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THE Indicator

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Obituary

Anita J.Brandolini, 56, Assistant Professor of Chemistry at Ramapo College of New Jersey, died suddenly at her home in Hillsboro, NJ on March 10, 2012.

Originally from Morton, PA, Brandolini earned her BS in Chemistry in 1979 at Drexel University and her MA and PhD in Physical Chemistry in 1981 and 1983 at the University of Delaware. She was also a course Instructor for JEOL, USA, Inc.

Brandolini worked for 17 years at Mobil Chemical where she was a Team Leader and Senior Research Chemist in polymer analytical chemistry. She was an expert in the nuclear magnetic resonance of polymer systems publishing a book, *NMR Spectra of Polymers and Polymer Additives* (Anita J. Brandolini and Deborah D. Hills, New York; Marcel Decker, 2000) and contributing chapters on spectroscopy to numerous publications.

In 2000 Brandolini began a full time academic career accepting a two-year appointment at the College of New Jersey and then teaching at William Paterson University and Fairleigh Dickinson University before joining the Ramapo University faculty in 2007. She was an enthusiastic educator dedicated to undergraduate teaching and research and incorporating her industrial experience into her teaching, design of experiments, and writing. She believed strongly in undergraduate research and mentored many students. Her work primarily involved studies of the adsorption of polymers to surfaces and, more recently, the binding of dyes to nucleic acids.

Brandolini disseminated her love of chemistry broadly. She published a book for children *Fizz, Bubble, and Flash: Element Explorations and Atom Adventures* (Anita J.Brandolini, Charlotte, VT. Williamson Books, 2003) for which she was awarded the Parents' Choice Foundation Silver Honor in 2003. She developed a website **Keys to Chemistry**, an interactive forum for students to practice chemistry, and she hosted a blog **Dr. B's Science Lab** where she posted monthly themed experiments involving science for the whole family. She also gave many lectures at schools and at the New Jersey Liberty Science Center.

Brandolini was an active member of the ACS and its North Jersey Section. She was an ACS Councilor and served as Secretary and Chair of the Section. Nationally she was a member of the Committee on Project SEED and the Committee on Public Relations and Communications. In 2011 she was named a Fellow of the American Chemical Society.

The NJACS is establishing an Annual Project SEED Award to be given to an outstanding high school student at the SEED Poster Session held in September each year.

Donations to the **Anita J. Brandolini SEED Fund** should be sent to the following address:

Val Kuck
NJACS Project SEED Treasurer
45 Warfield Street
Upper Montclair, NJ 07043

Please make checks payable to NJ Project SEED and in memo include The Anita J. Brandolini Fund.

THE INDICATOR
Manager / Editor - LINDA ATKINS
1 Milbark Court, Homosassa, FL 34446
973-981-4383; Fax 352-503-7613
linatkins@tampabay.rr.com
Advertising Manager - VINCENT GALE
MBO Services, PO Box 1150
Marshfield, MA 02050-1150 • 781-837-0424
vincegale@mboservices.net
INDICATOR COMMITTEE
Chair, DR. LES McQUIRE
17 Crown Drive, Warren, NJ 07059
908-334-5473, **Les@LesMcQuire.org**
New York Section Rep.
DR. NEIL JESPERSEN
Chemistry Dept., St. John's University
8000 Utopia Parkway, Jamaica, NY 11439
718-990-5221
jespersn@stjohns.edu
North Jersey Section Rep.
DR. ANITA BRANDOLINI
TAS, Ramapo College, 505 Ramapo Valley Rd.,
Mahwah, NJ 07430 • 201-684-7753
abrandol@ramapo.edu
Web Masters
NY Section - DR. BRIAN GIBNEY
postmaster@newyorkacs.org
NoJ Section - PAUL TUKEY
tukey@verizon.net
NEW YORK SECTION
http://newyorkacs.org
Chair, DR. JAIMELEE IOLANI RIZZO
Department of Chemistry and Physical Science
Pace University, 1 Pace Plaza, New York, NY 10038
212-346-1761; Fax 212-346-1256
jrizzo@pace.edu
Chair-Elect, DR. PHILIP H. MARK
1522 Luddington Road, East Meadow, NY 11554
516-489-7920
philip.mark@ncc.edu
Secretary, DR. BRIAN R. GIBNEY
Dept. of Chemistry, Brooklyn College - CUNY
2900 Bedford Avenue, Brooklyn, NY 11210
718-951-5000 x6636; Fax 718-951-4607
brg33@newyorkacs.org
Section Office
St. John's University, Chemistry Dept.
8000 Utopia Parkway, Jamaica, NY 11439
516-883-7510; Fax 516-883-4003
njesper1@optonline.net
NORTH JERSEY SECTION
http://www.njacs.org
Chair, DR. AMBER FLYNN CHARLEBOIS
Associate Professor of Chemistry
Fairleigh Dickinson University - M-SB1-01
285 Madison Ave., Madison, NJ 07940
973-443-8761
charleb@fdu.edu
Chair-Elect, DR. JEFFERSON TILLEY
19 Evergreen Drive, North Caldwell, NJ 07006
973-723-6330
tilleyjk@optonline.net • tilleyjk@FDU.edu
Secretary, BETTYANN HOWSON
49 Hillside Avenue, Madison, NJ 07940-2612
973-822-2575
chemphun@optonline.net
Section Office
49 Hillside Avenue, Madison, NJ 07940-2612
973-822-2575
chemphun@optonline.net

