63rd Annual Undergraduate Research Conference

Research Conference winners and judges: front Dr. Anne Kelly, Jessica Dickinson, Robert Perkins and Beatrice Markiewicz; back row William Suits and Allen Jones.

(Photo courtesy of Amber Charlebois)
See story on page 9.

NoJ IYC Happening
See story and photos on page 10.
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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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High School Teachers Topical Group
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Deadline for items to be included in the October 2011 issue of The Indicator is August 15, 2011.

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

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In looking over my card catalog where significant events in the chemical heritage are listed by the months in which they have occurred (yes, I still have an old-fashioned card catalog; just been too lazy/busy to transform it into a digitized electronic data base) I find that the stack of events for September is one of the thickest. Among birthdays there are Nobel laureates Aston, Ostwald, Soddy, Delbruck, Moore, Cornforth, Barton, Compton, Irene Joliot-Curie, Willstätter, Robinson, Ruzicka, Szent-Györgyi, Courmand, Ochoa, Florey, Morgan, Moissan, and Fermi. This month I will give a short summary of the career of the distinguished German organic chemist, Adolph William Hermann Kolbe, generally known as Hermann Kolbe, who was born near Goettingen on September 27, 1818.

Kolbe was the first of fifteen children of a Lutheran minister. He started his studies with Woehler in 1838, just six years after Liebig and Woehler's seminal paper on the benzoin radical had appeared; this was one of the first demonstrations that particular groupings of atoms — the radicals — could maintain their integrity in the course of a set of organic reactions. Liebig and Woehler speculated that radicals were to organic chemistry as elements were to inorganic. Kolbe moved to Marburg as Bunsen's assistant in 1842, and then to London in 1845 where he worked with Lyon Playfair in the Museum of Economic Geology analysing gases that might be involved in mine explosions. Another of Playfair's assistants was Edward Frankland, father of organometallic chemistry and of the concept of valency; Kolbe and Frankland became lifelong friends. In 1845 Kolbe, accompanied by Frankland, returned to Marburg where Frankland initiated his work on organozinc compounds which he continued on his return to England. Kolbe succeeded Bunsen in the Chair at Marburg in 1851. After 14 years there he was called to Leipzig after Liebig's death; the university built a large new laboratory for him and his students. Kolbe excelled as a teacher and author. In addition to his own textbooks he contributed to Liebig and Woehler's comprehensive (10 volume) textbook of pure and applied chemistry. From 1870 he was editor of the influential Journal fuer Praktische Chemie.

Kolbe had strong views on the place of theory in chemistry. Following Berzelius he viewed organic compounds as derived from carbon dioxide by substitution, coupling, and other processes. Connections between compounds were purely formal and he regarded all efforts to describe the relative positions of atoms either in terms of connectivity or, worse, in terms of spatial relationships as hopeless and fundamentally unsound. This inevitably put Kolbe on a collision course with developing new chemical theories. I will return to this topic later, but first some comments on Kolbe's triumphs. In the course of work on chlorinated ethanes Kolbe effected the first complete synthesis of an organic compound, acetic acid, from inorganic precursors. His carbon source was carbon disulfide, chlorination of which gave carbon tetrachloride. This was pyrolyzed to yield tetrachloroethylene, aqueous chlorination of which gave trichloroacetic acid. This was reduced to acetic acid in an electrolytic cell. Kolbe went on to use electrolysis to produce what he originally regarded as hydrocarbon radicals (we now recognise them as dimers) from carboxylic acids — one of the Kolbe reactions. In collaboration with Frankland he worked out the general homologation reaction in which an alkyl halide is converted to a nitrile and thence to a carboxylic acid. Another Kolbe reaction is the production of salicylic acid from phenol and carbon dioxide. Kolbe showed that the product was a useful disinfectant.

To return to Kolbe as author and critic, and here I quote from Vol. IV of Partington's magisterial History of Chemistry: "He was straightforward and fearless and quite unawed by authority .... his criticisms of the work and ideas of his contemporaries (particularly Kekule, Baeyer, and Emil Fischer) were more forcibly expressed than is now customary." I will close with the most famous example of Kolbe's rhetoric. When van't Hoff published his "Chemistry in Space" as a short book in 1876 it included a preface by Wislicenus. Kolbe rushed into print: "I would have ignored this work .... had not a significant chemist [Wislicenus] ...recommended it ... A Dr. J. H. van't Hoff, employed at the School of Veterinary Medicine at Utrecht finds ... exact chemical research not to his taste. He has thought it more convenient to mount Pegasus (borrowed, no doubt, from the Veterinary School) and to proclaim ... how on his daring flight to the chemical Parnassus the atoms appeared to be arranged in space .... To criticize this paper in any detail is impossible because the play of imagination completely forsakes the solid ground of fact and is quite incomprehensible to the sober chemist."

Hermann Kolbe, a sober chemist and a great experimentalist, died near Leipzig on November 25, 1884.
SEPTEMBER HISTORICAL EVENTS IN CHEMISTRY

By Leopold May, The Catholic University of America, Washington, DC

September 1, 1909
Rohm & Hass Co. was founded on this date.

September 4, 1913
Stanford Moore who was born on this date, did research on enzymes. He shared the Nobel Prize in Chemistry in 1972 with William H. Stein for their contribution to the understanding of the connection between chemical structure and catalytic activity of the active centre of the ribonuclease molecule and Christian B. Anfinsen for his work on ribonuclease, especially concerning the connection between the amino acid sequence and the biologically active conformation.

