characteristics of polycationic organic species. These have included quaternary phosphonium and quaternary ammonium salts, which bear both intriguing structural and practical aspects. This presentation is a summary of this work with indications of future directions of practical significance, including medical applications.

12:45 PM COFFEE BREAK. There will be poster presentations by the New York Section Project SEED Students.

1:00 PM ACS, NEW YORK SECTION COMMITTEE PLANNING SESSIONS FOR 2018.

Educational Activities: (Chemagination, Chemists Celebrate Earth Day, Continuing Education, High School Chemistry Olympiad, National Chemistry Week, Nichols Foundation Teacher Award, Project Seed, Student Membership)

Chair: Dr. Alison G. Hyslop

Member Affairs: (ACS Fellows, Awards, Employment and Professional Relations, History of the New York Section, *Indicator*, Membership, Outstanding Service Award)

Chair: Dr. Ralph Stephani

Program Review: (Subsection and Topical Discussion Group Chairs)

Chair: Dr. Anne T. O'Brien

Public Affairs: (Academe and Industrial Relations, Environmental Chemistry, Fund Raising, Government Affairs, Information Technology, Public Relations, Speaker's Bureau)

Chair: Dr. Robert P. Nolan

1:45 PM REPORTS FROM THE CHAIRS OF THE COMMITTEE PLANNING SESSIONS.

2:00 PM CONCLUSION OF THE MEETING. Join with colleagues for lunch at a local restaurant.

To inquire about the Section-wide Conference, please call the New York Section Office at 516-883-7510 or e-mail Marilyn Jespersen, Office Administrator, at: njesper1@optonline.net

New York Meetings

www.newyorkacs.org

NEW YORK SECTION BOARD MEETING DATES FOR 2017

No December 2017 Meeting.

Sectionwide Conference, **January 20, 2018**, Pace University, NYC.

William H. Nichols Distinguished Symposium and Medal Award Dinner, April 13, 2018, Crown Plaza Hotel, White Plains, NY

More information will be posted in future monthly issues of *The Indicator* and on the New York website at

<http://www.NewYorkACS.org>.



NEW YORK/NEW JERSEY SOCIETY FOR APPLIED SPECTROSCOPY

CALENDAR 2017

“Materials testing at the Met: What display, shipping, and storage materials should or shouldn’t be near the art.”

Speaker: Eric Breitung

Date: Friday, December 1, 2017

Place: Metropolitan Museum of Art

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“Vibrational spectroscopy applications understanding protein secondary structure or application in protein production using NIR”

Speaker: John Wasyluk

Date: to be determined

Place: BMS

For more information, visit our website at www.NYSAS.org.



CHEMICAL MARKETING AND ECONOMICS GROUP

Leadership Awards

Date: Tuesday December 5, 2017

Times: 11:30 AM – 2:30 PM

Place: Metropolitan Club
1 E 60th Street
New York, NY

Further information www.cmeacs.org and see flyers on pages 11 and 12.

Mark your Calendars:

Dates: Tuesday, January 30, 2018

Tuesday, June 19, 2018

Times: Refreshments — 7:00 PM

Science — 7:30 PM

Place: New York University
Dept. of Chemistry, Room 1003
(10th Floor) Silver Center
31 Washington Place (between
Washington Sq. East & Green St.)
New York, NY



WESTCHESTER CHEMICAL SOCIETY

Special Seminar – “FTIR Microscopy and Imaging – When You Need It and How To Use It”

Speaker: Linda Kidder Yarlott, PhD
Product Manager – Molecular
Spectroscopy
Shimadzu Scientific
Instruments, Inc.
7102 Riverwood Drive
Columbia, MD 21046

FTIR Microscopy and Imaging – the Hows and Whys of “Seeing Infrared”

What do the FGM-148 Javelin anti-tank missile and laboratory-based FTIR imaging systems have in common? Both use infrared sensitive focal plane arrays – albeit with different goals in mind. The Javelin uses the IR detector (64 x 64 pixel MCT) to create thermal images of targets for “locking-on” purposes, and ultimate destruction of the intended target. Laboratory-based FTIR imaging systems have an entirely different goal, incorporating a wavelength filter (interferometer) to create images based on IR functional groups that enable the spatial distribution of sample components to be characterized. I will explore various technologies that enabled the development of IR microscopy and imaging, from single point micro-spectroscopy to mapping and imaging. I will also discuss applications of spatially resolved IR spectroscopy, from materials characterization to pathology, as the ultimate value in developing novel analytical

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WESTCHESTER CHEMICAL SOCIETY

(continued from page 9)

instrumentation is to add tools to our analytical toolbox.

