THE Indicator

MAY 2015 Vol. 96 • No. 5 ISSN0019-6924

National ACS Appoints Four National Committee Chairs from the North Jersey Section

Amber Charlebois
Chair-Women Chemists Committee

George Heinze
Chair-Senior Chemists Committee

Elizabeth M. Howson
Chair-Committee on Chemical Safety

Diane Krone
Chair-Society Committee on Education

Additional photo on page 4.

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

THIS MONTH IN CHEMICAL HISTORY

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

One hundred years ago, on April 22, 1915, Allied soldiers in their trenches defending the village of Langemarck, north of Ypres in Northern France, saw a cloud of a greenish gas slowly flowing towards them. Within a short time some 6000 French, Algerian, and Moroccan soldiers were dead, along with many horses. This was the first use of poison gas in modern warfare, devised, among others, by Fritz Haber, a Nobel laureate in chemistry for his work on ammonia synthesis. The attack used about 170 tons of chlorine. In September of the same year the British unleashed their own gas attack, using about 140 tons of chlorine and 10,000 phosphorus bombs against German troops near Loos in Northern France. The era of gas warfare in World War I had begun.

I have just been reading an interesting book, from which the information above was obtained: "The Chemists' War 1914 – 1918" by Michael Freemantle published by The Royal Society of Chemistry in the U.K. this year (2015). The Great War, World War I, has often been called the chemists' war, because of the many contributions of chemists to the development of not only the weapons of war, but also to the multitude of other applications of chemistry during wartime. Some of these stories are so well-known that a few lines can recount them. For example the explosives used in the war were mostly nitro compounds (TNT, guncotton etc,) and the importation of South American nitrates obtained from guano into Germany became almost impossible after 1914 because of the British navy's blockade of the Atlantic and the North Sea. Just in time to avert a critical shortage of nitric acid Haber and Bosch had developed both the scientific basis and the industrial production of ammonia from nitrogen and hydrogen, and Ostwald had shown how ammonia could be oxidized to nitrogen dioxide and then converted into nitric acid. Without these scientific and industrial discoveries and applications Germany might have run out of explosives within a year of the outbreak of the war in August 1914.

A less well-known story, which Freemantle calls the acetone crisis, began in 1915. The British army was facing a shortage of artillery shells that were propelled from guns by cordite, a mixture of guncotton (highly nitrated cellulose) and nitroglycerin. Acetone solvent was essential in the processing of cordite, and was in short supply. The needed acetone was imported from the USA and demand was exceeding supply. At that time acetone was almost completely obtained by the dry distillation of wood, though a process involving heating calcium acetate was under development.

Enter the biochemist Chaim Weitzmann. A Russian Jew born in 1874

who was educated in Germany and Switzerland, where he earned his doctorate for research on dyes, he moved to England in 1904. He was already a dedicated Zionist. Weitzmann became interested in fermentation biochemistry and became a self-taught biochemist and microbiologist. He investigated a range of organisms that could convert potato starch and maize starch into industrially useful products like butanol and the pentanols. In 1913 he isolated a bacterium (Weitzmann's organism) that fermented maize starch into a mixture of butanol and acetone. This process was scaled to a production level of a few hundred kg of acetone a week – still not enough to supply the demand in the explosives industry. In early 1916 Weitzmann met the First Lord of the Admiralty, the head of the British navy, Winston Churchill, who asked him to build a pilot plant for acetone production using his biochemical method. Within months Weitzmann's process was making 500kg batches of acetone consistently, and by 1917 the process was making around 3000 tons of acetone a year from maize and rice starches at several factories in the U.K. For these achievements Weitzmann has been called the father of industrial fermentation. The British government, perhaps influenced by his contributions to the war effort, issued the Balfour Declaration in late 1917, saying that Britain looked with favor on the establishment of a national home for Jews in Palestine. Weitzmann became the first President of Israel in February 1949, but his health was already failing, and he died in office in November 1952.

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THE Indicator

The monthly newsletter of the New York & North Jersey Sections of the American Chemical Society. Published jointly by the two sections.

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The Indicator (ISSN0019-6924) is published on-line monthly except July and August by the New York and North Jersey Sections of the American Chemical Society, Office of Publication, 1 Milbark Court, Homosassa, FL 34446.

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Deadline for items to be included in the June 2015 issue of *The Indicator* is

April 20, 2015

***The Indicator* is posted to the web on the 15th of the previous month at**

www.TheIndicator.org

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***JERSEY GIRLS* – North Jersey Councilors Diane Krone, Chair-Society Committee on Education, Amber F. Charlebois, Chair-Women Chemists Committee, and Elizabeth M. Howson, Chair-Committee on Chemical Safety.**

(Photo courtesy of Tom Krone)

North Jersey Meetings

http://www.njacs.org

NORTH JERSEY 2015 AWARDS AND RECOGNITION DINNER

Congratulations are in order to the members of the North Jersey Section who have reached 50 and 60 years of service!