THE Indicator

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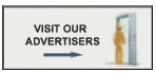

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***The Indicator* is posted to the web on the 15th of the previous month at www.TheIndicator.org**

Deadline for items to be included in the June 2012 issue of *The Indicator* is April 20, 2012.

THIS MONTH IN CHEMICAL HISTORY

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

My last column described the career and some of the achievements and publications of Michael Faraday. A 150th. anniversary edition of his "Chemical History of a Candle" (Oxford; Frank James ed. 2011) has recently been published; this is a book that has not been out-of-print since it first appeared. The new edition has some notable features. It has been carefully edited by Frank James who is a leading authority on Faraday. He is Professor of the History of Science at the Royal Institution in London, the Institution in which Faraday worked for all of his professional career. James has had access to the Institution's extensive collection of Faraday books and manuscripts and has edited the six volumes of Faraday's Correspondence.

James' introduction to the "Chemical History of a Candle" explores the origin of the text that was not written down by Faraday. A shorthand reporter was present at the lectures given to a juvenile audience, and their adult relations, at the Royal Institution in December 1860 and January 1861. Faraday was not in good health at the time, but decided not to disappoint the enthusiastic audience that had been attending these Christmas Lecture series for years. At the start of his career Faraday had been an indifferent lecturer, but by dint of practice and experience he developed into a magnificent teacher. An attendee wrote in 1863: "He never told his listeners of an experiment, he always showed it them, however simple and well-known it might have been. 'If", Dr. Faraday once said to a young lecturer, 'I said to my audience this stone will fall to the ground if I open my hand, I should open my hand and let it fall. Take nothing for granted as known; inform the eye at the same time as you address the ear.' This was the great secret of Faraday's success."

It was the scientist William Crookes, publisher of the magazine "Chemical News", who prevailed upon an initially reluctant Faraday to allow his lectures to be taken down and published . (Crookes was a discoverer of the element thallium, and a pioneer in radiochemistry and X-rays.) Crookes' staff recorded Faraday's talks in shorthand and Crookes edited them for grammar and accuracy. They were published in the early issues of Chemical News in 1861, were rapidly republished in Scientific American in the United States and appeared in book form on both sides of the Atlantic in 1861. In both serial and book form the "Chemical History of a Candle" was an immediate success and has remained so to this date.

A striking feature of James' new edition is the inclusion of 40 pages of reproduced manuscript of Faraday's original notes in his own hand for the delivery of the lecture series. They are not easy to read, not because of Faraday's handwriting, which is clear, but because of low contrast between the mid-grey of the background and the dark grey of the writing. Patience and persistence does allow for deciphering these interesting guides to how Faraday planned his lectures, and the main text makes clear how much he added in his actual presentation. In accord with his dictum, mentioned above, there are many direct observations and demonstrations woven into the course.

Faraday comments in these lectures on their purpose and his philosophy:

"There is not a law under which any part of this universe is governed which does not come into play and is touched upon in these phenomena. There is no better, there is no more open door by which you can enter into the study of natural philosophy than by considering the physical phenomena of a candle."

"So are we made dependent not merely upon our fellow-creatures, but upon our fellow-existers, all Nature being tied together by the laws that make one part conduce to the good of another."

I have carefully avoided trying to abstract the bulk of what Faraday did and said. I urge you to read this short classic for yourselves; it is under 100 pages. If the new Oxford edition is too rich for your blood, there is a Dover Books edition that is cheaper. But dipping into this little book will bring you into contact with one of the greatest and most modest scientific minds of all time. It's worth the trip.

MAY HISTORICAL EVENTS IN CHEMISTRY

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

May 1, 1493
Paracelsus or Theophrastus Bombast von Hohenheim, who founded a new school of chemistry, iatrochemistry, which is the application of chemistry to medicine; was born on this date. He believed that the four elements (air, water, earth, & fire) were present in substances as three principles, mercury (volatility and fusibility), sulfur (inflammability), and salt (incombustibility), and he developed a cure for St. Vitus Disease.

May 2, 1912
One hundred ago on this date, BF Goodrich Co. was incorporated.

May 3, 1892
Seventy five years ago, George Paget Thomson shared the Nobel Prize in Physics wit Clinton Joseph Davisson for their experimental discovery of the diffraction of electron by crystals. He was born on this date.