Biography:

Dr. Linda Kidder graduated from Williams College with a B.A. in Chemistry and received her Ph.D. in physical chemistry from the Johns Hopkins University, where she was the recipient of the Sonneborn and Ernest Marks Fellowships. During her post-doc in the Laboratory of Chemical Physics at NIH, she developed a deep appreciation for molecular spectroscopy: developing, deploying, and characterizing Raman and Fourier transform infrared hyperspectral imaging systems. Since then, her career has focused on the development and commercialization of novel analytical instrumentation: as co-founder of Spectral Dimensions, Senior Scientist at Malvern Instruments as part of the Bioscience Development Initiative, Vice President of Market Development at BrightSpec, and currently as Strategic Product Leader at Shimadzu Scientific Instrumentation. She is a long-standing member of the Society for Applied Spectroscopy, the Coblenz Society, and the American Chemical Society, and has contributed to ASTM on both E13.10 and E55 committees. She has also worked on outreach for vibrational spectroscopy, as program coordinator at the FACSS (now SciX) and EAS meetings, as well as organizing the SAS Tour Speakers program in 2011 and upcoming in 2018. In her "spare time" she and her husband are raising two active boys (11 and 9), and looking after a flock of pets including 2 Australian shepherds, 3 hamsters, a rabbit, a guinea pig and a parakeet.

Date: Tuesday, December 5, 2017

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

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

Cost: Free and Opened to the Public

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



LONG ISLAND SUBSECTION

Holiday Seminar: "Investigating the impact processing of Asteroids using Quantitative Three-Dimensional Petrography of Ordinary Chondrites"

Speaker: Dr. Jon Friedrich
Fordham University
Bronx, NY

The 3D imaging technique x-ray microtomography allows for the internal examination of materials at resolutions of up to about 1 micron/voxel (a voxel is a 3D pixel or volume element). Some background of the technique will be presented. Several quantitative applications of this 3D technique will be discussed including investigations into the porosity and degree of compaction of primitive meteorites. These investigations inform up about the impact history of a meteorite's asteroidal parent body.

Come join us to celebrate the end of a great year and the beginning of another!

For up-to-date information, please visit:
http://www.newyorkacs.org/sub_island.php

Date: Thursday, December 7, 2017

Time: Dinner & Seminar – 6:00 PM

Place: Nassau Community College
College Center Building
Room 252-253 (CCB 252-253)

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



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Skorton**13th Secretary of the
Smithsonian
Institution and Past
President of Cornell
University**Extraordinary
Innovation****John
Keller**President and CEO of
Shionogi Inc. and
President of the New
York Pharma Forum

Tuesday December 5, 2017 • 11:30 am – 2:30 pm

Metropolitan Club, 1 E 60th St, New York, NY 10022

www.cmeacs.org

CELEBRATE TODAY'S LEADERS - ENABLE THOSE OF TOMORROW



December 5, 2017
11:30 am – 2:30 pm

Metropolitan Club
1 E 60th St, New
York, NY 10022

Schedule
11:30 am - 12:00 pm
Registration
12 pm - 1 pm
Luncheon
1 pm – 2:30 pm
Awards Presentation

info@cmeacs.org

WWW.CMEACS.ORG



PROGRAM

REGISTRATION

LUNCHEON

INTRODUCTION

ACS Chair of the Board – Pat Confalone

CME Chair – Charles Brumlik

ACS President – Allison Campbell

AWARDS PRESENTATION

CME Host – George Rodriguez

Corporate Reinvention – Christopher Pappas

Extraordinary Innovation – John Keller

Lifetime Achievement – Roque Benavides

Science Involvement – David Skorton

CLOSING REMARKS

2016 ACS President – Donna Nelson

ANNUAL STEM AWARDS

Inspiring leadership has been the hallmark of the Chemical Marketing and Economic Group (CME) of ACS NY, a topical group founded in 1954. Established in 2012, the Leadership Awards™ are the highest honors given by CME to leaders of industry, investments, and other sectors, for their contributions to science, technology, engineering and mathematics initiatives.

CME organizes monthly luncheons and webcasts in Manhattan where industry leaders present cutting-edge outlooks on energy, materials & life science.

Founded in 1876 and Chartered by the U.S. Congress, ACS is the world's largest scientific society with 158,000 members. This ACS ChemLuminary award-winning event is a fundraiser to help advance STEM programs.

CELEBRATE TODAY'S LEADERS - ENABLE THOSE OF TOMORROW



NOMINATING COMMITTEE FOR THE 2018 ELECTIONS MEETS IN DECEMBER

The Nominating Committee of the New York Section will meet in December to select candidates for the 2018 elections.

