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## THIS MONTH IN CHEMICAL HISTORY

Harold Goldwhite, California State University, Los Angeles • [hgoldwh@calstatela.edu](mailto:hgoldwh@calstatela.edu)

Among the eminent women scientists of the twentieth century Kathleen Yardley Lonsdale ranks highly. She was not a Nobel laureate (so few women were!) but she became one of the first two women to be elected a Fellow of the Royal Society, the first woman President of the International Union of Crystallography, the first female tenured Professor at University College, London, and the first female President of the British Association for the Advancement of Science.

Kathleen Yardley was born in Ireland in 1903; her English father was at that time a post-master at a town near Dublin. Her parents separated and her mother took her five children to live in England. Kathleen was a child during World War I and saw Zeppelins bomb her suburb. She dates her anti-war feelings to this event.

An excellent student Kathleen entered Bedford College, a women's college and part of the University of London, at 16, changed her major from mathematics to physics, and graduated at 19 with the highest grade in her finals of the last ten years. She earned a Master's degree with William Henry Bragg, Nobel Laureate for his crystallographic work, and moved with Bragg to the Royal Institution in 1923. By then she had met Thomas Lonsdale, a fellow physics student. At the Royal Institution Kathleen earned a D.Sc. rather than a Ph.D. (an unusual distinction) for crystallographic work on ethane derivatives. She married Thomas Lonsdale in 1927, and the couple settled in Leeds where Thomas worked towards his Ph.D. and Kathleen was awarded a prestigious scholarship and a grant from the Royal Society for a spectroscope and an ionization spectrometer. She solved the crystal structure of hexamethyl benzene, showing for the first time by physical methods the planar structure of the benzene ring and the equality of bond lengths within the benzene ring. Christopher Ingold, the physical organic chemist, read Lonsdale's paper and wrote to her: "the calculations must have been dreadful, but one paper like this brings more certainty into organic chemistry than generations of activity by us professionals." Another scientist influenced by this early work of Lonsdale's was Dorothy Hodgkin, who said later that as a young graduate student the clear exposition by Lonsdale of how to go about analyzing X-ray data was influential on her own work – which later led to the award of a Nobel Prize to Hodgkin.

After her husband earned his Ph.D. at Leeds his new position was in London and Kathleen accompanied him. Working again at the Royal Institution she had no X-ray equipment available, and so embarked on measuring magnetic susceptibilities aromatic compounds. The results suggested the existence of pi-orbitals in these compounds extending over the whole molecule. When she returned to X-ray work in the late 30s she improved on the Fourier analyses that she had pioneered, and developed new ideas on space groups. She worked on diamonds, on calculi like kidney and gall stones, and on solid state transformations.

Lonsdale was a noteworthy pacifist. Perhaps influenced by her childhood experience in World War I she and her husband became Quakers in 1935. During World War II she refused on principle to become a "fire-watcher", that is a person in Civil Defense who reported on the positions of incendiary bombs dropped on London. She was fined for this refusal, but refused to pay the small amount of the fine! Consequently she served a one month term in the Holloway Prison for Women. This experience led her to become a prison reformer and she later served on the Boards of overseers of a number of prisons. In the 50s she visited the USSR with a group of Friends (Quakers) on a peace mission, and in the 50s, along with Pauling, she campaigned vigorously against the testing of nuclear weapons. In 1957 her book "Is Peace Possible" was published as a Penguin paperback.

Lonsdale became a professor at University College in 1949; she had 3 children and in 1956 became a grandmother – and was named a Dame of the British Empire. She published dozens of papers, mostly on X-ray crystallography. She was awarded honorary degrees by many British universities. But in late 1970 she was diagnosed with leukemia. She died in 1971 aged 68.

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## May Calendar

### NEW YORK SECTION

**Tuesday, May 2, 2017**

Westchester Chemical Society  
See page 5.

**Thursday, May 4, 2017**

2017 Brooklyn Frontiers in Science Lecture  
See page 6.

**Saturday, May 6, 2017**

65th Annual Undergraduate Research Symposium  
See page 7.

**Tuesday, May 9, 2017**

Long Island Subsection - High School Awards  
See page 6.

**Friday, May 19, 2017**

High School Teachers Topical Group  
See page 8.

**Thursday, May 25, 2017**

Long Island Subsection Board Meetings  
See page 6.

*also*

**Tuesday, June 6, 2017**

New York Nanoscience Discussion Group  
See page 8.

**Fridays, June 9, September 15, and November 17, 2017**

New York Section Board Meetings  
See page 5.

### NORTH JERSEY SECTION

**Monday, May 8, 2017**

Careers in Transition  
See page 14.

**Wednesday, May 10, 2017**

Mass Spec Discussion Group  
See page 14.

*also*

**Monday, June 12, 2017**

Careers in Transition  
See page 14.