May 6, 1871
One hundred ago, F. Victor Grignard shared the Nobel Prize in Chemistry for the discovery of the so-called Grignard reagent, which in recent years has greatly advanced the progress of organic chemistry. He developed the magnesium reagent used in organic chemistry and was born on this date. The prize was shared with Paul Sabatier who received it because of his method of hydrogenating organic compounds in the presence of finely disintegrated metals whereby the progress of organic chemistry has been greatly advanced in recent years.

May 7, 1939
Sidney Altman, who proved that ribonucleic acid (RNA) can act as a catalyst in the cell, was born on this date. He shared the Nobel Prize with Thomas R. Cech in 1989 for their discovery of catalytic properties of RNA.

May 8, 1873
Nevil V. Sidgwick, who was born on this date, was a researcher on molecular structure and theory of valency. He did research in bonding in coordination compounds and investigated phase equilibria and the solubility of organic acids and bases.

May 11, 1904
Donald F. Othmer was a chemical engineer who developed the Othmer still and was born on this date. He was co-founder & editor of the Kirk-Othmer Encyclopedia of Chemical Technology.

May 16, 1950
Twenty-five years ago, J. Georg Bednorz shared the Nobel Prizein Physics with K. Alexander Müller for their important breakthrough in the discovery of superconductivity in ceramic materials. He was born on this date.

May 18, 1778
Andrew Ure, when referring to chemical equivalents of chemical solutions, was first to coin the phrase "Normality." He was born on this date.

May 19, 1914
Fifty years ago, Max F. Perutz shared the Nobel Prize in Chemistry in 1962 with John C. Kendrew for studies of the structure of globular proteins. He studied structure of hemoproteins using x-ray diffraction and was born on this date.

May 20, 1890
Francis O. Rice, a researcher in free radicals, was born on this date. He served as Head of the Chemistry Department at The Catholic University of America from 1938 to 1959.

May 22, 1912
One hundred ago, Herbert C. Brown was born on this date. He was a researcher in organoboron and carbocation chemistry and shared the Nobel Prize in Chemistry in 1979 with Georg Wittig for their development of the use of boron and phosphorus-containing compounds, respectively, into important reagents in organic synthesis.

May 24, 1640
John Mayow discovered that air contained two gases, one of which supported life & combustion, spiritus nitro-aerous (oxygen). He recognized the role of oxygen in the combustion of metals and recorded a correct anatomical description of respiration and was born on this date,

May 28, 1887
One hundred and twenty-five years ago, Kasmir Fajans was born on this date. He established the radioactive displacement law and initiated the concept of heat of hydration of gaseous ions.

May 29, 1794
Antoine A. B. Bussy, who isolated magnesium in 1828, was born on this day.

May 30, 1912
One hundred years ago, Julius Axelrod was born on this date. He was a researcher on catecholamines. He shared the Nobel Prize in Medicine or Physiology in 1970 with B. Katz and U. Von Euler for discoveries concerning humoral transmitters in the nerve terminals and the mechanism for their storage, release and inactivation.

Additional historical events can be found at Dr. May's website, **faculty.cua.edu/may/history.htm**.

SUBWAY SCIENCE, FROM METAL SOAPS TO STRING THEORY

By: Kevin Olsen, Montclair State University

The summer of 2012 marks the 65th anniversary of an unusual physics experiment, the experiment itself was fairly routine, it was the place that made it unique. Austrian born physicist Victor Francis Hess (1883-1964) set up a physics laboratory in a subway station 160 feet below New York City's 190th Street. Hess had been educated in Austria and between 1910 and 1920 he worked at the Institute of Radium Research of the Viennese Academy of Sciences. For his discovery of what would become known as cosmic radiation, he was awarded the Lieben Prize in 1919. The extraterrestrial origin of cosmic radiation was not confirmed until 1936. That year Hess was awarded the Nobel Prize for his contribution to our understanding of cosmic radiation.

Hess was serving as the chairman of the physics department at Fordham University in 1947. His primary research efforts were directed at the medical uses of radium. He was also deeply involved in the pathology and early detection of radium poisoning. Hess developed increasingly sensitive instrumentation to measure radiation. They allowed accurate exposure measurements among radium workers and others who routinely dealt with radioactive materials.

By the 1940s, scientists had observed small amounts of radioactivity in igneous rock due to inclusions of uranium, thorium, and potassium. However the amounts of gamma radiation emitted by the rocks were higher than what was predicted from the known concentrations of these radionucleotides. Could cosmic radiation be inducing radioactivity in the rocks? This seemed unlikely but how could this hypothesis be tested? Since much of Manhattan Island is solid rock, the 190th Street IND subway station near Fort Tyron Park was a perfect place to conduct field measurements.

Samples of pulverized granite deep underground were shielded from cosmic radiation and they emitted the same levels of gamma rays as when they were observed at sea level. The conclusion was that cosmic radiation could not account for extra emissions. A resolution of the problem first appeared in 1948 when it was shown that the gamma radiation of potassium was much higher than had previously been thought.