Positions available are:

Chair-elect for 2019
Secretary for 2019 - 2020
Directors-at-Large for 2019
Councilors and Alternate Councilors for 2019 – 2021

If a member of the New York Section wishes to run for office or to suggest a member for consideration by the Nominating Committee, please write to the American Chemical Society, New York Section, Inc., St. John's University, Department of Chemistry, 8000 Utopia Parkway, Jamaica, NY 11439 or send an e-mail to the New York Section office at njesper1@optonline.net by **November 30**.



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.

SURPRISE

our editor by calling and saying you appreciate the quality and content of our newsletter. Our editor works hard to maintain a publication of interest to our membership. Oh, and by the way, you could also give credit to our advertisers who financially support us.



WESTCHESTER CHEMICAL SOCIETY

On October 10, 2017 Dr. Kenrick M. Lewis spoke on "R&D AT UNION CARBIDE TARRYTOWN TECHNICAL CENTER 1959 - 1990". Dr. Lewis is a Corporate Research Fellow at Momentive Performance Materials in Tarrytown, NY (a successor to the Union Carbide silicones business). His talk was based on an invited lecture, "Golden Age of R&D at Union Carbide Corp Tarrytown Technical Center," presented at the Spring 2017 ACS National Meeting in San Francisco. Dr. Lewis gave a brief history of the site and its laboratories and discussed some of the cutting-edge research and development done there. He mentioned numerous, well-known scientists and engineers who worked there over the years, with a focus on several whom Dr. Lewis admired, including Edith Flanigen, Bernard Kanner and Lawrence Litz. Among other things, Dr. Flanigen worked on zeolite, silicalite and aluminophosphate molecular sieves; Dr. Kanner on organofunctional silanes including the silicone surfactants that make possible flexible and rigid urethane foams, and the direct synthesis of various silanes; and Dr. Litz on the preparation of the first gram quantities of plutonium during the Manhattan Project, the UCARSEP® (Trademark of Union Carbide) membrane separation process, fuel cells, molten salt technology, and applications of oxygen and hydrogen in hydrometallurgy and chemical syntheses. In addition to having been considered for a Nobel prize, Dr. Flanigen was granted more than 100 patents and had been given numerous awards, including:

1991: Chemical Pioneer Award, American Institute of Chemists.

1992: Perkin Medal.

1993: Garvan Medal.

2004: Lemelson-MIT Lifetime Achievement Award.

2012: National Medal of Technology and Innovation.

2014: Award created in her honor at Humboldt University, Berlin, for outstanding female scientist early in her career.

Dr. Kanner was the author or co-author of 86

(continued on page 14)

WESTCHESTER CHEMICAL SOCIETY

(continued from page 13)

patents. Dr. Litz was a key contributor to two Kirkpatrick Awards: UCARSEP and Commercialization of improved processes for the use of oxygen in synthesis of organic chemicals.

Dr. Lewis noted numerous other achievements completed in Tarrytown, including:

- Applications of zeolite molecular sieves in hydrocarbon cracking & adsorption (Kirkpatrick Award).
- PRESTONE® (Prestone Products trademark) Antifreeze with silicone – silicate corrosion inhibitor.
- UCARSEP ultrafiltration membrane separation process (Kirkpatrick Award).
- UNISON* (Trademark of Union Carbide) Process for safe removal of PCBs from transformers (Kirkpatrick Award).
- Vinyl tiles to replace asbestos in floor covering.
- NIAX* (Trademark of Momentive Performance Materials, Inc) Silicone surfactants for polyurethane foams.
- The Direct Trimethoxysilane Process (Kirkpatrick Award).

Dr. Lewis also summarized some of the projects that he worked on over the years, including:

- The Catalytic transformations of silicon and organosilicon compounds, e.g. Direct Syntheses of silanes from silicon, Redistribution/Disproportionation, Hydrosilylation and Hydrogenolysis of disilanes.
- Silicon surface enrichment in Cu-Si intermetallics during Direct Synthesis.
- Silylenes, especially CH_3SiCl , as key intermediates in Direct Synthesis of Methyl-chlorosilanes.
- The Direct Synthesis of Tris(dimethylamino)silane.
- The Slurry-Phase Direct Synthesis of Trimethoxysilane (Kirkpatrick Award).
- Copper-catalyzed reactions, particularly the use of nanosized copper and copper compounds in catalyzed Direct Reactions of silicon.

- Structure-property relationships among siloxane-polyether copolymers, especially silicone surfactants for stabilizing rigid polyurethane foams.

- Stereology and Image Analysis of polyurethane foams.