**Deadline for items  
to be included in  
the June 2017 issue  
of *The Indicator* is  
**April 28, 2017****

***The Indicator* is posted to the web around the  
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## New York Meetings

[www.newyorkacs.org](http://www.newyorkacs.org)

### NEW YORK SECTION BOARD MEETING DATES FOR 2017

The dates for the Board Meetings of the ACS New York Section for 2017 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](mailto:njesper1@optonline.net) or by calling the Section office at (516) 883-7510.

All 2017 Board Meetings will be held at The Graduate Center, Science Center, Room 4102, 365 Fifth Avenue, New York, NY 10016, except for the January 21 Section-wide Conference and March 24 Nichols Symposium. Prof. Brian Gibney will chair all meetings. Refreshments will be available starting at 6:00 PM while the actual meeting will start at exactly 6:30 PM.

The board meetings dates for 2017 will be Friday, June 9, 2017

Friday, September 15, 2017

Friday, November 17, 2017

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

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



### WESTCHESTER CHEMICAL SOCIETY

**Distinguished Scientist Award and Student Achievement Awards Dinner Meeting: Investigating the Impact Processing of Asteroids Using Quantitative Three-Dimensional Petrography of Ordinary Chondrites**

**Speaker:** Jon M. Friedrich, PhD  
Professor  
Department of Chemistry,  
Fordham University  
and  
Research Associate  
Department of Earth and  
Planetary Sciences  
American Museum of Natural  
History

The major geologic process that has shaped the asteroids and led to development of their regoliths is impact. Thus, crucial to understanding the evolution of asteroids and their regoliths is unraveling the collisional histories recorded in the meteorites derived from these bodies. We use a combination of traditional petrographic methods and synchrotron X-ray microtomography ( $\mu$ CT) derived data to interpret the impact history of the chondrite Northwest Africa (NWA) 7298. From the chondrite's textures, we found unique information on a series of sequential impacts that affected its parent asteroid.

Dr. Friedrich is a Professor of Chemistry at Fordham University and a Research Associate of the Department of Earth and Planetary Sciences at the American Museum of Natural History. Dr. Friedrich's research is focused on questions relating to the chemical and physical processing of material in the early solar system through studies of meteorites. Dr. Friedrich specializes in the use of x-ray microtomography for the examination of the physical properties of meteorites and their components.

**Date:** Tuesday, May 2, 2017

**Times:** Social Hour - 5:00 PM  
Lecture and Awards - 6:00 PM  
Dinner - 7:00 PM

**Place:** Pace University  
The Campus Center, Butcher Suite  
861 Bedford Road – Entrance #2,  
Pleasantville, NY

**Cost:** \$30.00; Students: \$20.00



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## 2017 BROOKLYN FRONTIERS IN SCIENCE LECTURE

### Flatland – the New World of Two-dimensional Materials

**Speaker:** James Hone, PhD  
Wang Fong-Jen Professor of  
Mechanical Engineering  
Columbia University

and

Director of PAS3  
Columbia's Materials Science  
Research and Engineering  
Center (MRSEC)

The 2017 Brooklyn Frontiers in Science Lecturer will be Professor James Hone, of the Department of Mechanical Engineering, Center for Precision Assembly of Superstratic and Superatomic Solids, Columbia University, New York 10027 USA.

Professor Hone will speak about his research into nano-materials and nano-structures, especially atomically thin two-dimensional materials such as graphene. The lecture is scheduled for Thursday, May 4. Light refreshments will be served at 5:30 PM, and the lecture begins promptly at 6:00 PM in the Pfizer Auditorium at the NYU Tandon School of Engineering, 5 MetroTech Center, Brooklyn NY. The lecture is free and open to the public, but preregistration is required at: <http://www.newyorkacs.org/meetings/Brooklyn/Frontiers.php>

James Hone is currently Wang Fong-Jen Professor of Mechanical Engineering at Columbia University, and director of PAS3, Columbia's Materials Science Research and Engineering Center (MRSEC). He received his PhD in experimental condensed matter

physics from UC Berkeley in 1998, and did postdoctoral work at the University of Pennsylvania and Caltech, where he was a Millikan Fellow. He joined the Columbia faculty in 2003. His current research interests include synthesis, characterization, manipulation, and applications graphene, and other 2D materials; nanomechanical devices; and nano-biology.