What should have been a minor footnote in a long and distinguished career is widely known beyond the physics community because of its connection to the subway system. It is a favorite trivia topic among New York City's many subway enthusiasts (yes, there are such people) and among railroad enthusiasts generally (of which this author is one).

My thanks to subway historian and a member of the American Physics Society Joe Cunningham, for brining this little known aspect of New York Subway history to the attention of a wider public.

Reading about the work of Professor Hess raises the question of what other science research has been conducted in and on New York City's subways?

New York's first subway, the IRT line from City Hall to 145th Street, was opened in 1904. Once the initial enthusiasm of opening day had passed, the public began to wonder if the air in the subway was safe to breath. Passengers complained of headaches, vertigo, and dizziness. The city responded with a massive round of testing. By 1906, scientists working for the Rapid Transit Commission had completed 2,200 chemical analysis of air in the subway, 3,000 bacteriological determinations, and 400 miscellaneous chemical and biological assays. They also made some 50,000 measurements of temperature and humidity.

In the fall of 1906, the results of these tests were reported by civil engineer and public health expert, George A. Soper at a meeting of The Society of Arts in Boston. Soper's paper was later reprinted in the Annual Report of the Board of Regents of the Smithsonian Institution. It was found that most of the air in the subway was kept in motion by the movement of the trains. They pulled air down from street level behind them and pushed air out of the tunnels ahead of them. It proved to be a remarkably efficient ventilation system, capable of exchanging more than 60,000 cubic feet of air per minute during times of heavy train traffic.* To measure the movement of odors in the subway, observers would pour a fragrant cologne near the tracks at a station while other observers waited at the next station with nostrils aquiver and stopwatches at the ready. They found that odors traveled through the system at a rate of 271 feet per minute.

Eighty samples of subway air were analyzed for oxygen and it was found that there was no

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significant decrease from the oxygen levels at street level. The scientists were satisfied and oxygen measurements were discontinued. The remaining testing focused on carbon dioxide. Soper noted that the average carbon dioxide concentration in the subway air was 481 ppm and at street level it was 367 ppm. This was slightly elevated but not necessarily harmful. This elevation was caused by the passengers' respiration. Because it was impossible to know how many passengers where in the system at any one time, precise mass-balance calculations were impossible. About all that could be said was that in colder weather, when more people rode the trains instead of walking, carbon dioxide concentrations rose to their highest levels. Sadly, the reports do not mention what analytical methods were used to obtain these results.

Remarkably, bacterial cultures of subway air only had about half the organisms present in cultures inoculated with air at street level. The testing methods used in the study could not determine what proportion of the organisms were pathogenic. The higher bacteria levels on the street might be attributable to horse manure that was still a significant nuisance in 1904.

Soper concluded that the air in the subway was safe and that the bad odors came from the unwashed clothes on sweaty, unwashed bodies. It was said that it was possible to identify a passenger's occupation by the smells clinging to his clothes. Other sources of odors included lubricating oils, the "slatey" smell of the ballast under the tracks, the fish oils that were used as cement additives, and the disinfectants used in the rest rooms. These odors were unpleasant but not dangerous. Air conditioning on subway cars did not come into general use until the late 1960s.

Samples of dust collected in the subways were also analyzed and found to contain approximately 62% cast iron. This material was used for brake shoes and every month, about one-ton of iron was lost for every mile that the trains ran. The dust also contained about 16% silica and 22% organic matter. Physicians already knew that metal dust posed a hazard in steel grinding and other metal working trades. What effect the dust would have on both subway employees and passengers would need additional investigation.**

Although great care was taken during design to keep the humidity in the subways low, any underground environment will be damp. Other than air quality, one of the first problems associated with the subway to be studied by chemists was finding paint formulations that stood up to the high humidity.

Most of the subway does not run inside tunnels. The system's designers used a "cut and cover" method of construction. A deep trench was excavated in the street, tracks were laid, and a new street was laid over a system of supporting columns. This system was more expensive than digging deep tunnels since water, sewer, electrical, and telephone lines all had to be re-routed and the streets had to be closed during construction. However it would have lower operating costs since the elevators and escalators needed to reach deep stations were eliminated. An exception to this general arrangement were deep tunnels under the granite hills of northern Manhattan where Hess conducted his experiments.

Failure of the supporting columns could be catastrophic and we can only imagine the panic engineers felt when cracks appeared in their paintwork. Almost as soon as the new subway was opened, large flakes of paint and rust could be easily pried off the steel work. In 1904, the most common rust-resistant paints were made from a mixture of linseed oil and inorganic pigments. Naturally, this type of paint was selected for use underground.

The steel columns arrived from the fabricator painted with a mixture of linseed oil and Red Lead. Linseed oil is obtained from the seeds of the flax plant (Linum usitatissimum) and contains high levels of linolenic acid. It also contains both omega-3 and omega-6 fatty acids. Linseed oil is highly reactive and oxidatively unstable. Applied as a thin film and allowed to dry, it forms a hard, tough, elastic surface. Red Lead (Pb_3O_4) is a reddish substance that had been used as a pigment since ancient times. The columns were painted with an additional coat of White Lead ($2PbCO_3.Pb(OH)_2$) and linseed oil after installation.