Finally, Dr. Lewis summarized some of the key factors contributing to the many successes at the Union Carbide Tarrytown site, including

- The recruitment of high caliber chemists and engineers, curious and eager to search for knowledge and truth at the molecular level. Passionate and purposeful. A quote of Edith Flanigen's is particularly pertinent at this point: *"Creative minds stretched and emboldened by excellence in their educational training. Dreamers, visionaries, free spirits. At home with concepts. Thinkers with uncanny chemical intuition. Persistent, almost stubborn, in their resolve. With a childlike impetus at play and just a little bit of luck"*.
- R & D Management encouraged and supported exploration of new ideas.
- R & D managers were also high caliber scientists. Marketing and Business Management also supportive.
- Active mentoring of younger scientists by experienced scientists.
- Excellent ancillary services (Library, Analytical Services, Fab shop, Glass Shop, Stockroom, Cafeteria).

- A culture of information sharing and collaboration (Inter-site and intra-site). Seminars and conferences.

- In-house training (Safety, IP, Management and Personnel Development Courses).

Although much of the site is now used by Regeneron, it is interesting that the Union Carbide Silicones Division is still active at the Tarrytown site through successor companies, including the current Momentive Performance Materials, Inc., with whom Dr. Lewis is employed. We had a larger than usual audience, including several former Carbiders, one of whom is Paul Dillon, the co-chair and program director of the Westchester Chemical Society (and who helped create the engineering statistical models used in the UNISON process). There was a lively discussion following the

talk which was given at the Westchester Community College in Valhalla, NY.

Dr. Lewis was born in Grenada, West Indies, and completed his secondary education there. His degrees are from the University of Alberta (Edmonton), BS (first class honors in chemistry), and from the University of Massachusetts (Amherst), Ph.D. (Inorganic Chemistry). He joined the Linde Research Dept. of Union Carbide in January, 1977 and has been at the Tarrytown Technical Center since then. He has received many scholarships, prizes and awards from his studentship to the present time. These include the Latimer and Langmuir Awards at General Electric Co., Caribbean Icon of Science and Technology from the Caribbean Council for Science and Technology, and a Key Contributor to the 1999 Kirkpatrick Award for Innovation in the Direct Synthesis of Trimethoxysilane. Tarrytown, NY. He is co-editor of *Catalyzed Direct Reactions of Silicon* (Elsevier, 1993), the author of forty-six technical publications, and inventor on twenty-six issued US patents.

After the talk Dr. Lewis and several of the attendees enjoyed a dinner together at a nearby restaurant. The photo below is of Dr. Lewis and the other WCS board members who attended the meeting.

Others

FALL 2017 SEMINAR SERIES AT NJIT

Dates: Mondays

Time: 2:45 PM

Place: Cullimore Lecture Hall 3
New Jersey Institute of Technology
University Heights, Newark, NJ

Seminar schedule:

<http://chemicaleng.njit.edu/news/seminars.php>

For more information contact the seminar coordinator, Dr. Gennady Gor (973) 596-2944, gor@njit.edu
<http://chemicaleng.njit.edu/people/gor.php> Jebrown@infionline.net



Paul Dillon, Kenrick Lewis, Rolande Hodel, Jody Reifenberg, Peter Corfield and Sally Mitchell

(Photo courtesy of Paul Dillon)

 ACS Chemistry for Life®	66th	ANNUAL UNDERGRADUATE RESEARCH SYMPOSIUM
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**The New York Chemistry Students' Association
Student Affiliate Committee – New York Section
American Chemical Society**

Saturday, May 5th, 2018 at York College CUNY

8:00 am – 3:00 pm (breakfast, luncheon and award reception included)

Sign up as an attendee at <http://www.newyorkacs.org/meetings/urs/urs.php>

Keynote Speaker

Dr. Dhabih V. Chulhai

Dept. of Chemistry, University of Minnesota, Minneapolis MN

Dhabih Chulhai grew up in Guyana and began his studies in chemistry at the University of Guyana. He received his B.S. in Chemistry at York College of the City University of New York (CUNY) in 2011, where he worked with Prof. Ruel Desamero, and his Ph.D. in Chemistry from The Pennsylvania State University in 2016, working with Prof. Lasse Jensen. Since then, he has been working as a postdoctoral associate with Dr. Jason Goodpaster at the University of Minnesota. Dr. Chulhai was awarded the Eugene and Jane Apple Science Graduate Fellowship at Penn State University for his contributions to the National Science Foundation's (NSF), Center for Chemical Innovation (CCI) entitled Center for Chemistry at the Space-Time Limit (CaSTL). In CaSTL he worked with a team to develop and use theoretical methods to understand chemistry at the smallest possible length and time scales. He is currently a part of the Department of Energy's Nanoporous Materials Genome Center, where his research is focused on developing and using highly accurate quantum chemical methods to guide the discovery of novel materials.