September 6, 1906
Luis J. Leloir who isolated glucose 1,6-diphosphate and uridine diphosphate glucose; was born on this day. He also synthesized trehalose with E. Cabib in 1953 and sucrose with C. Cardini and J. Chiriboga in 1955. He received the Nobel Prize in Chemistry in 1970 for his discovery of sugar nucleotides and their role in the biosynthesis of carbohydrates.

September 9, 1877
Aleksandr E. Arbuzov, who was born on this date, studied organophosphorous compounds and the rearrangement of phosphate esters (Michaelis-Arbuzov reaction).

September 13, 1886
One hundred and twenty-five years ago on this date, Robert Robinson was born. He was a researcher in plant pigments, alkaloids and phenanthrene derivatives and received the Nobel Prize in Chemistry in 1947 for his investigations on plant products of biological importance, especially the alkaloids.

September 14, 1961
Fifty years ago on this date, Analtech, Inc., the manufacturer of products for thin layer chromatography, was founded as Custom Service Chemicals. Its name was changed on January 8, 1965 to Analtech, Inc.

September 14, 1936
Seventy-five years ago on this date, Ferid Murad, a researcher in the role of NO and cyclic GMP; was born. He shared Nobel Prize in Physiology or Medicine in 1998 system with Robert F. Furchgott and Louis J. Ignarro for their discoveries concerning nitric oxide as a signaling molecule in the cardiovascular system.

September 19, 1861
One hundred and fifty years ago on this date, Alexandre M. Butlerov presented the first definition and use of term, chemical structure, before Speyer Congress.

September 24, 1895
André Frédéric Cournand, who performed the first clinical cardiac catheterization, was born on this date. He shared the Nobel Prize in Physiology or Medicine in 1956 with Werner Forssmann and Dickenson W. Richards for their discoveries concerning heart catheterization and pathological changes in the circulatory system.

September 26, 1886
One hundred and twenty-five years ago on this date, Archibald V. Hill, a researcher on oxygen consumption of muscular action, was born. In 1922, he shared the Nobel Prize in Physiology or Medicine for his discovery relating to the production of heat in the muscle and Otto F. Warburg for his discovery of the fixed relationship between the consumption of oxygen and the metabolism of lactic acid in the muscle.

September 28, 1852
One hundred and twenty-five years ago in 1886, Henri Moissan discovered fluorine (F, 9). He invented an electric furnace in which he prepared metal carbidess and silicon carbidess. In 1906, he received the Nobel Prize in Chemistry in recognition of the great services rendered by him in his investigation and isolation of the element fluorine, and for the adoption in the service of science of the electric furnace called after him. He was born on this date.

Additional historical events can be found at Dr. May's website, at http://faculty.cua.edu/may/ChemistryCalendar.htm.
North Jersey Meetings

http://www.njacs.org

NORTH JERSEY EXECUTIVE COMMITTEE MEETING

Section officers, councilors, committee chairs, topical group chairs, and section event organizers meet regularly at the Executive Committee Meeting to discuss topics of importance to running the section and representing the membership. All ACS members are welcome to attend this meeting and to become more involved in section activities.

Date: Monday, September 26, 2011
Time: 6:00 PM
Place: Rutgers University
Wright-Rieman Labs, Room 260
Busch Campus, 610 Taylor Road
Piscataway, NJ 08854
Cost: $5.00 - pizza dinner
Directions can be found using mapquest and the address above. A map of the campus can be found at rumaps.rutgers.edu/location.jsp?id=C70861

Reservations: call (732) 463-7271 or email njacsoffice@aol.com prior to Wednesday, September 21, 2011.

Dinner at the Section Meeting is payable at the door. However, if you are not able to attend and did not cancel your reservation, you are responsible for the price of your dinner.

CAREERS IN TRANSITION GROUP

Job Hunting??

Are you aware that the North Jersey Section holds monthly meetings at Fairleigh Dickinson University in Madison to help ACS members? Topics covered at these cost-free workshops are:

• The latest techniques in resume preparation
• Ways for improving a resume
• Answers to frequently asked interview question and
• Conducting an effective job search

The next meeting for the Careers In Transition Group will be held Thursday, September 1, 2011, in the Rice Lounge on the first floor of the New Academic Building. The meeting will start at 5:30 PM and end at 9:00. There will be a Dutch-treat dinner. To get the most from the meeting, be sure to bring transparencies of your resume.

Please contact billsuits@earthlink.net, if you plan on attending this meeting.

TEACHER AFFILIATES

Executive Board

Date: Thursday, September 8, 2011
Time: 4:00 PM
Place: College of St. Elizabeth, Library

ChemTAG

Safety in the Lab — Food Science with an Introduction to Culinology

Start the school year by learning! Come to ChemTAG and learn about Culinology and its relation to Food Science. Bring your class lessons on this topic or others and share chemical demonstrations.

Date: Thursday, September 15, 2011
Time: 4:00 – 6:00 PM
Place: Bergen Academies Technical School
Hosted by: Jayasree Sankar
2011 REGULATORY-CMC SYMPOSIUM

Topics of Current Interest in Regulatory-CMC

The Regulatory-CMC & Quality Topical Group is proud to hold its second half-day symposium on September 22, 2011. An agenda follows. Please register by visiting the NJACS.org website. If you have any questions, please send an email to asingh.njacs@gmail.com.