In 1904 chemists did not understand why some pigments seemed to accelerate rust formation when mixed with linseed oil (Chinese Blue, lamp black, and certain graphite-based pigments) while other pigments seemed to inhibit rust formation (White Lead, Zinc-Lead Chromate, Zinc Oxide, Chrome Green, and Ultramarine Blue). Still others seemed to have no effect one way or the other, Red Lead was chief among them but this list also included White, Blue, and Venetian Reds, Calcium Carbonate, China Clay, and Chrome Yellows.

With the blessings of the subway system engineering staff, the rust problem was addressed by industrial chemist Maximilian Toch. He reported his findings to the Chemist's Club in New York in April of 1905. To test the performance of the Red Lead / linseed oil paint mixture in the field. Toch monitored conditions in the IRT subway around 50th Street. He worked in the winter months when humidity was lowest. While the air around the supporting columns was relatively dry, the actual amount of moisture that the columns were exposed to was often greater than simple humidity measurements would suggest. The tops of the columns reached to the street level and thus conducted heat out of the subway. As the metal cooled, moisture condensed on it.

Toch concluded that under conditions of high humidity the linseed oil was undergoing hydrolysis. The result was a semi-solid solution similar to soap. Instead of a hard coating impervious to atmospheric carbon dioxide and moisture, the paint allowed both to reach the surface of the steel, form carbonic acid, and rust the metal. His recommendation was not to use any linseed oil based paints in any underground application.*** Toch was also quick to reassure his audience that the corrosion problems were being addressed and that the subway system was safe.

Unless one is a coatings chemist, it is difficult to assess the validity of Toch's work. By the mid-1950s it had long been known that "metal soaps" formed by linseed oil's fatty acids and metals such as lead, zinc, barium, strontium, and calcium inhibited corrosion of iron and steel. Metal soaps are water-insoluble compounds containing a metal combined with monobasic carboxylic acids whose chain lengths range between 7 and 22 carbon atoms. Metals soaps accelerate the hardening of oxidizable coatings and are also used as waterproofing agents. The 1995 ASTM Paint and Coating Testing Manual states that a metal soap formed from Red Lead and linseed oil increases a paint film's corrosion resistance ability.

So what was going wrong in the subway? Two chemists working for the Bell Telephone System, R.M. Burns and H.E. Haring, made electrochemical measurements of iron rods coated with Red Lead / linseed oil and immersed in water. Burns and Haring noted that in theory, Red Lead and linseed oil would make an excellent anti-corrosion coating but in practice its effectiveness was highly variable. In their experiments, the latest and most sensitive voltage meters were used to follow the potential of the iron over time. They reported their findings in 1936.

Monitoring electrical potential allowed Burns and Haring to know when the metal was corroding and when it was not, even though the corrosion could not be observed under the paint. When the paint film was forming an effective barrier to moisture, the rate of corrosion was lowest. Once the barrier began to break down, the rate of corrosion increased. They concluded that in order for the Red Lead paint to be effective, the linseed oil must serve as a barrier to moisture. At that time, a varnish was sometimes added to the paint as an extra moisture excluder. Even if water does permeate the coating, the Red Lead can still offers some protection, though obviously not complete protection. Burns and Haring attributed this effect to some combination of the Red Lead's alkalinity and oxidizing ability.

Toch was probably correct in assuming that the linseed oil originally used in the subway paint was probably compromised through hydrolysis caused by the damp conditions. Perhaps it was poor quality. It is not recorded what corrective actions the subway engineers undertook once the problem was identified.

Sadly, one of the more active areas of chemical research in the subways has been to design better chemical warfare agent detectors. The first such attack on a subway system was the release of Sarin on the Tokyo system in 1995. Thirteen people were killed in the attack and dozens were injured.

In 2002, playwright Susanna Speier envisioned another strange science experiment on the subways. In her play Calabi-Yau, a documentary filmmaker gets lost in the subway system. He comes upon transit workers who are hoping to prove string theory with a particle accelerator they are building in an abandoned tunnel. They invite the filmmaker into their circle hoping he can shed some light on their quest. An actor portraying a scientist made periodic appearances on stage to offer explanations of the physics. The play's title refers to multidimensional spaces postulated by string theory. Unfortunately for science geeks everywhere, Ms. Speier's script spent too much time merely playing with the science and not enough time developing the characters.

The idea of a particle accelerator in a subway is not entirely science fiction. Officials with

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SUBWAY SCIENCE

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London's subways (or as they are properly named, The London Underground) opened talks with the European Organisation for Nuclear Research (CERN) about using the 23km tunnel of the Circle Line to house a small-scale "atom smasher" alongside a passenger line. The cost would only be a fraction of digging a new tunnel. Supercooled magnets and collision detectors would be placed on the Circle Line with the main collision experiment directly below Portcullis House, an office complex that houses more than 200 members of Parliament.