Keynote Address

Understanding Chemistry Using Theoretical Embedding Methods

Abstract: All of chemistry may be understood by solving the time-dependent Schrödinger equation for the relevant system, although exact solutions are often impossible or computationally too expensive. Theoretical and computational chemists seek to find and use shortcuts that are both accurate and computationally tractable to solve this equation. Luckily, most of chemistry often occurs in a small region of an otherwise complex environment. As such, we are interested in using embedding methods—where we use a highly accurate method to describe the small region of interest but describe the rest of the environment using less accurate methods—to model systems. Experiments are now able to observe chemistry happening one molecule at a time, using techniques like surface-enhanced and tip-enhanced Raman scattering. We will show how using these embedding methods allows us to gain insights into these experimental findings.

SIGNIFICANT DATES FOR 66th URS

Deadline for Abstract Submission - **March 15, 2018** Abstract acceptance notification – March 26, 2018

Deadline for Symposium Advanced Registration – March 27, 2018

2018 Co-chair Dr. Paul Sideris Queensborough Community College psideris@qcc.cuny.edu	2018 Co-chair Dr. Yolanda Small York College - CUNY ysmall@york.cuny.edu	2018 Co-chair Dr. Ipsita A. Banerjee Fordham University banerjee@fordham.edu	2018 Co-chair Dr. Naphtali O'Connor Lehman College - CUNY naphtali.oconnor@lehman.cuny.edu
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FREE Registration for student members of the National ACS, faculty mentors who register in advance and sponsors. For non-ACS members and guests, the registration is \$95 in advance. All on-site registration is \$45 for faculty, staff and guests. Checks for the registration fee should be made out to: "NY ACS URS" and sent to: Prof. Joseph Swartz, St. John's University, Department of Chemistry, 333 St. Albert Hall, Queens, NY 11439.

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 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



WESTCHESTER CHEMICAL SOCIETY DISTINGUISHED SCIENTIST AWARD 2018

The Westchester Chemical Society is accepting nominations for the "WCS Distinguished Scientist Award 2018". Scientists who live or work in Westchester or the Bronx qualify. The awardee is expected to attend the Awards Dinner (April/May timeframe) and to present aspects of his or her work. Self-nominations are acceptable.

Nominations are not carried over from previous years. New and possibly updated nominations should be submitted. New this year, we will allow teams to be nominated. The team should include only those who have made substantial scientific contributions to its work. If a team is selected, then a single presentation of about an hour will be made by either a single team member or more than one; a choice to be made by the team. Please send a cover letter stating why your nominee should receive the award along with the nominee's resume (or all team members' resumes with an indication of team-specific contributions) by **January 31, 2018** to:

Dr. Paul Dillon at

PaulWDillon2@hotmail.com or

67 Matthes Road, Briarcliff Manor, NY 10510

or to:

Dr. Peter Corfield at pwrc@earthlink.com.



NY SECTION — SOCIETY FOR APPLIED SPECTROSCOPY

2018 GOLD MEDAL AWARD

Nominations are being sought for the 2018 Gold Medal Award of the New York Section of the Society for Applied Spectroscopy. This coveted award was established in 1952 to recognize outstanding contributions to the field of Applied Spectroscopy. The Gold Medal will be presented at a special award symposium, arranged in honor of the awardee, at the 2018 Eastern Analytical Symposium. A nominating letter describing the nominee's specific accomplishments should be submitted along with a biographical sketch and list of publications by January 10th, 2018. Please email all materials to Kathrynalee@hotmail.com.



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Call for Nominations

2018

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NOMINATE LEADING FACULTY CANDIDATES



LIFE SCIENCES PHYSICAL SCIENCES & ENGINEERING CHEMISTRY

ONE LAUREATE IN EACH CATEGORY AWARDED **\$250,000**

Nominations open on **SEPTEMBER 27TH, 2017**

NOMINATIONS CLOSE ON NOVEMBER 15TH, 2017

Nominate at www.blavatnikawards.org

Letters of support must be submitted by **NOVEMBER 29TH, 2017**

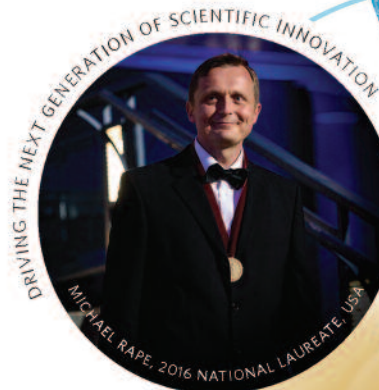
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Blavatnik Awards
Young Scientists