**Date:** Thursday, May 4, 2017

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

**Place:** Pfizer Auditorium  
New York University  
Tandon School of Engineering  
5 Metro Tech Center  
Brooklyn, NY

**Cost:** Free and open to the public, but preregistration is required



## LONG ISLAND SUBSECTION

### MEETINGS CALENDAR

\*\*\*\*\*

#### OTHER EVENTS:

##### High School Awards

**Date:** Tuesday, May 9, 2017

##### Board Meeting Dates

**Date:** Thursday, May 25, 2017

**Time:** 6:30PM

**Place:** Nassau Community College  
Life Science Building  
Chemistry Dept, 2nd Floor



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**The Student Activities Committee of the  
New York Section of the American Chemical Society**  
**Saturday, May 6<sup>th</sup>, 2017 at Fordham University**

**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. Jin Kim Montclare***

**NYU Tandon School of Engineering**

Jin Kim Montclare is an Associate Professor in the Department of Chemical and Biomolecular Engineering (CBE) at NYU Tandon School of Engineering (NYU SoE), who is performing groundbreaking research in engineering proteins to mimic nature and, in some cases, work better than nature. Prior to joining NYU SoE, Jin was an NIH postdoctoral fellow at the California Institute of Technology in the Division of Chemistry and Chemical Engineering in the Tirrell lab. She received a Bachelor of Science in Chemistry from Fordham University as a Goldwater and Clare Boothe Luce undergraduate fellow, a PhD in Bioorganic Chemistry from Yale University as an NSF and Pfizer predoctoral fellow. In 2015 began serving as Graduate Studies Director for CBE and Associate Director for Technology Advancement for the NYU Materials Research Science and Engineering Center, while leading the multidisciplinary Center for Innovation and Entrepreneurship at NYU SoE. Among her many honors and awards are the 2016 ACS WCC Rising Star Award, 2015 Agnes Faye Morgan Research Award from Iota Sigma Pi, 2014 Executive Leadership in Academic Technology and Engineering Fellowship, and 2014 Distinguished Award for Excellence, Dedication to Invention, Innovation and Entrepreneurship.



***Keynote Address***

**Intelligent Self-Assembling Biomaterials**

Through centuries of evolution, nature has developed biopolymers capable of folding and assembling into discrete structures with a functional consequence. Inspired by this, our lab focuses on engineering “intelligent” protein materials with entirely new properties and function. In particular, our lab has fabricated protein-derived nanomaterials: helix-elastin block polymers and coiled-coil fibers. We investigate the fundamental self-assembly and molecular recognition capabilities of these systems. More importantly, we are able to harness these structure as well as others to interface with small molecule therapeutics, genes, cells and inorganic metals. Central to this work is the integration of stimuli-responsive domains through rational design.

**SIGNIFICANT DATES FOR 63<sup>rd</sup> URS**

Deadline for Abstract Submission - **March 20, 2017**      Abstract acceptance notification – April 3, 2017  
 Deadline for Symposium Advanced Registration – April 21, 2017

2017 Co-chair <b>Dr. Paul Sideris</b> Queensborough CC - CUNY psideris@gcc.cuny.edu	2017 Co-chair <b>Dr. Ipsita Banerjee</b> Fordham University banerjee@fordham.edu	2017 Co-chair <b>Dr. Naphtali O'Connor</b> Lehman College - CUNY naphtali.oconnor@lehman.cuny.edu	2017 Co-chair <b>Dr. Meredith Foley</b> New Jersey City University mfoley@njcu.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 \$35 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. Paul Sideris, Queensborough Community College, Department of Chemistry, Science Building S-445, 222-05 56th Avenue, Bayside, NY 11364.**

## HIGH SCHOOL TEACHERS TOPICAL GROUP

### The Development of Carolacton-derived Macrolactones for the Perturbation of Bacterial Biofilms

*Speaker:* Dr. Americo J. Fabroni  
Department of Chemistry  
Temple University  
Philadelphia, PA.

In recent years, biofilms have been revealed to be a significant problem for many industries, most notoriously healthcare, in which they are responsible for numerous persistent infections and are increasingly found to be drug resistant. New methods for probing and combatting biofilms have thus been of growing interest. *Streptococcus mutans* (*S. mutans*) is an anaerobic, gram-positive bacterium that is known for its role in endocarditis and cardiovascular disease, as well as its ability to form biofilms in the oral cavity as a part of dental plaque, leading to dental caries. Recently, the natural product carolacton was discovered to kill *S. mutans* cells in a biofilm matrix with an IC50 of ~15 nM during biofilm formation, and a number of derivatives were also shown to have promising activity. Currently, new synthetic methods are being developed to generate libraries of carolacton analogues to be tested against these biofilms in order to increase efficacy and to better understand its mode-of-action. The structure-activity relationships (SAR) of these analogues are being studied in order to make more rational structural adjustments to improve activity. This understanding will help the scientific community rationally develop antibiotics for the prevention and treatment of other biofilm-related infections.

**Date:** Friday, May 19, 2017

**Time:** Social and Dinner — 5:45 PM

Meeting — 7:15 PM

**Place:** Social & Dinner — DoJo Restaurant  
14 West 4th St. (@Mercer Street)  
New York, NY

Meeting — New York University  
Silver Center for Arts and  
Sciences, Room 207

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In case of unexpected severe weather, call John Roeder, (212) 497-6500, between 9:00

AM and 2:00 PM to verify that meeting is still on; (516) 385-4698 for other info.

Note: On street parking is free after 6:00 PM.