Readers of *The Indicator* can do their own subway science. If you are planning to visit New York City, take the "A" Train, (Eighth Avenue Express) for the Museum of Natural History at 81st Street from the Port Authority Bus Terminal at 42nd Street or Penn Station at 34th Street. The "C" Train, (Eighth Avenue Local) makes the same stops. The southbound "A" Train will take you to Brooklyn and the Jamaica Bay National Wildlife Refuge. The only wildlife refuge in the world that has a subway running through it. The Number 1 Train, (Broadway / 7th Avenue Local) passes the 190th street station and stops instead at 191st Street. It was also on this line that Toch conducted his paint tests.

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* The iconic image of actress Marilyn Monroe standing over a subway grating with her skirt billowing around her waist first appeared in the 1955 film, the Seven Year Itch. Passing trains force air out of the system through gratings set in the sidewalks.

**During the mid-1960s York College Professor Peter Scheiner measured the metal dust concentrations in the IND's 50th Street station and found the concentration to be 658 uG/cubic meter. Federal health guidelines recommended exposure to no more than 75 uG/cubic meter. In subsequent years a number of other studies addressed similar issues of dust exposure in the subways.

***In response to this discovery, the engineers constructing the Philadelphia subway system dispensed entirely with paints made with linseed oil.

North Jersey Meetings

http://www.njacs.org

NORTH JERSEY EXECUTIVE COMMITTEE MEETING

AND 50 & 60 YEAR MEMBERS AWARDS DINNER

Date: **Monday, May 14, 2012**
Time: Social 5:00 PM
Dinner and Presentation of Certificates 6:- - PM
Place: Fairleigh Dickinson University
College at Florham
Lenfell Hall, the Mansion
Madison, NJ
Cost: $35.00 m^v^_ib ^qœb al l o

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 **Monday, May 7, 2012**

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

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

Here are the lists of 50 and 60 year members:

50 YEAR MEMBERS

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Dr. David Charles Armbruster
Dr. Jean I. Armstrong
Mr. Martin Baum
Dr. Raymond A. Baylouny
Mr. Andrew James Brislin
Mr. David F Brusco
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Mr. Joseph John Howanitz
Mr. Mamoun Mahmoud Hussein
Dr. Charles Vincent Juelke
Dr. Sandor Karady
Dr. James Edgar Kuder
Dr. Peter Kulsa
Dr. Fuk L. Lam
Dr. John W. Liskowitz
Dr. Ronald K. Lustgarten
Dr. Shiro Matsuoka
Dr. Remi Henri Renard
Dr. John W. Scott
Dr. Samavedam Srinivasachari
Mr. Steve Stinson
Mr. Walter Van Wely Vink
Dr. Burton H. Waxman
Mr. Jerry Yadlowsky

60 YEAR MEMBERS

Dr. William L. Berry
Dr. Ronald C. Chisholm
Mr. Rudolph Di Giacomo
Dr. Mariano Andrew Guiducci
Dr. Carl E. Heath
Mr. John Imperante
Dr. Stanley Katz
Dr. Richard W. Kierstead
Dr. Peter B. Lederman
Mr. Robert Mac Farlane
Mr. George Oscar Morton
Mr. Charles F. Murphy
Dr. Charles B. Parisek
Dr. Walter John Polestak
Dr. Charles Paul Priesing
Dr. John F. Rakszawski
Ms. Mary E. Reilly
Mr. Harvey Reisman
Mr. Joseph A. Ruffing
Dr. Theodore Sall
Dr. Ronald R. Sauers
Dr. Edwin A. Schmall
Dr. Norman Slagg
Ms. Ann F. Smith
Mr. Henry R.Stoner
Dr. Daniel W. Thomas

Congratulations to all our 50 & 60 Year Awardees!

ChemTAG MEETING

Using the TI-Nspire in the Science Classroom

Activities will include:

- Collecting data from Vernier Sensor Probes
- Collecting student data and answers using Navigator wireless system
- Examples of Chemistry Lab
  Temperature data collection
  Boyle's Law
  Radioactive decay
- Examples of Physics Lab
  Conservation of Momentum
  Static Friction Vs. Kinetic Friction
  Freefall/Air Resistance

Date: **Thursday, May 3, 2012**
Times: Refreshments 4:00 PM
Meeting4:30 PM – 6:30 PM
Place: Morristown High School
3rd floor science wing
50 Early Street
Morristown, NJ

For more information please contact: Barbara McNally, Email: **barbara.mcnally @morristownhighschool.org**

School phone (973) 292-2000 ext. 2343
Cell (973) 818-7240.

CAREERS IN TRANSITION MEETINGS

Job Hunting??