Date: **Wednesday, May 20, 2015**
Times: Social 4:30 PM
Dinner and Presentation of Certificates and Awards 5:30 PM
Place: Fairleigh Dickinson University College at Florham
Lenfell Hall, the Mansion
Madison, NJ
Cost: $35.00

Directions: can be found at **http://view.fdu.edu/default.aspx?id=238**

Reservations: Please make your reservation at our website, **www.njacs.org** prior to **Thursday, May 7, 2015**

Questions: Call (973) 822-2575 or e-mail **chemphun@optonline.net**

Here are the lists of 50 and 60 year members:

60 YEAR MEMBERS

Dr Victor John Bauer
Mr Burton Blagman
Mr Laurence Dewald Bobbin
Mr Martin Barry Bochner
Dr Jeannette Elizabeth Brown
Mr John W Drew
Dr Elijah Herman Gold
Dr James B Johnson
Dr Daniel Kruh
Dr Stephen Marburg
Dr Edward Stone
Mr Joseph Westheimer

50 YEAR MEMBERS

Dr Sandor Barcza
Dr Adele Boskey
Dr Charles Frank Bruno
Ms Maureen G Chan
Mr Robert Engel
Mr Francis John Farrell
Dr Robert Glassman
Mr Bruce Goldberg
Mr Leonard Gross
Dr Robert Joseph Harvey
Mr Isadore Saul Heller
Dr Roland F Hirsch
Dr Sungchul Ji
Dr Peter C Kahn
Dr Alan Hartland King
Dr Mary Yvonne D Lanzerotti
Dr Richard R Ledesma
Dr Lawrence Robert Lerner
Dr Antonio Losurdo
Dr Maghar Singh Manhas
Mr Nalin Vishnuprasad Mankad
Mrs Frances J Matticoli
Mr Edward J O'Bara
Prof Joseph Anthony Potenza
Ms Patricia Richlin
Dr Mohindar Singh Puar
Mr Richard Joseph Santangelo Sr
Dr Franz J Scheidl
Mr Paul Edgar Schueler
Mr Joel Schwartz
Dr Gurdial Mal Sharma
Mr Bert Singleton
Mr David C Steinberg
Ms Mary Krystyna Stinson
Dr Ronald Stephen Strange
Dr Donald Knapp Webster

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 11, 2015**
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**

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**.

See **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** to learn more about this innovative program.

S2S continues to expand their exciting laboratory 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 4 & 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 Don Truss at (908) 334-8435.

MASS SPECTROMETRY DISCUSSION GROUP

Launches 26th Year with Expanded Goals

The Mass Spec Discussion Group is “off and running” for our 26th year. In spite of our winter weather, we met for our monthly dinner gatherings in both February and March with excellent presentations for the 100 or so members in attendance. We continue to very much appreciate the corporate support that allows our group to meet free-of charge. This year as well, Shimadzu Scientific has kindly opened its facility to the NJMSDG’s executive committee for the monthly evening planning meetings.

There are several new goals set for our topical group this year. We are seeking to increase the membership and attendance from Colleges and Universities in our area that have strong interest in mass spectrometry. We are actively recruiting and hope to report growth in faculty and student participation as our eyes look for future leaders of the NJMSDG. Also, as we have done in the past, we are budgeted to award two Student

Travel awards of $500 each to ASMS. This is of course good for a student's resume as well as an advisor's budget.

It is also well worth noting that our group has launched a Linked-In page, with the expert help of James Shen of BMS. Social media is new to our group, but we are hoping to have active discussion arena that will serve both the science and networking interests of our group.

Lastly, it is not too early to mark your schedule regarding our meeting dates through 2015. Further information can be found at **http://www.njacs.org/mass-spectrometry-topical-group-meetings**

Dates: **Tuesday, May 12, 2015**
Tuesday, June 9, 2015
Tuesday, October 20, 2015
Times: Social 5:30 PM
Dinner 6:15 PM
Presentations 7:00 PM
Place: Holiday Inn
195 Davidson Avenue
Somerset, NJ

NJMSDG Symposium and Vendor Show.

Date: **Tuesday, September 1, 2015**

Further details and plans regarding the September 1 NJMSDG Symposium and Vendor Show will be posted next month, but we do want to announce, with great excitement, the addition of a Poster Session! We trust this will give added opportunity for students, faculty, vendors, and members to share their science and further enhance discussions and networking.

Kathleen Anderson
NJMSDG Director of Communications

METRO WOMEN CHEMISTS COMMITTEE

6th Annual Gift of Mentoring Event

Date: **Tuesday, May 12, 2015**
Time: 6:00 PM Includes dinner
Place: Farleigh Dickinson University
Madison, NJ

For further details as the event approaches please check our website (**http://njacs.org/metrowomen.html**) or email Sarah Carberry (**sbolton@ramapo.edu**).

LABORATORY ROBOTICS INTEREST GROUP

21st Annual Technology Event

This meeting will offer multiple opportunities to exhibit and interact with other industry members. Please go to **https://www.eventbrite.com/e/lrig-midatlantic-chapter21st-annualtechnology-and-exhibition-showcase-tickets-16196777999** and visit the Free Attendee Registration page to register now. If you are interested in being a sponsor or exhibitor for LRIG spring event, please contact event planner Gail Crawford at **gcenterprises@verizon.net** for more information.