Call for Nominations


2018 BLAVATNIK NATIONAL AWARDS



 **Program:** Blavatnik National Awards for Young Scientists

 **Mission:** Recognize America's most promising faculty-rank researchers

 **Categories:** Life Sciences, Physical Sciences & Engineering, and Chemistry

 **Awards:** Three Laureates, \$250,000 each in unrestricted funds, paid directly to Laureate, one in each category

ELIGIBILITY

The nominee must:

- Have been born in or after 1976.
- Hold a doctoral degree (PhD, DPhil, MD, DDS, DVM, etc.).
- Currently hold a faculty position at an invited institution in the United States.
- Currently conduct research as a principal investigator in one of the disciplinary categories in Life Sciences, Physical Sciences & Engineering, or Chemistry.
- The Blavatnik Awards welcomes candidates from underrepresented groups in science and engineering.

LIMITED SUBMISSION

- Candidates must be nominated by their institution. Self-nominations are not allowed.
- Each institution may submit up to **three nominations**, one in each disciplinary category of Life Sciences, Physical Sciences & Engineering, and Chemistry
- Nominations must be submitted using the online nomination system.

NOMINATION MATERIALS

- Nominator's **Rationale for Nomination** (200 words).
- Nominee's **Curriculum Vitae** (4 pages).
- Nominee's **Research Summary** (1,000 words).
- **Full-text publications and/or patents** representing the nominee's work (up to 4).
- Names and email addresses for two letter writers.

EVALUATION CRITERIA

Nominees and their work as independent investigators will be evaluated according to the following criteria:

- **Quality:** The extent to which the work is reliable, valid, credible, and scientifically rigorous.
- **Impact:** The extent to which the work addresses an important problem and is influential in the nominee's field.
- **Novelty:** The extent to which the work challenges existing paradigms, employs new methodologies or concepts, and/or pursues an original question.
- **Promise:** Future prospects in the nominee's field and potential for further significant contributions to science.

QUESTIONS

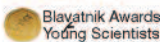
This is a summary of the Blavatnik National Awards. Please read the 2018 Blavatnik National Awards Guidelines for complete details. For general questions about rules and eligibility, please consult the Frequently Asked Questions on the Blavatnik Awards website.

For all other inquiries, please contact the Blavatnik Awards team at blavatnikawards@nyas.org or 212.298.8624.

Nominate at:
www.blavatnikawards.org

Nominations Open:
September 27th —
November 15th, 2017

Letters of Support Due:
November 29th, 2017



PLEASE VISIT WWW.BLATVNIKAWARDS.ORG FOR MORE INFORMATION

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: 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 (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!

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 post-marked no later than March 31 Annually

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

Call for Applications

OPEN-NJ Scholarship Program Department of Chemistry and Biochemistry



MONTCLAIR STATE
UNIVERSITY

Receive one of the scholarships (\$10,000/year for 2 or 3 years) to enter one of the following programs at Montclair State University

- *Masters in Pharmaceutical Biochemistry*
- *Masters in Chemistry*
- *Masters in Chemistry with a Concentration in Biochemistry*

This program is open for the following majors: Biochemistry, Chemistry, Physics, Molecular Biology, Biology, Environmental Sciences, and related degrees (B.A., B.S.).

Summer Research Stipends available for highly qualified students.

Information: <https://www.montclair.edu/csam/open-nj/>

<https://www.montclair.edu/graduate/news/article.php?ArticleID=16127>

Requirements for Program

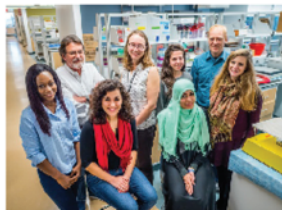
- Minimum overall 3.0 GPA (B.S. or B.A. degree)
- Completed General Chemistry I (with lab), General Chemistry II (with lab), Organic Chemistry I (with lab), Organic Chemistry II, Calculus I and II and a year of Physics.
- US citizen, national, admitted refugee or permanent resident
- Enrolling full time in an MSU Department of Chemistry and Biochemistry M.S. program
- Financial aid eligible as determined by the Office of Financial Aid.
- Committed to participating in all OPEN-NJ meetings including networking events.

Apply

Apply to the Graduate Program at Montclair State University (<http://www.montclair.edu/graduate/>) AND email Dr. Nina Goodey (goodeyn@mail.montclair.edu) to indicate interest in the OPEN-NJ Scholarship Program. The OPEN-NJ Selection Committee will use your graduate school application.