## 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](mailto:hessytaft@hotmail.com).

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



## NEW YORK NANOSCIENCE DISCUSSION GROUP

### 2017 Sessions

*Hosted by the New York University  
Department of Chemistry*

### **Speakers and details to be announced.**

The NYNDG is an ACS Topical Group that meets in the New York University Department of Chemistry. Sessions feature three 30-minute presentations on nanoscience, one each with strong orientation in biology, chemistry, and physics/applied mathematics. Presentations will be focused on discussion of recent work, although speakers will place the work in a context understandable to a broad audience.

**Dates:** Tuesday, June 6, 2017

**Times:** Refreshments at 7:00 PM  
Science at 7:30 PM

**Place:** New York University, Silver Center  
31 Washington Place (between  
Washington Square East and  
Greene St.), Rm. 1003 (10th Fl.)

For more information, contact: James Canary ([james.canary@nyu.edu](mailto:james.canary@nyu.edu))

Topical Group History: <http://www.nyu.edu/projects/nanoscience>

## **CANDIDATES FOR THE NEW YORK SECTION 2017 ELECTIONS**

At the January Section-wide Conference, the Nominating Committee presented the candidates for office for the 2017 elections. The biographies of the candidates are posted on the New York Section website at [www.NewYorkACS.org](http://www.NewYorkACS.org).

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

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

To receive all electronic messages from your New York Section, please be sure that your e-mail account will accept messages from [NYACS-L@stjohns.edu](mailto:NYACS-L@stjohns.edu) or [njesper1@optonline.net](mailto:njesper1@optonline.net) or [jespern@stjohns.edu](mailto:jespern@stjohns.edu)

Members requesting paper ballots will receive them by May 1, 2017. If any member does not receive voting materials by May 1, please contact the New York Section Office at (516) 883-7510 or [njesper1@optonline.net](mailto:njesper1@optonline.net)

The Candidates are:

### **Chair Elect for 2018**

Mrs. Erin Rent Wasserman  
Dr. Justyna Widera-Kalinowska  
(Adelphi University)

### **Treasurer 2018 and 2019**

Mr. Frank Romano (Agilent Technologies)

### **Directors-at-Large 2018**

Dr. Yosra Badiel (Saint Peter's University)  
Dr. Paul Dillon (Siemens Healthcare Diagnostics Consultant)  
Dr. Meredith Foley (New Jersey City University)  
Dr. Peter DeRege (Firmenich, Inc.)  
Dr. Aaron Muth (St. John's University)

### **Councilor 2018-2020**

Dr. Ronald D'Amelia (Hofstra University)  
Dr. Donad Clarke (Fordham University)  
Dr. Barbara Hillery (SUNY – Old Westbury College)  
Dr. Rolande Hodel (AIDSfreeAFRICA)  
Dr. Hiroko Karan (CUNY – Medgar Evers College)  
Dr. Patricia Redden (St. Peter's University)  
Dr. Marc Walters (New York University)

### **Alternate Councilor – To Fill Vacancies**

Dr. Brian Gibney (CUNY – Brooklyn College)  
Dr. Rita Upmacis (Barnard College)



## **2017 WILLIAM H. NICHOLS FELLOWSHIP AWARDEE**

The New York Local Section of the American Chemical Society is excited to announce the third year of a summer research opportunity for undergraduates, the William H. Nichols Fellowship. The Nichols Fellowship is open to all college students majoring in chemistry (broadly defined) who perform research over the Summer before graduation at an institution in the NY Local Section geographic area. Each Nichols Fellow receives a stipend of \$5,000 to support them as they perform their research and is expected to present their findings at the 2018 Undergraduate Research Symposium. In addition, they will be honored at the 2018 William H. Nichols Award Banquet. The 2017 Nichols Fellowship Awardee is, as follows:

Salah Eldein Elkattawy, New York University  
Molecular mechanism of feedback regulation by RNase E with Prof. Joel G. Belasco

The New York Local Section wishes our 2017 William H. Nichols Fellow the best in his research endeavors as it looks forward to hosting this summer research program for many years to come.

**Learn more about the  
New York Section at  
[www.NewYorkACS.org](http://www.NewYorkACS.org)**

## NICHOLS SYMPOSIUM REVIEW

The William H. Nichols Medal Award for 2017 was presented to Dr. Chad A. Mirkin of Northwestern University on March 24th, at an award dinner at the Crowne Plaza Hotel, White Plains, NY. Dr. Mirkin received the Nichols gold Medal for "Pioneering practical applications of nanochemistry." Over three hundred industrial chemists, students and faculty from New York Local Section colleges and universities were in attendance at the gala event.

The William H. Nichols Distinguished Symposium, that preceded the award dinner, was titled "Improving Life through Advances in Chemistry and Nanoscience". The 320 attendees enjoyed research talks by these internationally known speakers: 2003 Nichols Medalist Dr. Harry B. Gray (California Institute of Technology); Dr. Timothy M. Swager (Massachusetts Institute of Technology), Dr. Nathan C. Gianneschi (University of California – San Diego), Dr. Christopher J. Chang (University of California – Berkeley), and Dr. Mirkin who gave the Award Lecture titled "Unlocking the Potential of Spherical Nucleic Acids in Biology and Medicine." Dr. Joseph M. Serafin, Chair-elect of the New York Section, expertly emceed the symposium, introducing each speaker. The Nichols Distinguished Symposium and the following social hour were enjoyed by all.