12:15 – 12:45 PM  Registration

1:00 - 2:00 PM  David Ziering, Director, Bristol-Myers Squibb Co.
“Genotoxic Impurities in Pharmaceuticals: A Regulatory Perspective”

2:00 - 3:00 PM  Matthew Lamb, Sr. Director, Warner Chilcott
“Regulatory Assessments and Strategic Planning: Key Considerations for Global Drug Development”

3:00 - 3:15 PM  Break

3:15 - 4:15 PM  Steven R. Peltier, Vice President, Corporate Reg Affairs, Integra Life
“Off Label Promotion – General vs Specific Claims”

4:15 - 5:15 PM  Ravi Kalyanaraman, Senior Scientist, Bristol-Myers Squibb Co.
“Combating ‘Fake Pharmaceuticals’ Using PAT”

5:30 PM  Adjourn

Date:  Thursday, September 22, 2011
Place:  Fiber Optics Auditorium
        Rutgers Busch campus
        Piscataway, NJ

• Pre-registration is recommended.  Deadline is Friday, September 16, 2011.
• Registration fee: General $15.00; students, retirees etc. $10.00
• Please register at www.njacs.org and pay online using paypal. The site also has information on directions, maps and parking, etc.
• On-site registration allowed but not preferred (cash or check only, no credit card). Please make your check or money order payable to the North Jersey Section of the ACS

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NORTH JERSEY ELECTION — SLATE OF CANDIDATES

The North Jersey Section ACS slate of officers and councilors for 2012-2015 is:

Chair:
Landon Greene
Jefferson Tilley

Councilor/Alternate Councilor:
Alan Cooper
Jacqueline Erickson
Anne Kelly
Joseph Potenza
Tuwanna Rudolph
John Sowa
Jefferson Tilley

REMINDER: The 2012 North Jersey Section ACS election will take place this fall by ELECTRONIC BALOTING. Additional information will be sent to all section members via email.

63RD ANNUAL UNDERGRADUATE RESEARCH CONFERENCE

The Sixty-Third Annual Undergraduate Research Conference organized by the College of St. Elizabeth Student Chapter of the ACS and their advisor, Sister Marion Jose Smith occurred on Friday April 29, 2011. The event was held at the College of St. Elizabeth in Florham Park, NJ. Eight undergraduate students from four different universities were hosted by the College of St. Elizabeth Chemical Society as they presented their research for an audience of students and faculty from the North Jersey area. The three judges, Dr. Anne Kelly (BMS), Dr. Allen Jones (ACS Trenton Section) and Mr. Bill Suits (ACS North Jersey Section) were presented with a tough decision as they judged the student presentations and selected the top three undergraduate students. Each presenter represented their university and gave sight to the remarkable research opportunities students in the North Jersey Section are provided with.

First Place and the Jean Asell Duranna Award was awarded to Ms. Beatrice Markiewicz from Fairleigh Dickinson University who was mentored by Dr. Alexey Teslia, for her research conducted at the Brookhaven National Laboratory during the summer of 2010. Her impressive presentation was based on her research investigating Cavity Ring Down Spectroscopy.

Mr. Robert Perkins from Fairleigh Dickinson University was awarded with the second place award for his presentation based on the binding/staining effects of cresyl violet on nucleic acid molecules. His notable research was conducted under the direction of Dr. Amber Flynn Charlebois.

The third place award went to Ms. Jessica G. Dickinson for her presentation on her research accomplished also at Fairleigh Dickinson University under the advisement of Dr. Amber Flynn Charlebois. Jessica presented her research on HPLC analysis of protein structure modification.

The award certificates were formally presented to the selected student presenters at the North Jersey Section’s Annual Awards Dinner held on Tuesday May 17, 2011 in Lenfell Hall on the Fairleigh Dickinson University campus in Madison, NJ.
INTERNATIONAL YEAR OF CHEMISTRY — NORTH JERSEY SECTION

On Thursday, May 26 Dr. Charles Michael Drain, a member the American Chemical Society (ACS) did the International Year of Chemistry Global Water Experiment with Mrs. Alisa Swider’s class of 19 third graders. Each student filtered water through a bed of sand and then measured the pH of the local Holland Brook stream. Their average result compared exactly to Dr. Drain’s result in his university lab. It was 7.2 suggesting little pollution. Dr. Drain is a professor at Hunter College. This is his daughter’s class. Earlier Dr. Drain did the same experiment with 250 seventh graders from the Readington Middle School working with samples from the children’s wells at home. They observed an acceptable range for their wells from 7.2–7.6.

Their results will be tabulated with thousands of others from around the world by the end of 2011. The experiment is to illustrate the importance of high quality drinking water for global health. Every year over 1.8 million children die from contaminated drinking water.

Mr. Bill Suits, another ACS member assisting Dr. Drain, shared the importance of water quality for world health with the class. His presentation Pennies for PuR Water showed how children in Africa would be charged with bringing home water from local streams where cattle drink and mothers wash their clothes. While American families consume 160 gallons per day, Africa families are lucky to have 1.5 gallons per day. Those interested in this ACS Children’s Safe Drinking Water Campaign can locate more information at http://www.njacs.org/csdw.html

(Photos courtesy of Bill Suits)
COME JOIN US AT THE LIBERTY SCIENCE CENTER

ChemExpo 2011 at Liberty Science Center

Saturday, October 22nd, 2011
10 a.m. - 2 p.m.
"CHEMISTRY—OUR HEALTH, OUR FUTURE!
Hands-on Science Activities
A family affair presented by area chemists, college and high school chemistry teachers and students.
Visit Liberty Science Center and enjoy this additional event included with general admission to the center.
Coordinated by
North Jersey Section of the American Chemical Society

For further information go to www.njacs.org or email rosellerams@yahoo.com

Last year The North Jersey Section celebrated National Chemistry Week at the Liberty Science Center. We had a great time and the attendees really appreciated all of our efforts. Why don’t you join us this year? On Saturday, October 22, the North Jersey Section will be holding its annual ChemExpo in celebration of National Chemistry Week. As usual we will have many tables offering all kinds of hands-on activities for budding scientists. You can set up your own table or help out at another table. We need you to help us make a difference!