An Automated, High Throughput Platform for Induced Pluripotent Stem Cell Derivation, Characterization and Differentiation
Keynote Speaker: Daniel Paull
Director, Automation Systems & Stem Cell Biology
The New York Stem Cell Foundation

CROs and the Changing Paradigm of Drug Discovery
Keynote Speaker: Christine Brideau
Vice President
Vitro Biology
WuXi AppTec

An Overview of Laboratory Automation in Drug Product Development at BMS
Speaker: Jaquan Levons
Senior Research Scientist
Research and Development
Bristol-Myers Squibb

Accelerating Processes and Workflows Through 3D Archetypes
Speaker: Alex Baranowski
Research and Development
Bristol-Myers Squibb

Date: **Thursday, May 14, 2015**
Times: 3:00 - 9:00 PM
Place: Holiday Inn
Somerset, NJ
Cost: Free

NMR TOPICAL GROUP

Our next meeting will be:

Date: **Wednesday, May 20, 2015**
Place: TBA

For more details, please check our website: **http://www.njacs.org/nmr-spectroscopy-topical-group**

NORTH JERSEY CHROMATOGRAPHY GROUP

Seminar: Fast and High Throughput Separation for Pharmaceuticals by Using UPLC/UHPLC

Sponsored by Waters

Date: **Thursday, May 21, 2015**
Times: Social 5:30 PM
Dinner 6:15 PM
Seminars – 7:00 PM
Place: DoubleTree Hotel
Mirabelle Room
200 Atrium Drive
Somerset, NJ

DETECTING AND COMBATING HIV IN 3

A Video Challenge for High School Students

RCSB PDB invites high school students to create short videos that promote understanding of HIV/AIDS at the molecular level. Videos should incorporate structures from the PDB in order to tell a story related to the global efforts of defeating, combating, and controlling the HIV pandemic. The video submission is underway and will conclude on **May 31, 2015**.

Visit **rcsb.org/pdb-101** and use the Video Challenge tab for more information, resources, HIV related curriculum, and more. A PDF flyer describing this challenge is available for download and distribution at education. **rcsb.org/events/HIV-flyer.pdf**

RES MED: RESIDENTIAL SCHOOL ON MEDICINAL CHEMISTRY AND BIOLOGY IN DRUG DISCOVERY

The ResMed School offers an intensive week long graduate-level course organized to provide an accelerated program for medicinal chemists, biologists and other industrial and academic scientists who wish to broaden their knowledge of drug discovery and development. The aim of the school is to concentrate on the fundamentals that are useful in drug discovery spanning initial target assay evaluation through clinical development. Several case histories of recent successful drug development programs will also be presented. The five-day program consists of lectures, seminars and case histories.

Date: **Sunday-Friday, June 7-12, 2015**
Place: Drew University
Madison, NJ

For more information and application forms visit our website, **www.drew.edu/resmed**, email **resmed@drew.edu**, phone (973) 408-3787 or fax (973) 408-3504.

CHEM EXPO 2015 AND NATIONAL CHEMISTRY WEEK NEWS

The North Jersey Section will be at Liberty Science Center for ChemExpo 2015 on **Saturday, October 17, 2015**. We will once again have a competition among the undergraduates ($175 for 1st and $75 for 2nd) and a competition among the high school chemistry students ($100 for 1st and $50 for 2nd). We are giving you a head start for planning your exciting hands-on theme-related activity. The theme for 2015 this year is "Chemistry Colors our World". Be alert for future flyers and announcements!

MASS SPECTROMETRY DISCUSSION GROUP

Dr. Wendy Zhong, Principal Scientist at Merck Research Lab Presents "Top Down Approach on Low Level Unknown Determination of Therapeutic Peptides and Proteins Using High Resolution FT-ICR MS Platform" at the March 17, 2015 NJMSDG meeting, Holiday Inn, Somerset NJ.

(Photo courtesy of Kathleen Anderson)

New York Meetings

www.newyorkacs.org

NEW YORK SECTION BOARD MEETING DATES FOR 2015

The dates for the Board Meetings of the ACS New York Section for 2015 have been selected and approved. The meetings are open to all – everybody is welcome. All non-board members who would like to attend any (or all) meetings ought to inform the New York Section office by emailing Mrs. Marilyn Jespersen at **njesper1@optonline.net** or by calling the Section office at (516) 883-7510.

All 2015 Board Meetings will be held on the following dates at St. John's University, 8000 Utopia Parkway, Jamaica, NY. Dr. Paris Svoronos will chair all meetings. Refreshments will be available starting at 6:00 PM while the actual meeting will start at exactly 6:30 PM. Please check Marilyn Jespersen for the exact building and room number. You may also be added in the mailing list if you so desire.

Friday, June 5, 2015
Friday September 18, 2015
Friday November 20, 2015

More information will be posted in future monthly issues of *The Indicator* and on the New York website at **http://www.NewYorkACS.org**.

HUDSON-BERGEN CHEMICAL SOCIETY — JOINT MEETING WITH SIGMA XI CHAPTER AND THE SCHOOL OF NATURAL SCIENCES OF FAIRLEIGH DICKINSON UNIVERSITY

The 17th Annual Undergraduate Research Symposium

This is a forum for undergraduate students and their faculty mentors from colleges and universities that participate in the subsection's activities to present the results of their research. Outstanding graduating students are also being recognized (they receive the Hudson-Bergen Chemical Society Award consisting of a certificate and a book). All the presenters will receive certificates and a book. Students who wish to present posters must send an abstract via e-mail to **mleonida@fdu.edu**, **by April 15, 2015**. The abstract should be in MS Word format and must include the names and addresses of the student(s) and their faculty adviser(s) in addition to the title of the abstract. The abstract should not exceed 200 words. The name of the student presenting the poster should be underlined. The posters have to be self-supported. There is no registration fee.