Dr. Brian R. Gibney, 2017 Chair of the ACS New York Section, welcomed the award dinner guests and recounted the story of William H. Nichols and the history of the Nichols Medal. American Chemical Society President Dr. Allison A. Campbell brought greetings and congratulations from the 153,000 members of the ACS. Dr. Harry B. Gray delighted the room with a touching memorial to the late Dr. Fred Basolo, his

PhD advisor at Northwestern University, and with a spirited introduction of Dr. Chad A. Mirkin who carries on Dr. Basolo's commitment to excellence at Northwestern University. Dr. Gray noted that the Nichols Medal has been presented to himself, his PhD student Dr. Richard Eisenberg in 2013, and now his PhD student's PhD student Dr. Chad A. Mirkin in 2017, a unique accomplishment in the storied history of the Nichols Medal. Chair Gibney then awarded the gold medal, identical bronze medal and \$5000 to Dr. Mirkin. The Medalist and speakers then happily met with students and posed for photos with them.

Members of the Nichols family also enjoyed this special event. The New York Section was honored to have as guests: Mr. C. Walter Nichols III (great grandson of William Nichols), Mrs. Sandra Nash (great, great granddaughter) and Whitney Nash (great, great, great granddaughter). It is exciting and truly a great pleasure to have three generations of the Nichols family present at the presentation of the Nichols Medal to the third generation of an academic lineage.

The Nichols Medal Award was established in 1902 by Dr. William H. Nichols to honor a chemical scientist for outstanding original research and was first awarded in 1903. Dr. Nichols, a charter member of the American Chemical Society and its president in 1918 and 1919, maintained a deep commitment to research and development and to the importance of supporting science education and students of chemistry. Since its inception, through an endowment fund, the New York Section administers the award. It has been perpetuated by the generosity of Dr. Nichols, his family and the Nichols Foundation, Inc. The William H. Nichols Medal is the first award in chemistry of the American Chemical Society.



**Nichols Symposium and Dinner Participants: (front) Mary Bet Dobson (Assistant Director, Development for the ACS), Laura Pence (District I Director, ACS), Allison Campbell (President, ACS), (back) Brian R. Gibney (Chair, NY ACS), Chad A. Mirkin (Medalist), Harry B. Gray, Timothy M. Swager, Christopher J. Chang, Nathan Gianneschi, Joseph M. Serafin (Chair-Elect, NY ACS)**

(All photos on pages 10-11 and 19 courtesy of Brian Gibney)



Presentation of the 2017 Nichols Medal — Dr. Brian R. Gibney presented the 2017 Nichols Award Medal to Dr. Chad A. Mirkin of Northwestern University.



The Nichols Symposium is always a great opportunity to catch up with colleagues. Alternate Councilor Dr. Donald D. Clarke talks with Dr. Richard S. Kirchner of Manhattan College.



The Nichols Family with the Medalist. From left: Ms. Whitney Nash, Mrs. Sandra Nichols Nash, Mr. C. Walter Nichols III and Dr. Chad A. Mirkin.



PhD Candidate Robert Collison poses a question to the Medalist after his award address.

*More pictures on page 19.*



2017 NY ACS Chair Brian Gibney congratulates 2016 Nichols Fellowship recipient Mr. George Maio.



Nichols Symposium Participants— From left: Dr. Joseph M. Serafin, Dr. Brian R. Gibney, Dr. Chad A. Mirkin (2017 Medalist), Dr. Harry B. Gray (2003 Medalist), Dr. Nathan Gianneschi, Dr. Christopher J. Chang, and Dr. Timothy M. Swager.

## JOSEPH NAGYVARY LECTURES – VIOLENCE AND VIOLINS

Thanks to the efforts and financial support of the Long Island (LIACS) and Westchester (WCS) subsections, Dr. Joseph Nagyvary, Professor Emeritus at Texas A&M University, gave a series of lectures in the New York area in early March. The talks were interdisciplinary and of particular interest to those with interests in the field of Chemistry, Physics, Engineering, Music, Art and History. They focused on Dr. Nagyvary's book, "Violence and Violins – The Making of a Hungarian Refugee" published in October 2016 to coincide with the sixtieth anniversary of the 1956 Hungarian revolt. It is available at Amazon: <https://www.amazon.com/Violence-Violins-Making-Hungarian-Refugee/dp/1536894060/>