The theme for this year is “Chemistry—Our Health, Our Future!” Come explore the positive impacts of chemistry as it relates to nutrition, hygiene and medicine. Check out the National Chemistry Week web page at http://portal.acs.org/ to get some ideas for hands-on activities that you might want to present.

Your activities should be geared for 8 to 12 year olds. As usual our first priority is safety. Preferably presenters should use household materials to demonstrate a scientific principle. We would like the students to be able to redo these experiments at home and at school so it would be very helpful if you had handout instructions to distribute.

To minimize duplication of the presentations, we will need to know by October 1 the activity you would like to conduct at your table. Individuals contacting us first with their idea(s) will be given priority, so please let us hear from you as soon as possible. Contact Bobbi Gorman at rosellerams@yahoo.com to let her know what activities you will be doing at your table or if you want to volunteer at the Expo.

We also value and look forward to receiving financial support to help cover many of the expenses associated with the Section’s NCW activities. If you would contact the appropriate individuals at your company, the Section would be most grateful. A donation of $500.00 indicates Gold Sponsorship, a $250.00 gift indicates Silver Sponsorship and a $100.00 gift indicates a Bronze Sponsorship. Checks should be made out to the North Jersey ACS Section with a memo of “NCW” and sent to Jacqueline Erickson, 33 Ronald Road, Lake Hiawatha, N, 07034-1121.

Please fill out the following forms and return them to Bobbi Gorman at rosellerams@yahoo.com.

Form 1.
Count me in.
My name is: ________________________
I am volunteering to work on: Saturday, Oct. 22, 10:00 AM – 11:30 AM, 11:30 AM – 2:00 PM, or 10:00 AM – 2:00 PM (Underline times).
I can be reached at: (work phone number) ______________
My complete address is: ______________
__________________________________
I am an employee at: ________________
__________________________________
The activities at my table will be: ______
__________________________________
In addition to a table, I also need: ______
__________________________________
I will be bringing handouts on activities that the students can do at home. Yes No
I will need more than one table. Yes No
How many additional tables will you need?
__________________________________

(continued on page 12)
COME JOIN US AT THE LIBERTY SCIENCE CENTER

(continued from page 11)

**Form 2.**
My company would like to support these efforts.

The following company/individuals are willing to help defray the costs of these events:

__________________________________
__________________________________
__________________________________

An acknowledgement letter for this contribution should be sent to (name and full address):

__________________________________
__________________________________
__________________________________

**Form 3.**
I will be joined at my table by the following volunteers.

Complete Name: Institution: Address (snail mail):

Activity Time Volunteering

__________________________________
__________________________________
__________________________________

Activity Time Volunteering

__________________________________
__________________________________

Activity Time Volunteering

__________________________________
__________________________________

Acknowledgement letters should be sent to:

__________________________________

__________________________________

Thanks very much for all of your help. The Section is most appreciative of your efforts.
Bobbi Gorman and Valerie Kuck
NEW YORK SECTION BOARD MEETING DATES FOR 2011

The dates for the Board Meetings of the ACS New York Section for 2011 were chosen and approved at the June 2010 Board Meeting. The meetings are open meetings; all are welcome. If non board members would like to attend the meeting, please let the New York Section office know by emailing Mrs. Marilyn Jespersen at njesper1@optonline.net or calling the office at (516) 883-7510. Refreshments are served at 6:00 PM and the meeting is held at 6:45 PM.

The 2011 Board Meetings will be held on the following Fridays in the library of St. John’s University, 8000 Utopia Parkway, Jamaica, NY. Dr. Hiroko I. Karan will chair the meetings.

Friday, September 23, 2011
Friday, November 18, 2011

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

Synthetic Biology and Organism Engineering

Organizers: Bryan Cowen, PhD
Memorial Sloan Kettering Cancer Center
Wan Seok Yang, PhD
Columbia University
Kelvin Tsou, PhD
The Rockefeller University
John Rakus, PhD
New York University
Anna Takaoka, PhD
Hunter College
Jennifer S. Henry, PhD
New York Academy of Sciences

Speakers: Sam Gellman, PhD
University of Wisconsin — Madison

Kathryn Loving, PhD
Schrödinger, Inc.
Desmond Lun, PhD
Rutgers University

New York chemical biologists come together to hear three diverse speakers provide updates in the design and application of ‘foldamers’, metabolically engineering microbes for the production of biofuels, and fragment-based de novo design of ligands.

Date: Thursday, September 8, 2011
Time: 5:00 – 7:30 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 use the Priority Code SPN1-ACS1. 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/SyntheticBiology

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

**Safety Concerns in Academic and Industrial Laboratories**

**Speaker:** Robert Lippman  
LI-ACS Safety Committee Chair

In recent months several incidents occurring in both academia and industry have made it as lead stories in newspapers. What actually happened, how it affected the students or technicians, the principle investigators or supervisors, and the institutions involved will be discussed. Suggestions for accident prevention (within OSHA guidelines) will be considered.

**Date:** Thursday, September 15, 2011  
**Times:** Social 6:00 PM  
Seminar 6:30 PM  
**Place:** Hofstra University  
Breslin Hall, Room 103  
**Cost:** Seminar is free and open to all.  
Dinner: following the seminar at a nearby restaurant ($25.00)

Please visit the LI-ACS webpage at http://www.newyorkacs.org/sub_island.php for details, updates, and directions.