This year's symposium also features the lecture:

Mapping Protein Folding Landscapes with High Pressure NMR

Speaker: Catherine Royer, PhD
Rensselaer Polytechnic Institute

How and why does pressure unfold proteins? How can we use pressure perturbation to map protein folding landscapes and probe the molecular origins of protein folding cooperativity? We have discovered recently that the major cause for pressure induced unfolding is the elimination of packing defects present in protein folded states. This mechanism, which depends on specific and structurally heterogeneous properties of the folded states of proteins, is distinct from heat and chemical denaturation, the effects of which depend rather homogeneously upon the amount of surface area exposed to solvent in the unfolded states of proteins. This local effect of pressure, in combination with site specific NMR experiments, SAXS, fluorescence, pressure perturbation calorimetry and other biophysical techniques has allowed detailed structural and energetic mapping of protein folding landscapes, and the effects of mutations thereon. We have found for example that single mutations can change a very simple folding pathway into a very complex one with multiple parallel

(continued on page 10)

HUDSON-BERGEN CHEMICAL SOCIETY

(continued from page 9)

routes.
We are currently using pressure coupled with the above mentioned techniques applied to repeat proteins in a systematic study of the sequence and structural determinants of folding cooperativity.

Catherine Royer is a Professor of Biology and Chemistry and Chaired Constellation Professor in Bio-computation and Bio-informatics at Rensselaer Polytechnic Institute in Troy NY. She is a Permanent Visiting Professor at the Johns Hopkins University Department of Biophysics and an Elected Fellow of the American Association for the Advancement of Science. Her research interests involve the use of fluorescence spectroscopic methods to characterize structure-function-dynamics relationships in and among biomolecules.

Dr. Royer obtained her PhD in 1985 in the Department of Biochemistry in the School of Chemical Sciences at the University of Illinois at Urbana-Champaign under the direction of Professor Gregorio Weber. She carried out postdoctoral studies at the University of Paris 7, the CNRS at Gif-sur-Yvette and at LURE. She then took a position as User Coordinator and Research Physicist at the Laboratory for Fluorescence Dynamics in the Department of Physics at the University of Illinois - Urbana Champaign. In 1990 she moved to an Assistant Professorship in the School of Pharmacy at the University of Wisconsin-Madison, where she was promoted to Associate Professor with tenure in 1995. In 1997 she took the position of INSERM Director of Research in the Center for Structural Biochemistry in Montpellier where, in 2002, she became the Associate Director of the Institute and in 2007, Institute Director, a position she held until joining RPI in August of 2013.

Dr. Royer has published extensively in the field of pressure effects on biomolecular structure and interactions, and on use of state of the art fluorescence approaches applied to understanding the physical basis for the control of transcription. She is an Executive Editor of Analytical Biochemistry, Associate Editor of Biochemistry, and Editorial Board member for Biophysical Journal and Proteins. She has served on numerous review panels (National Science Foundation Biophysics Panel, CNRS Section 21, 20, INSERM Scientific Council, French Agence National pour la Recherche – Physique et Chimie pour le Vivant) and the councils of national and international biophysical societies.

Date: **Friday, May 1, 2015**
Times: Poster Session 5:00 PM
Dinner 6:00 PM
Awards and Lecture 7:00 PM
Place: Jeepers Café
Fairleigh Dickinson University
Teaneck, NJ
Cost: $10.00 for dinner (dinner cost for presenters will be waived).

Reservations: Dr. Mihaela Leonida
(201) 692-2338, e-mail:
mleonida@fdu.edu by April 25, 2015.

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.

ACS Chemistry for Life®

63rd ANNUAL UNDERGRADUATE RESEARCH SYMPOSIUM

The Student Activities Committee of the New York Section of the American Chemical Society

Saturday, May 9th, 2015 at Queensborough Community College

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. JaimeLee Rizzo

Department of Chemistry and Physical Sciences, Pace University

JaimeLee Iolani Rizzo is a Professor of Chemistry in the Department of Chemistry and Physical Sciences at Pace University, NYC campus. A native of Honolulu, Hawai'i, Dr. Rizzo received her associate's degree from Queensborough Community College followed by a bachelor's and a master's degree in Chemistry from Queens College, CUNY. She completed her graduate studies under the tutelage of Robert Ralph Engel at Queens College, CUNY, where she developed an interest in organic synthesis particularly polyammonium compounds. A series of these compounds were covalently bound to macromolecules where host/guest binding interactions were investigated.

In 2001, Dr. Rizzo joined the faculty at Pace University, where her laboratory co-developed a method to bind polycationic organic compounds to carbohydrate-based surfaces which exhibits antimicrobial activity. This work has led to the acquisition of 14 patents and 5 publications. Johnson & Johnson Wound Management Division and Prismatic Dyeing and Finishing Company have supported this endeavor and are collaborators on some patents.