Questions?

Please, email Dr. Nina Goodey (goodeyn@mail.montclair.edu).



In the News

DR. MICHAEL CEFOLA HONORED AT FORDHAM CELEBRATION

On Wednesday, October 11, 2017, Fordham University hosted a symposium commemorating the 75th anniversary of the isolation of plutonium and celebrating the life of Dr. Michael Cefola, a Fordham chemistry professor from 1950 – 1975. Prior to his arrival at Fordham, Dr. Cefola worked as part of the team that accomplished the first isolation of plutonium. Dr. Jon Friedrich, current chair of the chemistry department served as the master of ceremonies. Dr. Anne O'Brien, councilor and past director of ACS, brought greetings from the national ACS as well as from the New York section. Mr. Michael A. Cefola, son of the honoree, shared personal reflections about growing up in a home frequently visited by celebrities from his

father's past including Dr. Glenn Seaborg, the director of the plutonium isolation project. Dr. Carla Romney, an Associate Dean at Fordham, presented Dr. Cefola's son and daughter-in-law with a copy of Dr. Cefola's Ph.D. dissertation from NYU.

Dr. Quamrul Hader, professor of physics, gave the keynote talk entitled Plutonium: A Nuclear Primer. This was followed by personal reflections by former students and colleagues of Dr. Cefola including Dr. Robert Messina, a former doctoral student, and Drs. Diana Bray, Richard Franck and Donald D Clarke, former colleagues. The ceremonies concluded with a poetry reading from "Free Ferry," a book authored Dr. Cefola's daughter-in-law, Ms. Ann Cefola.

The video; A commemoration of the 75th anniversary of the isolation of plutonium, has been added to the Walsh Library's digital collection. Video on Demand can be accessed at <https://cdm17265.contentdm.oclc.org/digital/collection/VIDEO/id/941/rec/1>.

THREE NEW ACS FELLOWS FROM THE NEW YORK SECTION



Drs. Peter Corfield, Anne O'Brien and Donald D. Clarke of the New York Section, recently named as ACS Fellows.

(Photo courtesy of Dr. Donald D. Clarke)

Obituaries

COLUMBIA UNIVERSITY AND THE ACS MOURN TWO EXTRAORDINARY CHEMISTS

The pantheon of Chemistry has lost two of its most illuminating stars, Professors Gilbert Stork and Ronald Breslow. The New York Local Section offers its condolences to their families, personal and professional. Each counted the William H. Nichols Medal from the New York Section, the US National Medal of Science, membership in the US National Academy of Sciences and foreign membership in the Royal Society, amongst their appanage. They were titans of the field who instructed countless giants that now walk amongst us including, but by no means limited to, Kahne, Wender, Danishefsky, Grubbs, Bergman, Wasielewski, Kool and Schepartz.

Professor Gilbert Stork

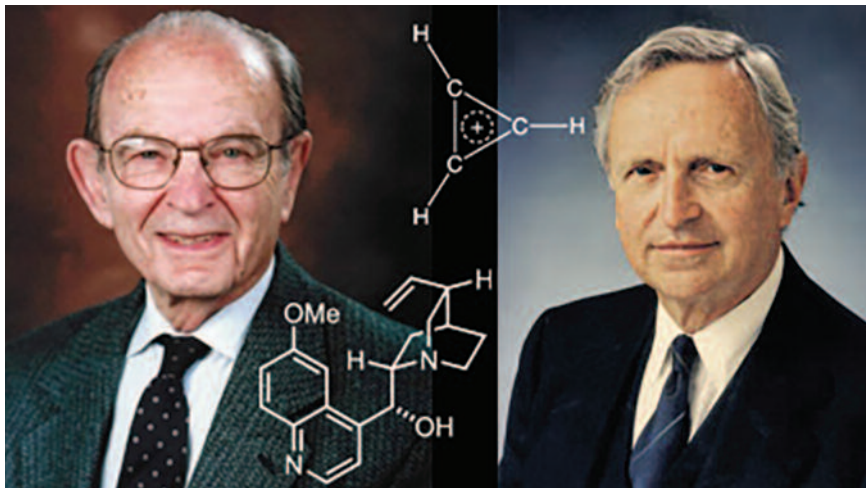
Professor Stork, the Eugene Higgins Professor of Chemistry Emeritus at Columbia University, was a treasure with a wry wit and a gentlemanly demeanor. He made remarkable contributions to both natural product synthesis and method development. In natural products, he developed the first asymmetric synthesis of quinine, a molecule which had touched the lives of many giants before him including Pasteur, Perkin, Rabe, Kindler, Prelog, Woodward, and Doering. In method development, his contri-

butions include the versatile Stork enamine alkylation, the introduction of the TBS protecting group, and his radical cyclization chemistry. Lastly, he had an incredible eye for talent and arranged to offer Ronald Breslow a position at Columbia University without consulting his Departmental colleagues.