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**HIGH SCHOOL TEACHERS TOPICAL GROUP**

**Dark Matter and Dark Energy**

**Speaker:** Prof. Ta-Pei Cheng  
Dept. of Physics and Astronomy  
University of Missouri-St. Louis

Our universe is mostly “dark” – full of matter and energy that cannot be detected by the usual electromagnetic means. Their presence has been deduced from their gravitational effects. This presentation will provide a basic introduction to dark matter and dark energy, their definitions, their observational evidence, and their possible physical origins.

**Date:** Friday, September 16, 2011  
**Time:** Social and Dinner — 5:45 PM  
**Place:** M&G Pub (Murphy and Gonzales)  
21 Waverly Place (at Green Street, North-east corner)  
New York, NY  
No reservations required

**Time:** Meeting 7:15 PM  
**Place:** New York University  
Silver Center Room 207  
32 Waverly Place (South-east corner Washington Sq. East)  
New York, NY

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**WESTCHESTER CHEMICAL SOCIETY**

**Special Seminar: Chemistry's Role In Nuclear Power**

**Speaker:** Patrick Falciano  
Nuclear Renaissance Services

In a nuclear power plant, the safe and efficient production of electrical energy requires the marriage of Chemical and Nuclear Engineering. From water quality to the regulation of neutron populations during the fission process, the importance of Chemistry cannot be overstated.

Mr. Falciano has been working in the nuclear industry for almost 41 years. The majority of his experience has been at the Indian Point Nuclear Generating Station. Some of the positions that he has held include Instrument and Controls Technician, Senior Health Physics Technician and Senior Training Instructor.

In February, 2008, he began a consulting firm, Nuclear Renaissance Services. This has given him the opportunity to speak to several Fortune 500 Companies, Colleges and Universities, as well as to local governments and emergency services regarding Nuclear Energy. His work has earned him significant recognition including “Friend of IEEE” and the “2007 Szabo Speaker of the Year”

He is currently working as the Outreach Education Coordinator at the Indian Point Energy Center as well as continuing his participation in NYAREA as a representative of the Nuclear Industry.

**Date:** Tuesday, October 4, 2011  
**Times:** Refreshments 5:30 PM  
Lecture 6:00 PM
NEW YORK SECTION 2011 ELECTION RESULTS

Chair-elect for 2012
Dr. Philip H. Mark

Treasurer for 2012-2013
Dr. Robert P. Nolan

Directors-at-Large for 2012
Mr. David J. Deutsch
Dr. Charles Hicks
Dr. Marie Thomas

Councilors for 2012-2014
Dr. Ronald P. D’Amelia
Dr. Barbara R. Hillery
Dr. Hiroko I. Karon

Alternate Councilors for 2012-2014
Dr. Richard M. Goodman
Dr. Rolande R. Hodel
Mrs. Joan A. Laredo Liddell

Alternate Councilors (Replacements) 2011-2012
Dr. Mihaela D. Leonida
Dr. Marc A. Walters

The New York Section extends a sincere thank you to all of the candidates. Their time, efforts and dedication are greatly appreciated.

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.

LONG ISLAND SUBSECTION

LI-ACS Events Schedule for Fall 2011

September 15, 2011
“Safety Concerns in Academic and Industrial Laboratories”
Speaker: Robert Lippman
LI-ACS Safety Committee Chair

Place: Hofstra University

October 20, 2011
“Personalized Medicine and the Biopharmaceutical Industry”
Speaker: Frank L. Douglas
Austen BioInnovation Institute in Akron

Place: Hofstra University

November 17, 2011
“Magnetic Carbon Nanotubes: Materials Development and Property Characterization”
Speaker: Dereje Seifu
Morgan State University

Place: Hofstra University

December 8, 2011
LI-ACS Annual Holiday Party & Board Elections
“Biological Sensors based on Advanced Materials: Preparation, Characterization and Practical Applications”
Speaker: Silvana Andreescu
Clarkson University

Place: Nassau Community College

Seminars are free and open to all

Please visit the LI-ACS webpage at http://www.newyorkacs.org/sub_island.php for details, updates, and directions.

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WESTCHESTER CHEMICAL SOCIETY

You know you have a successful event when the audience lingers way past closing time engaged in conversations, networking, planning projects, recruiting members. The winning formula started years ago when the Westchester Chemical Society board decided to combine two events: the Scientist award and the students’ award. Although a decision based on financial constrains, the new format provides an audience for the scientist and focuses the students into thinking about a possible futures in science seeing a role model being honored.

There would be no scientist award without someone submitting a nomination. This is work, it takes time and diligence, thus we are grateful to Dr. Rahni to have nominated this years awardee, Dr. Melikian. It seems appropriate to mention Dr. John Weisburger, a former recipient of the award himself who has nominated many wonderful awardees.

Dr. Melikian delivered a colorful presentation on tobacco and cancer, presenting the whole picture, history and science, a topic I had thought I knew a lot of – not so, now I know much more and enough to see that it is still only the tip of the ice berg.

Joseph Skrivanek’s pictures of meeting the president garnered gasps from the audience. We are so proud that one of our own was honored by the man in the White House.

I want to thank the Westchester board of directors for all the work and point out Peter Corfield’s initiative and creative gifts from the ACS store. Thank you to Ellen Weisser, who makes sure we have food and a beautiful place at Pace University. Thank you to the Professors for teaching Chemistry and inspiring our students to engage and see what we do. They are coming out in ever growing numbers and it is a pleasure to engage them in conversation, to pass on the baton.