Keynote Address

Constructing Killer Surfaces

Our laboratory has been developing an array of new surfaces that kill bacteria and fungi on contact. We have successfully synthesized antimicrobial surfaces that destroy bacteria and fungi where the mode of action is through an electrostatic disruption of the cell wall. The antimicrobial activity of the surface is continual with regard to the agent that is covalently bound to the surface because it is not consumed in the process of invasion and disruption of the cell wall. This makes it unlikely that microorganisms could become resistant to this type of attack as it would involve a major modification of their cell-wall structure. Surfaces which have been prepared include carbohydrate-based materials as in wood, cotton cloth, paper; proteinaceous-based as in wool and silk; chitosan; agarose; gelatin β. The agents that are covalently bound to a given surface are a series of quaternary ammonium salts. The salts are then attached via a simple two-step procedure that involves activation of the surface followed by an SN_2 reaction of the salt with the activated surface. The synthesis, characterization, and bacteriological results will be presented.

SIGNFICANT DATES FOR 63rd URS

Deadline for Abstract Submission - **March 20, 2015** Abstract acceptance notification – April 6, 2015
Deadline for Symposium Advanced Registration – April 10, 2015

2015 Co-chair	2015 Co-chair	2015 Co-chair	2015 Co-chair
Dr. Justyna Widera	**Dr. Yolanda Small**	**Dr. Paul Sideris**	**Dr. Sharon Lall-Ramnarine**
Adelphi University	York College - CUNY	Queensborough CC - CUNY	Queensborough CC - CUNY
widera@adelphi.edu	ysmall@york.cuny.edu	psideris@qcc.cuny.edu	slallramnarine@qcc.cuny.edu

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. Justyna Widera, Adelphi University, Department of Chemistry,Science 201, 1 South Avenue, Garden City, NY 11530.

Learn more about the New York Section at www.NewYorkACS.org

LONG ISLAND SUBSECTION

The 25th NYACS High School Awards

(For more information, see article under "Call for Nominations," on page __.)

"The Importance of Chemistry in Today's Crime Scene Investigations"

Speaker: Scott J. Kovar
Director of Forensic Sciences
Hofstra University

Date: Thursday, May 14, 2015
Times: Check-in – 6:00 PM
Dinner – 6:30 PM
Ceremony – 7:00 PM
Place: Nassau Community College
CCB Building
Multi-Purpose Room 1st Floor

Directions: **http://www.ncc.edu/campusservices/parkingandsafety/mapanddirections.shtml**

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

Chemical Biology Discussion Group Year-End Symposium

Organizers: David M. Chenoweth, PhD
University of Pennsylvania

E. James Petersson, PhD
University of Pennsylvania

Sonya Dougal, PhD
The New York Academy of Sciences

Speaker: Scott J. Miller, PhD
Yale University

The goal of the Academy's Chemical Biology Discussion Group meetings is to enhance interactions among local-area laboratories working in chemical biology and to feature forefront research in chemical biology to the wider community. The annual year-end meeting features distinguished keynote speaker Scott J. Miller of Yale University, followed by short, cutting-edge talks by trainees selected from participating tristate-area institutions and a poster session.

Date: Monday, May 18, 2015
Time: 12:00 – 4:00 PM
Place: The New York Academy of Sciences
7 World Trade Center
250 Greenwich Street – 40th Floor
New York, NY 10007
Cost: This event is FREE for ACS and NYAS members. Please select the appropriate non-member Registration Category and use the Priority Code ACS. Non-members may attend for a fee of $30, or $15 for students and post-docs.

For more information and to register for the event, go to: **www.nyas.org/CBDGYearEnd2015**. To become a Member of the Academy, visit **www.nyas.org/benefits**

BIOCHEMICAL TOPICAL GROUP — JOINT MEETING WITH THE NY ACADEMY OF SCIENCES BIOCHEMICAL PHARMACOLOGY DISCUSSION GROUP

Quantitative Systems Pharmacology: Progress towards Integration into Drug Discovery and Development

Organizers: Joshua Apgar, PhD
Applied BioMath

Mercedes Beyna, MS
Pfizer

John Burke, PhD
Applied BioMath

Nahor Haddish-Berhane, PhD
Johnson & Johnson

Cynthia Musante, PhD
Pfizer

Sonya Dougal, PhD
The New York Academy of Sciences

Speakers: Richard Allen, PhD
Pfizer

John Burke, PhD
Applied BioMath

Nitin Mehrotra, PhD
US Food and Drug Administration (FDA)

Tim Rolph, PhD
Pfizer

Vikram Sinha, PhD
US Food and Drug Administration (FDA)

Peter Sorger, PhD
Harvard Medical School

Paul Watkins, MD
Hamner-UNC Institute for Drug Safety Sciences

This symposium highlights advances in QSP applications in the continuum from pre-clinical exploration to clinical research and includes academic, government, and industry perspectives on the benefits and challenges of full adoption. Case studies from several therapeutic areas will be presented with applications to drug safety, efficacy, and precision medicine.