Are you aware that the North Jersey Section holds bi-monthly meetings at Students 2 Science, Inc. in East Hanover, NJ 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
- Conducting an effective job search
- Networking to discover hidden jobs

Dates: **Mondays, May 7 and 21, 2012**
Times: Meeting 5:30 - 9:00 PM
Pizza snack and soda 6:30 PM
Place: Students 2 Science, Inc.
66 Deforest Avenue
East Hanover, NJ
Cost: $5.00

Reservations: at **njacs.org/careers.html**

A job board and networking assistance will be offered at all topical groups meetings. Confirm at **billsuits@earthlink.net** (908) 875-9069 to meet 1 hr. before.

See **http://njacs.org/jobs_ifr.html** for local jobs and career assistance blogs.

LABORATORY ROBOTICS INTEREST GROUP

The Seventeenth Annual Technology Exhibition & Presentations

The annual technology exposition is a showcase for all types of advanced laboratory technology and is open to all scientists and engineers. More than 80 technology vendors register for this event each year and oral presentations are scheduled in the hotel's seminar rooms. The food is free to attendees and sponsored by all of the exhibitors.

Extensive hors d'oeuvre, courtesy of the exhibitors, will be available as well as cash bars. The proceeds from this exhibitor funded meeting are used to pay for various costs of running the group throughout the year. In this way the LRIG can operate without collecting dues. Please support the group by attending this informative and entertaining meeting. Attendance at last year's meeting exceeded 700 persons and we hope to surpass that turnout in 2012.

There are rooms at the Hyatt and nearby hotels for attendees who wish to stay overnight The hotel room rate is $133.00 and the deadline is **April 29, 2012**.

Parking is paid for by the LRIG - just tell the attendant that you were attending the LRIG meeting.

Donations for the door prize drawings are gratefully accepted. Open career positions at your company may be posted on the job board.

Date: **Tuesday, May 15, 2012**
Times: 3 PM to 9 PM
Place: Hyatt New Brunswick
2 Albany Street
New Brunswick, NJ

Register at: **http://lab-robotics.org/member/event.asp?eid=245** or go to: **http://lab-robotics.org/**

Follow the links to the Mid Atlantic Chapter meeting.

For additional information, please contact Kevin Olsen at **Olsenk@Mail.Montclair.Edu** or 973-655-4076

NORTH JERSEY CHROMATOGRAPHY GROUP

All-day Symposium (w/Vendor Show/ Exhibit)

Date: Thursday, May 17, 2012

*See **www.NJCG.org** for more information.*

NORTH JERSEY YOUNGER CHEMIST COMMITTEE

Expanding Your Horizons — STEM Workshop for Kids.

Write up workshop ahead of time, need volunteers to present.
http://www.expandingyourhorizons.org/

Date: Saturday, May 19, 2012
Place: NJCU

NMR TOPICAL GROUP

Agilent Night Sponsored by Agilent Technologies

"Investigating Quantification Precision with 1H and 13C"

Speaker: Ron Crouch
Sr. Applications Scientist
Agilent Technologies

"Agilent Update from ENC and On-going Activities for NMR"

Speaker: Corey Morcombe
Research Products Manager
Agilent Technologies

Date: Wednesday, May 23, 2012
Times: Dinner 6.00 PM
Seminar 7.00 PM
Place: Fuji Japanese Sushi & Seafood
1345 US Route 1
North Brunswick, NJ

NORTH JERSEY YOUNGER CHEMIST COMMITTEE

Future Events:

Monday, August 20, 2012
Career Symposium – Philadelphia PA – Christine McInnis (national YCC), **cmcinnis@dow.com**

Monday, September 4, 2012
Poster judging – Seton Hall

Sunday, September 9, 2012
Rain Date Sunday, September 16, 2012
YCC Picnic – Possible Locations: Johnson Park, Piscataway and Rahway River Park

Saturday, October 20, 2012
Mole Day/National Chemistry Week – 10 AM - 2 PM, at Liberty Science Center – science activities for kids.

Other Events this year - TBD

Evolution of a Scientist Lecture Series - now accepting recommendations for future presenters (presentation to be in Oct./Nov.)

Happy Hours – May and Nov. at TBD –

Let us know if you are interested in any of the following:

Mini-golf (who says it is just for kids), Hiking (summer), Bus trip to AC

About us: **Membership is Free**

The role of the NJACS Younger Chemists Committee is to promote the interests of members under the age of 35 (or close to that age). It provides graduate students, post-doctoral chemists, and young professionals with the opportunity to interact with other chemists in the section, to help them better direct their careers, and to increase their involvement in the ACS. We do it through organizing social events, volunteering, networking and mentor/mentee opportunities, talks, seminars, and generally having a bit of fun.

We have been revamping and reinvigorating the club in the last few years and have a host of new and exciting activities planned for this year.

So what can you do?

If you are under 35 (or just think you are!!) we need your feedback. What events do you want to see? How can we help you? We are here to serve you, so please send us your comments and suggestions. Better still, get involved!

For more information about our group or upcoming events please visit us on the YCC Google group, and post your questions: **http://groups.google.com/group/ycc_njacs**

One of us will get back to you shortly.