Next Scientist award:
First Wednesday in May, 2012

Next speaker meeting
Tuesday October 4, 2011

Above, from left: Joan Laredo-Liddell, David Rahni, Assieh Alexy Melikian holding up her award plaque, Jody Reifenberg, Richard Goodman, Rolande Hodel, Paul Dillon, Peter Corfield, Jean Delfiner, Joseph Skrivanek.

(Photo courtesy of Rolande Hodel)

At right, President Obama congratulating Dr. Joseph Skrivanek on receiving the President’s Award for Science Mentoring, January 27, 2011.

(Photo courtesy of Purchase College)
IYC – UPDATE

We are approaching the last quarter of activities for IYC. October would be a perfect time to incorporate National Chemistry Week and IYC activities.

Send information about all your IYC activities to: JLaredoLiddell@aol.com

METRO WOMEN CHEMISTS GROUP OF THE NEW YORK SECTION

Metro Women Chemists Group of the New York Section of the ACS cosponsored the conference “Women’s Health: Science, Technology and Society” with Association for Women in Science (AWIS), NY Chapter, Women’s Center and Academic Dean and the Departments of Biology and Psychology of St. Francis College which was held on April 2, 2011 at St. Francis College, Brooklyn, NY.

The morning Session had Panel 1 and 2: Topics were on Sports and Health Reform, Young Adult Health and Sexuality, Maternal Health and Working Women, HIV and Contraception and Mental Health and Body Image. The keynote speaker was Dr. Leonore Tiefer, Clinical Associate Professor, Department of Psychiatry of NYU School of Medicine. The afternoon session included Panels 3 and 4. Topics discussed were Health Action, Prenatal and Postnatal Health. The conference was well attended by faculties and students of many colleges from metropolitan New York area. There was an evening reception, where students and speakers were able to exchange views.
HUDSON BERGEN CHEMICAL SOCIETY

The 13th Annual Undergraduate Research Symposium and Student Award Night

The event was held on April 29, 2011 at Fairleigh Dickinson University, in Teaneck. This year’s symposium also featured the lecture: "Self-assembled soft nanomaterials from biobased surfactants" presented by Dr. George John, Dept. of Chemistry, The City College of New York-CUNY.

From left to right: Ivana Viani (presenter, FDU), Dr. Ish Kumar (FDU), speaker, Dr. George John (CUNY), Morrine Omolo (student attendee, FDU), Dr. Mihaela Leonida (FDU), Dr. Danyang Yu (FDU), and Elaine Sedhorn (presenter, FDU).
Call for Nominations

EDWARD J. MERRILL AWARD FOR OUTSTANDING HIGH SCHOOL CHEMISTRY TEACHER FOR 2011

Now is the time to begin thinking about nominations for the Edward J. Merrill Award, North Jersey Section, for Outstanding High School Chemistry Teacher for the year 2011.

Go to the web site, njacs.org under education and obtain your preliminary nomination form and guidelines. The full packet takes time to do a good job!

We all know an outstanding high school chemistry teacher. Perhaps one from your town, your son’s or daughter’s teacher or just one that you have heard about or worked with at some point. The award carries $500 for the teacher, $500 in supplies for the teacher’s classroom and a plaque to display at home or in the classroom.

Any questions or help needed contact Bettyann Howson, chemphun@optonline.net.

2012 ESSELEN AWARD FOR CHEMISTRY IN THE PUBLIC INTEREST

The Northeastern Section of the American Chemical Society is pleased to invite nominations of worthy candidates for the Gustavus John Esselen Award for Chemistry in the Public Interest. This award recognizes a chemist for outstanding achievement in scientific and technical work that contributes to the public well-being. The award consists of a $5,000 prize and a medal of recognition. The presentation takes place at an award ceremony in April at Harvard University, followed by a formal address by the awardee. The tentative date for this ceremony is April 19, 2012.

The award was established in 1987 to honor the memory of Gustavus John Esselen, a distinguished member of the Northeastern Section. The first awardees were F. Sherwood Rowland and Mario J. Molina, who subsequently received the Nobel Prize. Several other recipients of the Esselen Award have also been Nobel awardees.

Any field of chemistry or affiliation is appropriate as long as the scientific work has been an important contribution to the public well-being and its significant value to society has become apparent within the last five years.

This announcement details the nature of the award and the criteria and procedure for nominations. Further information is available at www.nesacs.org/awards_esselen.html. This announcement is to seek nominations of colleagues whose work meets the criteria and purpose of the award.

The deadline for nominations is October 15, 2011.

Others

AIChE LAUNCHES NEW FORUM

Houston – The American Institute of Chemical Engineers (AIChE) announced the launch of an Upstream Engineering and Flow Assurance Forum in conjunction with the opening of the Offshore Technology Conference, of which it is a sponsoring organization. According to AIChE President-Elect David Rosenthal, who helped form the group, the new upstream forum “will provide a ‘meeting place’ for engineers, scientists and technologists who work in developing and producing critical natural resources, like oil and natural gas.”

The Upstream Engineering and Flow Assurance Forum will focus on applications of scientific and engineering fundamentals and principles in the multi-disciplinary realm of upstream energy and natural resource production and flow assurance, from the reservoir to the refinery. Norman Carnahan, the forum’s chair, observed: “Our forum is devoted to the dissemination of knowledge that can foster smarter methods for the safe and economic development of our natural resources as we work to meet society’s growing need for energy.” Among the many topics that he says will receive attention are: thermodynamic properties and phase behavior of reservoir fluids, thermal and hydraulic transient flow of produced fluids, hydrate engineering, design of subsea processing facilities and production systems, drilling and completion fluids technology, reservoir stimulation, enhanced oil recovery, and more.