Date: **Tuesday, May 26, 2015**
Time: 8:30 AM – 4:30 PM (reception to follow)
Place: The New York Academy of Sciences
7 World Trade Center
250 Greenwich Street – 40th Floor
New York, NY 10007
Cost: This event is has reduced-rate registration for ACS and NYAS members, at $30 or $15 (for students and post-docs). Please select the appropriate non-member Registration Category and use the Priority Code ACS. Non-members may attend for a fee of $85 (corporate), $65 (non-profit or academic) or $45 (students and post-docs).

For more information and to register for the event, go to: **www.nyas.org/QSP**. To become a Member of the Academy, visit **www.nyas.org/benefits**

WESTCHESTER CHEMICAL SOCIETY

On March 26, 2015 Dr. Phaedon Avouris, IBM Fellow and the manager of Nanometer Scale & Technology at IBM's T. J. Watson Research Center in Yorktown Heights, NY spoke on the nanoscience of graphene and other two-dimensional materials. Dr. Avouris gave brief description of nano-scale materials (defined as materials with sizes of 1 to 100 nm in at least one direction) and ways in which their small size affects their physico-chemical properties, including such "simple" things as melting point but, more importantly, including electrical, optical, plasmonic, mechanical and thermal properties, and their strong interactions with their environment. Much of the discussion focused on graphene, a single atom thick sheet of graphite. This is a typical two-dimensional nano-material (i.e., it is nano-scale in one dimension, but larger in the other two). Graphene has been the focus of considerable research in recent years with more than 10,000 patents, either granted or pending. Its applications, both current and proposed, were discussed. Following the talk, given at the Westchester Community College in Valhalla, N.Y., there was a lively question and answer, and discussion, period. This continued for several attendees, the speaker and his wife, Alice, as they enjoyed a dinner together at a nearby restaurant. The photo below is of Dr. Avouris and the WCS board of directors who attended the meeting.

Anthony Durante, Jody Reifenberg , Phaedon Avouris, Paul Dillon, Rolande Hodel and Peter Corfield

(Photo courtesy of Paul Dillon)

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.

CANDIDATES FOR THE NEW YORK SECTION 2015 ELECTIONS

At the January Section-wide Conference, the Nominating Committee presented the candidates for office for the 2015 elections. The biographies of the candidates are posted on the New York Section website at 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 or **njesper1@optonline.net** or **jespersn@stjohns.edu**

Members requesting paper ballots will receive them by May 1, 2015. 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**

The Candidates are:

Chair Elect for 2016
Dr. Brian Gibney
(Brooklyn College - CUNY)

Dr. Terry Brack
(Hofstra University)

Treasurer 2016-2017

Mr. Frank Romano
(Agilent Technologies)

Directors-at-Large 2016

Dr. Daniel Amarante
(College of Mount Saint Vincent)

Dr. Paul Dillon
(Siemens Healthcare Diagnostics Consultant)

Dr. Ping Furlan
(U. S. Merchant Marine Academy)

Dr. Marlon Moreno
(Queensborough Community College - CUNY)

Dr. Yoel Ohayon
(New York University)

Dr. Paul Sideris
(Queensborough Community College - CUNY)

Councilor 2016-2018

Dr. Gina Florio
(St. John's University)

Dr. Rolande Hodel
(AIDSfreeAFRICA)

Dr. Pamela Kerrigan
(College of Mount Saint Vincent)

Mrs. Joan Laredo-Liddell
(Concordia College)

Dr. JaimeLee Rizzo
(Pace University - NYC)

Dr. George Rodriguez
(Argeni, LLC)

Dr. Joseph Serafin
(St. John's University)

Dr. Justyna Widera
(Adelphi University)

WESTCHESTER CHEMICAL SOCIETY

FUTURE MEETINGS

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Special Seminar – "How Your Grandmother's Diet May Have Changed Your Life"

Speaker: Hailey Clancy, PhD
Lieutenant Colonel, US Army
Assistant Professor
Department of Chemistry
and Life Science
United States Military Academy
West Point, NY

Abstract will be supplied in a later issue.

Lieutenant Colonel Hailey Clancy graduated from Westminster College in Fulton, Missouri with a double major in Biology and Spanish and was commissioned into the US Army in 1992. While on active duty with the US Army, she earned a MS Degree in Environmental Toxicology from Cornell University where she developed a biosensor to detect the bacterium that causes Anthrax. In 2012 she earned a PhD in Molecular Toxicology and Carcinogenesis from New York University, where she conducted research on the effects of human exposure to nickel and its role in lung cancer. LTC Clancy's military assignments include service as a Transportation and Logistics officer in Germany (Nürnburg, Kaiserslautern, Wiesbaden, and Baumholder), Bosnia-Herzegovina, Iraq (Balad, Diyala, Baghdad), and Fort Drum, NY. She is currently assigned as an Assistant Professor in the Department of Chemistry and Life Science at West Point, NY, where she teaches General Chemistry and Biology. Her military awards include the Bronze Star (with oak leaf cluster), Meritorious Service Medal (with two oak leaf clusters), Joint Service Commendation Medal, Army Commendation Medal (with oak leaf cluster), Army Achievement Medal (with oak leaf cluster) and the Meritorious Unit Citation.