Professor Ronald Breslow

Professor Breslow, the Samuel Latham Mitchill Professor of Chemistry and University Professor at Columbia University, was a force of nature with an enthusiastic optimism for the problem-solving ability of chemistry and chemists. He pioneered both fundamental and applied fields of chemistry.

On the fundamental side, he made the first aromatic system with less than six π -electrons and the simplest aromatic system, the cyclopropenyl cation, and developed the concept of anti-aromaticity. He used thermodynamic cycles to determine bond energies, a technique which is critical to current research in proton-coupled electron transfer reactions. Inspired by biology, he made seminal contributions to the mechanism of thiamine (vitamin B1) and pioneered the field of biomimetic chemistry where he developed synthetic enzymes using cyclodextrins and polyamines. On the applied side, he co-discovered the anti-cancer drug vorinostat and worked on molecular wires. Lastly, as a most visible ACS President, he was a tireless advocate for chemistry and a dedicated servant to his chosen profession.



Professors Gilbert Stork and Ronald Breslow

National

FORMS ON LINE

Dear Local Section, Division and International Science Chapter Officers,

Please be advised that the Forms On-line Report Management System (FORMS) has been updated and your 2017 Annual Report forms are now available for completion. To access your annual report, please go to www.acs.org/forms and login using your ACS ID and password.

In addition to submitting your required annual report forms, you may also nominate your group's 2017 activities for ACS ChemLuminary Awards. All Annual Reports and ChemLuminary self-nominations are due **February 15th**. All 2018 allotments will be dispersed to local section and division treasurers once the annual reports are completed and approved by your group and submitted to ACS for review.

As you complete your annual report, please note the following:

Log on to FORMS at www.acs.org/forms using your ACS ID.

All current officers have access to FORMS. In addition, a maximum of 3 non-officers can be added to access your group's annual report. To assign a non-officer access to FORMS, please ask your chair to send the non-officer's name and ACS ID to forms@acs.org.

Remember to save each tab as you complete it. The save button at the bottom of the page only saves the active tab that is displayed.

The system will log you out after 30 minutes of inactivity, so remember to save often.

Don't forget to add events, activities, and meetings to your annual report. If you are creating several similar events, take advantage of the copy event feature.

You may continue to add events as they occur, including your 2018 activities.

You can print your annual report forms by choosing Print PDF from the Action dropdown (on the first screen, right-hand side.).

Visit www.acs.org/getinvolved to view the User Guide or to view a recorded webinar.

If you still have questions, send an email to forms@acs.org, or post the question in the

Volunteer Support and Engagement **Group on the ACS Network**,
<https://communities.acs.org/groups/vse>

Thank you for your service.

Mark O'Brien
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Other News

Indiana University issues statement on opioid crisis being declared public health emergency

BLOOMINGTON, Ind. -- Indiana University Vice President for Research Fred C. Cate has issued the following statement regarding the Trump administration's decision to declare our national opioid crisis a public health emergency. Cate also administers IU's \$50 million Grand Challenges initiative, Responding to the Addictions Crisis.

"As an institution committed to preventing and reducing addictions in Indiana and beyond, we are encouraged to see the Trump administration taking steps to address our national opioid crisis. We are hopeful that the administration's actions will allow our state and others greater flexibility to access federal funds as needed.

"Our vexing addiction challenges require federal, state and local-community leaders to more effectively collaborate so that we can better understand, address and resolve the myriad issues contributing to this tragic epidemic. Here at home, we announced IU's commitment to invest \$50 million to collaborate with Gov. Eric Holcomb, health system leaders, community partners and more to address this crisis.

"Our collaborative response will help address the significant shortage of addictions professionals in the Hoosier state; provide continuing education programs to help those already working; build county-specific databases to help community officials; and include research into the genetic, socioeconomic and biological forces that drive addiction in order to better understand how to prevent and treat it.

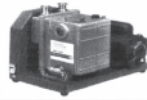
"Indiana is one of four states where the fatal drug overdose rate has more than quadrupled since 1999. In fact, Hoosiers are now more likely to die from a drug overdose than a car accident. These statistics are heart-breaking, and we are committed to resolving this epidemic."

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There are several web sites that may help you search for these open positions.

- www.mboservices.net
- <http://newyorkacs.org/jobs.html>
- <http://njacs.org/jobs.html>

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