A website is in development. In the meantime, for more information, e-mail upstream@aiche.org.
TRI-STATE CHINESE AMERICAN CHEMICAL SOCIETY

Successfully Held Its 2011 Annual Symposium at Rutgers University

The Tri-State Chinese American Chemical Society (Tri-State CACS) held its 2011 annual symposium at Busch Campus Center, Rutgers University on Saturday, June 18. The symposium was an opportunity to celebrate the International Year of Chemistry 2011 and the 30th Anniversary of CACS. Approximately 300 professionals and students from New Jersey, New York, Pennsylvania, Connecticut, and Delaware attended the day-long symposium.

The theme for this year’s Symposium was “Power of Chemistry and Collaboration in the Evolving World and the Role of CACS”. Various “hot topics” were discussed, such as global collaboration, chemical and pharmaceutical R&D, opportunities and challenges in the emerging markets, energy, sustainability, and intellectual properties (IP) protection.

Dr. Nancy B. Jackson, the current president of the American Chemical Society, kicked off the morning session entitled “Chemistry - Our Life, Our Future”. She discussed in her keynote speech the decline of manufacturing in the US and the challenges facing chemists and chemical engineers in this country. She also offered suggestions of adapting to the quick changes that are taking place in the industry and encouraged global collaboration.

Ms. Eunice Heath, General Manager of Home and Personal Care from the Dow Chemical Company, focused her speech on the topic of “Sustainability through the Wonders of Chemistry.” She said that sustainability is not only a necessity but also a tremendous opportunity for the chemical industry and that Dow is committed to leading the “industry of sustainability”. Dow already has exemplary products that feature both sustainability and profitability. Dr. Christopher Molloy, Dean of the Ernest Mario School of Pharmacy at Rutgers University, talked about the “Current Challenges in Drug Discovery & Development in the Evolving Pharmaceutical Industry”. He brought up an interesting opinion that “drugs get discovered despite management”. He was concerned that there is a mismatch between the long time needed to develop a drug and the wide spread short-term decisions by management in pharmaceutical companies. Because of the low success rate, management’s decision to terminate projects and to save money is correct most of the time; pharmaceutical scientists have to “fight” for the survival of their projects and bring products to the market. Dr. Jennifer Feeley, the Strategic Research Director from ExxonMobil Research and Engineering Company, shared ExxonMobil’s initiatives in developing sustainable energy sources and its projection on global energy consumption for the next 30 years. For example, ExxonMobil is investing in algae-based biofuel which is deemed a promising renewable energy source. The algae technology does not need to compete with the food industry for land or sugar.

Ms. Michelle Siekerka, Esq., Assistant Commissioner for Economic Growth and Green Energy from the New Jersey State Department of Environmental Protection, introduced several Green Programs in the State of New Jersey including “Green Municipals” that are already in place or being worked on in many New Jersey cities and towns. She affirmed that New Jersey is determined to lead the nation in green energy.

The afternoon session focused on the general topic of “emerging markets”. Each of the speakers had rich experience working in emerging markets such as China and directly witnessed the opportunities and challenges in these markets. Dr. Kailin Guan, a Senior Vice President from Qilu Pharmaceutical Co. Ltd., based in Jinan, Shandong Province, China, had 16 years of working experience in multinational pharmaceutical companies in the NJ area before he took on an opportunity in China a few years ago. He shared his unique experience and perspective on how Chinese pharmaceutical companies are competing with each other and with multinational companies in China’s rapidly expanding market. Dr. Jianwen Mao, Vice President for New Technology and Innovation from Avon Products, Inc., shared his personal experience and reflections on the “Challenges and Opportunities with R&D Operations in Emerging Economies”. Being an expatriate manager based in Shanghai for nearly 4 years, Dr. Mao had plenty of personal experience in recruiting and maintaining local talents in China. He emphasized that a good alignment of global functions was the key to turn potentials in the emerging markets into high performances and high returns. Mr. James Calkins, a Vice President and Principal Patent Counsel from Sanofi, shared some very positive news on the future growth of pharmaceutical companies. He stated that the emerging markets are becoming key growth drivers for multinational companies. The Chinese market is “tier 1” in emerging markets in terms of growth rate and absolute market value; big companies “cannot afford not going there”. He argued that with the right strategies, intellectual properties can still be protected in emerging markets.

The crowd of 300 participants felt that a Saturday was well spent at the symposium. The speeches were informative, up-to-date, and relevant to their professions. The messages were well received. In addition, there...
were plenty of opportunities for networking, thanks to the well-designed flow of the symposium. During the breaks, ACS Career Consultant Mr. Bill Suits provided career advice on-site, and vendors at the exhibition section were very busy demonstrating their products and promoting their companies to the interested attendees. For the first time, multiple companies posted job openings and collected résumés at the symposium.

Right after the successful conclusion of this symposium, leaders of the Tri-State CACS are already looking into their future events. Tri-State CACS will start planning for the 2012 Symposium after the summer. Meanwhile, along with China’s State Intellectual Property Office (SIPO), the Tri-State CACS will again co-organize the Beijing Pharmaceutical & Chemical Intellectual Property Forum in the summer of 2012. The Forum will provide the international community with an overview of China’s rapidly improving IP system and IP protection. International IP experts will also be invited to discuss new developments in IP laws governing pharmaceutical and chemical industries outside China. This will be the Third Beijing IP Forum that Tri-State CACS organizes with SIPO in Beijing. The two earlier IP Forums were held in 2006 and 2009 and each attracted an international audience of over 300 participants.