Tentative Date: Early October, 2015
Times: Social Hour - 5:00 PM
Lecture and Awards - 6:00 PM
Dinner - 7:00 PM
Place: Pace University
861 Bedford Road – Entrance #2
Pleasantville, NY 10570
The Campus Center, Butcher Suite
Cost: Students $20; All Others $30

RSVP Required – **pwrc@earthlink.com**

For more information, contact:

Paul Dillon:
E-Mail **PaulWDillon2@hotmail.com**

Or:

Anthony Durante
E-Mail: **anthony.durante@bcc.cuny.edu**

For Pace University information:
E-Mail: **eweiser@pace.edu**

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Special Seminar – "Hydrogen Bonding in Redox and Nanoparticle Construction"

Speaker: Marc A. Walters, PhD
Department of Chemistry
New York University
New York, NY

Abstract and CV will be supplied in a later issue.

Tentative Date: Early November 2015
Times, Place, Cost and Further Information: *See information under Early October meeting.*

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Special Seminar – "Making Green by Being Green – Life Cycle Assessment"

Speaker: Joseph C. Bush, PhD
Associate Director
The Center for Sustainable Energy
The City University of New York
Bronx Community College

The concept of Sustainability has its roots in many ancient cultures but over the last century was largely swept under the rug by consumer-led free market forces. However, intelligent investors never let go of the idea – they are always on the lookout for sustainable growth. As the energy and resource demands from developing nations continue to grow, and commodity prices fluctuate, the concept of sustainability is increasingly being integrated in all levels of corporate function. In this talk I will present examples of a process called *Life Cycle Assessment*, which seeks to quantify sustainability and is being incorporated in the decision making process of businesses of all sizes.

In 2005 Dr. Bush obtained his B.S in Chemistry from the Worcester Polytechnic Institute where he studied the- synthesis, purification and structural analysis of organic polydentate, metal chelating ligand molecules to bind divalent metal ions, creating low-density crystal structures. He went on to obtain his Ph.D. in Physical Chemistry in

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WESTCHESTER CHEMICAL SOCIETY

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2010 from Brown University where he studied Rydberg Fingerprint Spectroscopy using femtosecond pump-probe photoelectron spectroscopy on Rydberg states of biomolecular model systems. He continued at Brown as a postdoctoral research associate in the Physics Department where he designed and built a prototype system interfacing custom chip-based nano-pore materials with third party radio frequency mass filters for label-free, bio-polymer sequencing. For this work, he was the project lead for CAD design, nano-structure fabrication and optimization, computer-based simulation, and experimental implementation. During this time, he also was a consultant to Brown's Technology Venture Office, which markets intellectual property for external licensing. Since 2013, Dr. Bush has been the associate director for Bronx Community College's Center for Sustainable Energy. The Center builds bridges between academic departments, industry partners, and government agencies.

Tentative Date: Early December, 2015
Times, Place, Cost and Further Information: *See information under Early October meeting on page 15.*

Call for Nominations

THE WILLIAM H. NICHOLS MEDAL AWARD FOR 2016

The New York Section is accepting nominations for the William H. Nichols Medal Award for the year 2016. 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. The award consists of a gold medal, a bronze replica and $5000. The medals are presented at the William H. Nichols Meeting that involves 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 and officers of the American Chemical Society.

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 goes through 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, 2015. The Nichols Medal Award Jury will meet in June 2015 to select the Nichols Medalist for 2016.

Questions regarding the nomination procedure should be directed to the ACS, New York Section Office at **njesper1@optonline.net**.

NEW YORK SECTION'S OUTSTANDING SERVICE AWARD FOR 2015

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 2015 OSA Committee Chair, Dr. James Canary at **james.canary@nyu.edu**. **Nominations will be accepted until June 30, 2015.**

The nominations will be reviewed by a committee consisting of the previous five winners of the award. The Outstanding Service Award for 2015 will be presented at the New York Section's Section-wide Conference in January 2016.

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**

LONG ISLAND SUBSECTION

The 25th NYACS High School Awards

For the twenty-fifth consecutive year, the American Chemical Society will be recognizing outstanding high school chemistry students from high schools in Nassau, Suffolk, and Queens. We are looking for your school's outstanding chemistry student(s). While the committee hopes the student will major in chemistry while in college, it is not a prerequisite. Please nominate the student(s) who you feel have demonstrated a strong interest and who have excelled in the field of chemistry. Please consult with your colleagues and with such selection criteria as you see fit, and complete the nomination form below **by Monday, May 4, 2015**.

http://www.newyorkacs.org/sub_island_awards.php

For awardees able to attend: The ceremony and honorary dinner will be held on **Thursday evening, May 14, 2015** at Nassau Community College, CCB Building, Multi-Purpose Room 1st Floor.

Please plan on arriving by 6:00 PM for check-in. Dinner will begin at 6:30 PM and the program will start at 7:00 PM. Park in general student parking areas. The guest speaker and topic is:

"The Importance of Chemistry in Today's Crime Scene Investigations"

Speaker: Scott J. Kovar
Director of Forensic Sciences
Hofstra University

Each Awardee will receive a certificate mounted on a handsome wood plaque. Our LIACS Chair, Dr. Paul Sideris, will present the plaques following the talk.