As noted by Dr. Nagyvary "some great chemists, Olah, Somorjai, Pavlath, etc. came out of Hungary in 1956." For more information on the book go to [www.violence-andviolins.com](http://www.violence-andviolins.com) and see the news release from Texas A&M University: <http://today.tamu.edu/2016/10/13/violence-and-violins-prof-recalls-his-role-in-hungarian-revolution/>

The talks described Dr. Nagyvary's time as a young Hungarian chemistry student living under Communist dictatorship during the Cold War and how he, and fellow students, participated in the three week 1956 uprising. You may view an exciting video clip of the uprising, aired in 1957 by CBS and narrated by Walter Cronkite, and at: [https://www.youtube.com/watch?v=0Vq\\_LqrUDQY](https://www.youtube.com/watch?v=0Vq_LqrUDQY)

During his talks, Dr. Nagyvary noted that the Hungarian Revolution was the only shooting war in Europe of the Cold War. He described his escape from Hungary to Austria and then to The University of Zurich, Switzerland (where he earned his Ph. D.), his move to Cambridge University, UK (where he did post-doctoral work with Lord Todd), and his move to the United States, ultimately moving to Texas A&M University. He also described how his life experiences and childhood passion for classical music, lead him to extend his research from nucleotide chemistry to studies of the Stradivarius violins and his development of the theory that the chemicals used to treat the wood – not Stradivarius' violin making skills – account for the unique, pristine sound of Stradivarius violins. Despite con-

siderable outrage in music circles, he was proven to be correct (see Nature, 444, 30 Nov. 2006, p. 565 and <http://www.nagyvaryviolins.com>).

The talks were presented on March 2nd at St. John's University, Queens, NY (hosted by Dr. Neil Jespersen) and at Queensboro Community College (QCC), Queens, NY (hosted by Dr. Dominic Hull, the current LIACS chair), followed by a dinner at a nearby restaurant. On March 3rd, Dr. and Mrs. Nagyvary were picked up by the LIACS treasurer, Dr. Philip H. Mark and brought to Nassau Community College (NCC), Garden City, NY (hosted by Dr. Phil Mark and Dr. Daniel Resch) for his talk there. Following the talk, Dr. Nagyvary was happy to meet two retired NCC faculty, who had been students in Hungary at the same time as Dr. Nagyvary. They had a long conversation about their experiences. Dr. Mark then drove the Nagyvarys to St. John's University where they met with Dr. Ralph Stefani who took them to their next talk at Westchester Community College (WCC), Valhalla, NY (hosted by WCS co-chair Dr. Rolande Hodel and WCS Treasurer/Education Secretary Dr. Peter Corfield). The talk there was again followed by a dinner at a nearby restaurant. Dr. and Mrs. Nagyvary then spent several days with relatives in Chappaqua, NY. Although not an official ACS event, the last lecture was presented March 9th at Iona College, New Rochelle, NY as part of its Thomas G. Bullen Memorial Lecture Series in Science and Technology (hosted by Dr. Victor Stanionis). The talks were each well-attended by enthusiastic and inquiring audiences. Thanks are due to various volunteers who transported Dr. and Mrs. Nagyvary to and from airports, hotels, lecture sites and restaurants.



Joseph Nagyvary, Ph. D.

(Photo courtesy of Joseph Nagyvary)

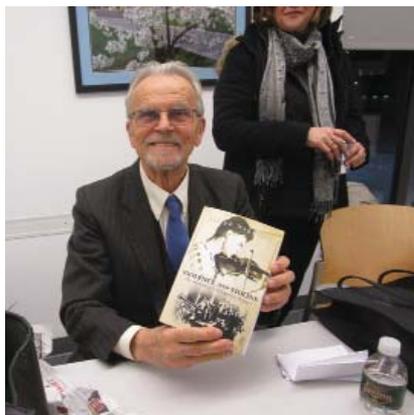
**At Westchester Community College**



**Front: Joseph Nagyvary. Rear: Jean Delfiner, Peter Corfield and Rolande Hodel**

*(Picture courtesy of Rolande Hodel)*

**At Westchester Community College**



**Joseph Nagyvary with His Book**

*(Picture courtesy of Rolande Hodel)*

**At Iona College**



**Victor Stanionis and Joseph Nagyvary**

*(Picture courtesy of Victor Stanionis)*

**At Queensboro Community College**



**Joseph Nagyvary Lecturing**

*(Picture courtesy of Dominic Hull)*

**At Queensboro Community College**



**Dominic Hull and Joseph Nagyvary**

*(Picture courtesy of Dominic Hull)*

## North Jersey Meetings

<http://www.njacs.org>

### NORTH JERSEY EXECUTIVE COMMITTEE MEETING

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



### CAREERS IN TRANSITION MEETINGS

#### Job Hunting??

Resume & LinkedIn writing and key word search rules are changing. To be found, come and utilize our latest insights. Our ACS trained Career Consultants offer assistance at Students2Science to help members with their job search on the second Monday of each month. Topics at this free workshop are:

- Techniques to enhance resume effectiveness
- Interview practice along with responding to difficult questions
- Networking to find hidden jobs
- Planning a more effective job search

#### Date: Monday, May 8, 2017

New from now on is a second CIT meeting in East Windsor on the third Monday. Contact Bill for details.