Founded in 1981, the Chinese-American Chemical Society (CACS) is a nonprofit, professional organization. Membership is open to professionals and students in chemistry, chemical engineering, and related fields, and to individuals and corporations supporting the objectives of the society. Over the last 30 years, CACS has worked to provide networking and learning opportunities for Chinese chemists and chemical engineers to develop their careers and interests. CACS also serves as a bridge for chemical and pharmaceutical companies between China and the US. The Tri-State CACS is the most active local chapter of the national CACS organization. Its annual symposium in June every year attracts hundreds of its members and friends in the greater tri-state area.

For more information about the Tri-state CACS, please visit www.tristatecacs.org.
Welcome to the first edition of the Newsletter for Senior Chemists. Our intention is to explore all the ways that senior chemists can continue to contribute, not only to the ACS, but also to the profession and their communities. I would urge all of you to think about ways we can make this happen.

One initiative we can all be involved in is to urge our local sections to establish local senior groups, if they have not already done so. If there is no senior group in your local section, take the lead and approach your local officers or executive committee and encourage them (preferably with your help) to start a local group. It could meet for lunch or a book discussion or input on a public policy question.

Another way to get started locally is to volunteer to help with career counseling or as part of the ACS mentoring program. Don’t be shy—many younger members very much appreciate getting some advice on how to forge ahead in their profession.

ACS has appointed a Senior Chemists Task Force (SCTF) to examine the role of seniors in the Society. The task force welcomes new participants, so I would urge you to contact me (donnergeist@verizon.net) or Cheryl Brown at ACS (c_brown@acs.org) if you know someone whom you believe would be a good addition to the group. Along the same line, we appreciate suggestions on topics or areas of interest that you would like us to explore. A listing of all the SCTF is included on the right sidebar in blue. Please feel free to contact any of these members if you have questions or suggestions to make.

One of the most successful events that the SCTF sponsors is our Tuesday morning Senior Chemists Breakfast at national meetings. They are always sold out and have featured top-notch talks by distinguished chemists (see the accompanying article in this newsletter). If there is a topic or speaker that you would like to suggest, again please contact us—we welcome your ideas.

The SCTF has been meeting as a group for the past three years. We believe that it is time for the ACS to recognize that there is a substantial role that seniors in the ACS can fulfill and that, as in our original intent, it is time for the task force to take its place in the ACS cosmos as a full committee along with groups like WCC and YCC. We urge you to make your voices heard by contacting the ACS Committee on Committees (ConC) or the ACS Board of Directors and advocating for this action. The email address is: secretary@acs.org.

Have a good summer and we will see you in Denver!

George Heinze
Chair, Senior Chemists Task Force
ACS National Meeting Senior Chemists Breakfasts

The Tuesday morning breakfasts for seniors at ACS National Meetings originated in 2005. Clifford Chang, Chair of the Silver Circle Working Group (SCWG) and a Councillor from the Pensacola Local Section, invited Madeline Jacobs, Executive Director & Chief Executive Officer of ACS, to give the breakfast talk at the fall 2005 meeting in Washington, D.C.

In Atlanta at the spring 2006 ACS National Meeting, William Carroll, ACS Immediate Past President, gave an enlightening talk entitled “Why Innovation Matters to the U.S. Economy”. While Cliff Chang had organized the meeting, I, a new member of the SCWG from the Committee on Local Section Activities, was invited to serve as meeting moderator.

As interest in the concept of a Tuesday morning breakfast for seniors grew and attendance increased, the search for appropriate speakers grew too. When Cliff Chang retired from the University of Western Florida and moved to Hawaii, I was invited to become SCWG Chair and take on the responsibility for the breakfasts. Together with ACS staffers Cheryl Brown, SCWG liaison, and Mary Bet Dobson, ACS Development Office, we organized and moderated the fall 2006 breakfast in San Francisco where Michael Burns, Chief Technology Officer, Your Encore, Inc., titled his talk “The Role of Retired Scientists and Engineers in Open Innovation”.

By 2007, the Tuesday morning breakfast had reached capacity, as more and more seniors learned of the event. Given the reputation of the previous speakers, and the quality of their talks, it became easier to convince more top-quality people to address the group. In 2009, SCWG became the Senior Chemists Task Force (SCTF). Responsibility for the breakfasts transferred to that group, and I agreed to continue to organize and moderate the breakfast with the assistance of Cheryl Brown and Mary Bet Dobson.

By the current year 2011, we have had three Nobel Laureates and four ACS Presidents address the group. All have been top-notch speakers from a variety of chemistry-related areas. At the upcoming ACS National Meeting in Denver, CO, Bassam Z. Shakashiri, ACS President-Elect and William T. Evjue Distinguished Chair for the Wisconsin Idea and Director of the Wisconsin Initiative for Science Literacy, will speak on the topic CHEMISTRY and SOCIETY: Looking Back, Looking Around, Looking Ahead. The event is on Tuesday, August 30, at the Hyatt Regency Convention Center Hotel and the ticket price is $15.00. I hope you will be able to join us.

Thomas R. Beattie
Member, ACS Senior Chemists Task Force
There are many companies and organizations searching for chemical and biochemical personnel to fill important jobs in their organizations.

- Companies for laboratory and management positions
- Universities & Colleges for teaching positions and laboratory personnel
- Hospitals for technical and research personnel

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

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