The LIACS offers TWO complimentary seats to the awards ceremony, (dinner for one student and one chaperone, usually a parent or teacher, per school). Additional nominated students per school will be charged $40.00 for their plaque and $25.00 to attend the dinner. All other additional guests will be charged $25.00 to attend the dinner. If your school has a permanent academic award trophy case or display, you may purchase a duplicate plaque for $40.00. If you require additional seats for dinner or additional plaques, please complete the corresponding request forms on the LIACS High School Award website:

http://www.newyorkacs.org/sub_island_awards.php

Any required payment must be paid by no later than May 4, 2015. For your convenience, you can submit payment by Credit Card via PayPal on our website. Alternatively, please send a check made payable to the NYACS Long Island Subsection and mail to: LIACS, c\o Frank Romano, 3280 Sunrise Highway, PMB 293, Wantagh, NY 11793-4024. An early response is appreciated so we can plan for the event.

If you cannot participate this year, we would still appreciate you filling in the Principal, Guidance Counselor, and Teacher information on the nomination form so that we may update our records. In addition to the awards program, the American Chemical Society also sponsors the Chemistry Olympiad, the Nichols Teacher Award ($1,000 prize), the High School Teacher Topical Group, and an Outstanding Teacher Award.

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CALL FOR NOMINATIONS LONG ISLAND SUBSECTION

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If there are any questions, please contact the High School Award Chair: Frank Romano **frank.romano@agilent.com**

Deadline for Nominations and Payment: Monday, May, 4, 2015

Date of the Event: Thursday, May 14, 2015
Times: Check-in – 6:00 PM
Dinner – 6:30 PM
Ceremony – 7:00 PM
Place: Nassau Community College
CCB Building
Multi-Purpose Room 1st Floor

Directions: **http://www.ncc.edu/campusservices/parkingandsafety/mapanddirections.shtml**

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 Pippen 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 Volunteers

MARM 2016

The New York Section will be hosting MARM 2016, June 9-12, 2016 at the College of Mount Saint Vincent, Riverdale, NY 10471. The section will be celebrating its 125th Anniversary during its event. The theme has yet to be determined. The General Chairs for this meeting are Dr. Pamela Kerrigan and Dr. Daniel Amarante from the College of Mount Saint Vincent's Division of Natural Sciences. To volunteer in planning and/or for further information, please contact them at the following emails:

Pamela.kerrigan@mountsaintvincent.edu

or

Daniel.amarante@mountsaintvincent.edu

National

19th ANNUAL GREEN CHEMISTRY & ENGINEERING CONFERENCE (GC&E)

Hosted by the ACS Green Chemistry Institute®

As the longest running green chemistry conference in the United States, GC&E invites scientists, decision-makers, students, and advocates coming together, compare findings, and discuss the science of the future. Register today to explore green chemistry and engineering advancements over three days of programming featuring more than 30 technical sessions, poster sessions, a green exhibit hall, and keynote lectures. The program sessions include themes around catalysis, designing safer chemicals, education, green engineering, pharmaceuticals, sustainable products, feedstocks, functional and biobased materials, tools and metrics, energy, synthetic transformations, and biochemistry. A student workshop will be held on Monday, July 13, 2015 at the ACS headquarters and there will be many opportunities to volunteer throughout the conference!

Date: Monday-Wednesday, July 14-16, 2015
Place: Bethesda, MD

Early registration is open until May 29, 2015!

For more information visit **gcande.org**.

Obituary

DR. GRACE B. BOROWITZ

Grace Borowitz 1934-2015

Grace Burchman Borowitz, 80, professor of organic chemistry emerita at Ramapo College of New Jersey in Mahwah, died in Ann Arbor, MI on January 16 after a long illness.

Born in New York City, Borowitz received a B.S. magna cum laude in chemistry from the City College of New York in 1956 before earning an M.S. in 1958 and Ph.D. in 1960, both in organic chemistry from Yale University.

Borowitz was an emerita member of ACS, joining in 1957. She served as New York Section councilor from 1975-2004, and served as chair of the Division of Professional Relations in 2000. She was active in the Hudson-Bergen Subsection of the New York Section, serving as chair in 1988.

After working briefly as a research chemist at American Cyanamid, Borowitz served as an assistant professor of organic chemistry for several years at Upsala College in East Orange, N.J. In 1973, she joined the chemistry faculty at Ramapo College of New Jersey as an assistant professor, and was named a professor in 1980.

She and her husband, Irving J. Borowitz, professor emeritus of chemistry at Yeshiva University, NYC, were also adjunct organic chemistry professors during summer sessions offered at Columbia University from 1980 until 2005.

She was a fellow of the American Association for the Advancement of Science and a member of the New York Academy of Sciences, Phi Beta Kappa, and Sigma Xi.

Borowitz was an emerita member of ACS, joining in 1957. She was a longtime councilor and served as chair of the Division of Professional Relations in 2000. She was active in the Hudson-Bergen Subsection of the New York Section, which she served as chair in 1988.

Borowitz received numerous accolades, including the Henry Hill Award from ACS in 1999 and the Fred & Florence Thomas Faculty Award from Ramapo College in 1981.

She is survived by her husband of 55 years; daughters, Susan Borowitz and Lisa B. Ensfield; and two grandsons.

Professional/Product Directory

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