Times: Meeting 2:30 - 5:00 PM

Place: Students 2 Science, Inc.  
66 Deforest Avenue  
East Hanover, NJ

Cost: No charge

Reservations: at [www.njacs.org/careers.html](http://www.njacs.org/careers.html)

A job board and networking assistance is offered at most topical group meetings. Appointments with Bill can be arranged for personal assistance at (908) 875-9069 or [billsuits@earthlink.net](mailto:billsuits@earthlink.net).

See [www.njacs.org](http://www.njacs.org) under the Career tab for Jobs hidden from sight and relevant blogs.



### NJACS PARTNERS WITH STUDENTS2SCIENCE

Members are encouraged to volunteer at their East Hanover facility and explore their website at [www.students2science.org](http://www.students2science.org) to learn more about this innovative program.

S2S continues to expand their exciting labo-

ratory experience the disadvantaged children. Many of our members continue to volunteer as mentors. At their 2 million dollar analytical lab, every 40 kids are assisted by 16 professional volunteer mentors. The experiments performed really make chemistry and science come alive using state of the art analytical equipment working with students starting in 6th grade up to HS seniors. Each day is optimized for grade level and curriculum.

Now the program has further expanded with internet video and experiments performed in the classroom for 4th & 5th grades. Internet allows views of the lab in operation and relates to simpler experiments setups done in the classroom with their teacher and a partnering chemist.

North Jersey members who volunteered benefited in many ways. Those in transition expanded their network and received job finding assistance. Retired chemists met up with old friends and made many new friends. Those with jobs used the volunteer hours as part of the company outreach programs and team training. All feel great about making a difference in the lives of the youth who may have never met a scientist or considered a career in the sciences.

Please consider volunteering and discovering more about this innovative program. If you want to learn more, you can speak with either Ellen Barrabee (908) 244-4328 or Fran Nelson (201) 220-2680.

For related CAREERS article, see under "OTHERS" page 16.



### NoJ MASS SPEC DISCUSSION GROUP

#### Upcoming 2017 Meeting

#### Date: Wednesday, May 10, 2017

(Sponsored by Bruker)

Times: Social and Registration 5:30 PM  
Complimentary Dinner 6:15 PM  
Welcome and Opening Remarks  
7:00 PM

Presentations 7:05 PM

Place: Holiday Inn Somerset-Bridgewater  
195 Davidson Avenue  
Somerset, NJ

Registration will open approximately 2 week prior to the meeting on our website (<http://www.njacs.org/topical-groups/mass-spectrometry>). Meeting updates will also be posted here.

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## Call for Nominations

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### 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](http://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 [jespersen@stjohns.edu](mailto:jespersen@stjohns.edu)



### NEW YORK SECTION'S OUTSTANDING SERVICE AWARD FOR 2017

Many members of the New York Section provide their time, leadership talent, and knowledge to the New York Section. The tradition of excellence of the New York Section is attributable directly to the cumulative effect of these dedicated individuals. Each year the New York Section presents the Outstanding Service Award to a most deserving member of the section. The New York Section is now accepting nominations for this award.

A nomination letter with supporting data should be emailed to the 2017 OSA Committee Chair, Dr. Stephen Z. Goldberg at [goldberg@adelphi.edu](mailto:goldberg@adelphi.edu). Nominations will be accepted **until June 30, 2017**.

The nominations will be reviewed by a committee consisting of the previous five winners of the award. The Outstanding Service Award for 2017 will be presented at the New York Section's Section-wide Conference in January 2018.

For more information about the award along with a list of former award recipients, please visit the ACS New York Section's website at [http://www.newyorkacs.org/awards\\_nyacs.php](http://www.newyorkacs.org/awards_nyacs.php)



### THE WILLIAM H. NICHOLS MEDAL AWARD FOR 2018

The New York Section is accepting nominations for the William H. Nichols Medal Award for the year 2018. This distinguished award, established in 1902 by Dr. William H. Nichols, for the purpose of encouraging original research in chemistry, is the first award authorized by the American Chemical Society. The New York Section presents this award annually in recognition of an outstanding contribution in the field of chemistry, and consists of a gold medal, a bronze replica and \$5000. The medals are presented at the William H. Nichols Meeting that includes the Distinguished Symposium, related to the medalist's field of expertise, and a Medal Award Dinner. The event is attended by members of the Nichols Family, officers of the American Chemical Society as well as chemists from academia and industry.

Investigators who have published a significant and original contribution in any field of chemistry during the five calendar years preceding the presentation meeting are eligible for consideration by the Nichols Medal Jury. The New York Section encourages nominations from academia, government and industry.

Each nomination requires a completed nomination form, biographical and professional data, and three supporting letters. The nomination process utilizes the New York Section website where the nomination form and instructions appear at <http://www.newyorkacs.org/meetings/Nominations/Nichols.php>

Nominations must be **received by May 31, 2017**. The Nichols Medal Award Jury will meet in June 2017 to select the Nichols Medalist for 2018.

Questions regarding the nomination procedure should be directed to the ACS, New York Section Office at [njesper1@optonline.net](mailto:njesper1@optonline.net).

## Others

### THE ACS PRINCETON SECTION and THE ACS PHILADELPHIA SECTION

#### Presents

#### Non-Traditional Careers: A Panel Discussion and Networking Event

*Moderator:* Joe Martino  
ACS Career Consultant and  
Presenter

*Panelists:* Mr. J. P. Northrop  
Edward Jones Investments

Dr. Kevin Cannon  
Penn State Abington

Dr. Mukund Chorghade  
THINQ Pharma

Dr. Molly Hoke  
Mallinckrodt Pharmaceuticals

Dr. Paul Winslow  
Students 2 Science

Are you considering stepping away from a traditional chemistry environment and moving toward an exciting career outside of an industrial laboratory? If this describes your situation, then please join us for this informative panel discussion as Joe Martino moderates a conversation with experienced chemists who have done exactly that. We'll explore transitioning from the industrial laboratory to roles which support the industrial enterprise, academia, non-profits, and even transitioning away from chemistry. Ample opportunity for networking will be provided along with an enjoyable dinner. Please join us! Bowen Hall is on the campus of Princeton University near the corner of Prospect Avenue and Olden Street. It is readily accessible from US 1, US 206, NJ 27, I 95 and I 295. Free parking is available beginning at 5:00 PM in the North Garage which is right next to Bowen Hall.

**Date:** Thursday, May 11, 2017

**Times:** 5:30 PM – 10:00 PM

**Place:** Bowen Hall  
Princeton University  
Princeton, NJ

**Cost:** \$25.00 (Includes dinner)

## 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](http://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](mailto: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](mailto: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](mailto:goodeyn@mail.montclair.edu)).



## 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 2 Science is seeking volunteers to aid in our Virtual Lab program. We have a series of elementary, middle, and high school experiments that we will be running in various schools across New Jersey. Members are especially needed to help with the North Jersey section's IPG funded project to bring hands-on science to South Jersey. We need professionals to help in the classroom with the students. It's great fun, a wonderful way to give back, and only requires a few hours of your time. Opportunities begin in November. For more information, contact Fran Nelson, [frannelson@students2science.org](mailto:frannelson@students2science.org) and visit our website at [Students2Science.org](http://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](mailto: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!

## In the News

### MIT DEVELOPS NEW TEST

*New technology could offer cheaper, faster food testing – Specialized droplets interact with bacteria and can be analyzed using a smartphone.*

<http://news.mit.edu/2017/cheaper-faster-food-testing-smartphone-0405>

CAMBRIDGE, MA -- The foodborne pathogen *Escherichia coli* O157 causes an estimated 73,000 illnesses and 60 deaths every year in the United States. Better safety tests could help avoid some of the illnesses caused by this strain of *E. coli* and other harmful bacteria, according to MIT researchers who have come up with a possible new solution.

The new MIT test is based on a novel type of liquid droplet that can bind to bacterial proteins. This interaction, which can be detected by either the naked eye or a smartphone, could offer a much faster and cheaper alternative to existing food safety tests.

"It's a brand new way to do sensing," says Timothy Swager, the John D. MacArthur Professor of Chemistry at MIT and the senior author of the study. "What we have here is something that can be massively cheaper, with low entry costs."

Qifan Zhang, an MIT graduate student, is the lead author of the paper, which appears in the journal ACS Central Science. Other authors are Suchol Savagatrup, an MIT postdoc; Peter Seeberger, director of the Max Planck Institute of Colloids and Interfaces in Germany; and Paulina Kaplonek, a graduate student at the Max Planck Institute.

Current food safety testing often involves placing food samples in a culture dish to see if harmful bacterial colonies form, but that process takes two to three days. More rapid techniques based on bacterial DNA amplification or antibody-bacteria interactions are expensive and require special instruments.

The MIT team hopes to adapt its new technology into arrays of small wells, each containing droplets customized to detect a different pathogen and linked to a different QR code. This could enable rapid, inexpensive detection of contamination using only a smartphone.

Contact: Sarah McDonnell, MIT News Office, Email [s\\_mcd@mit.edu](mailto:s_mcd@mit.edu) Tel: (617) 253-8923

## **NICHOLS SYMPOSIUM REVIEW**

*(continued from page 13)*



Students and faculty from the College of Mount Saint Vincent enjoyed the festivities.



Scientists from Pfizer Bioprocess & Oncology R&D enjoying the gala dinner.



Over 300 scientists attended the distinguished symposium Chaired by Dr. Joseph M. Serafin.

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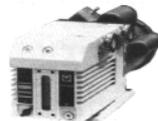


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