Or check us out on the National ACS YCC site: **http://membership.acs.org/Y/YCC/**

NORTH JERSEY CHROMATOGRAPHY GROUP

Please mark your calendars for our upcoming NJCG events for 2012:

Wednesday, September 19th
Evening Seminar at the Crown Plaza, in Somerset, NJ

Wednesday, October 17th
Evening Seminar in conjunction with CPSA, in PA

Monday, November 12th
Evening Seminar at the Crown Plaza, in Somerset, NJ (EAS week)

Please check our website: **www.NJCG.org** for more information on specific events.

NORTH JERSEY YOUNGER CHEMIST COMMITTEE

Trivia Night

This year instead of hosting the same old happy hour, we decided to spice it up a bit. What better way to bring a group of driven type-A scientists together than offer them a chance to engage their brains in friendly competition?

The evening began with a social hour encouraging attendees to mingle and interact with each other over a game of pool or a piece of pizza. Bill Suits and members from our executive committee made themselves available to give attendees information on resume assistance, job placements, mentoring and upcoming events.

The evening ended with an opportunity to continue discussion while competing in the Fox and Hound's Wednesday night trivia competition.

We would like to thank everyone who attended the first NJYCC trivia night at the Fox and Hound in Edison, NJ for making it such a smashing success and due to popular demand plan on holding another trivia night later in the year.

Special congratulations go out to the "Mad Scientists" for coming in 3rd place!!!

For more information about our group or upcoming events please visit us on the YCC Google group, and post your questions: **http://groups.google.com/group/ycc_njacs**

One of us will get back to you shortly.

Or check us out on the National ACS YCC site: **http://membership.acs.org/Y/YCC/**

THE SCIENCE OF SAVING JOBS

Montclair Scientist Urges Lawmakers to Support R&D

By Dan Prochilo
The Montclair Times

(Photo courtesy of Peter Cutts Photography)

Retired scientist Valerie Kuck has some suggestions for how to stimulate the American economy.

Kuck, 71, who worked for Bell Labs in Murray Hill for 34 years and has resided in Montclair for over 40 years, said the U.S. government needs to offer permanent, reliable tax breaks to companies involved in research and development to keep jobs in the sciences from migrating out of New Jersey and going overseas.

Kuck was one of three emissaries from the American Chemical Society who headed to Washington earlier this month to meet with various lawmakers and their aides, including members of Rep. Bill Pascrell's (D-8) and Sen. Robert Menendez's (D-N.J.) offices.

Kuck, a member of the society's Board of Directors, and her ACS colleagues pushed for the funding of basic, high-risk research projects of the sort supported by the National Science Foundation, as well as tax incentives for businesses performing applied research to develop new drugs and

other products.

Companies in the pharmaceuticals industry - a major source of jobs in the Garden State - have been moving R&D positions abroad to take advantage of cheap labor or relocating to New England to have easier access to Ivy League talent on the cutting edge of knowledge, Kuck said.

The delegation to Washington wanted to know where legislators "see our future" in New Jersey should the pharmaceutical industry begin to wane, Kuck said.

The northern New Jersey section of the ACS boasted 7,600 members five years ago, the highest number of any section within the organization, the world's largest scientific society.

Today, Kuck said, that number has plunged to 5,300.

"You can see the impact of all the cutbacks," she said. "It's very scary."

The advocates from the ACS urged Congress to enable"people who do research to get some sort of write-off.

"We just can't take it for granted anymore that these companies are going to be here and they are going to be hiring," Kuck said, pointing to Merck's recent announcement that it will be shedding approximately 13,000 jobs through the next three years.

"We need to look at our tax structure and make it financially rewarding not to leave the state" or nation, or to export jobs to Asia, Kuck said.

Technology will drive the economy in the future, and Capitol Hill must provide dependable tax relief for companies doing research, she said.

"It has to be permanent. Not 'on' this year, 'off' this year," Kuck argued.

The U.S. government's research-and-development tax credit expires each year and needs to be extended by Congress. The now-approximately $13 billion program has lapsed several times since its passage in 1981.

That lack of stability means companies cannot count on tax write-offs for qualifying research expenditures, which could prompt them to invest less in R&D or put money into research in other nations that offer financial incentives.

Funding for the tax credits has been flat for years, and the amount allocated for the program has fallen behind similar programs in over a dozen other developed nations.

Menendez, who is backing a bill that raises the tax credits and makes them permanent, said in a statement, "The government's role is not to get in the way of research and development. It should foster the first steps of what could potentially bring innovation, create jobs, and move the economy forward."

Kuck said the world is experiencing the technological rewards of the U.S. government's heavy investment in R&D and in science and math education to stay ahead of the Soviet Union during the space race and the Cold War.

"That led to things we now consider necessities in life," said Kuck. "Our quality of life has gone way up. America was the innovation engine, and all of us have reaped the benefits of it.

"Everyone fully expects that things are going to get better, and the only way it's going to get better is if we do research that allows us to explore," she said.

In a statement to The Times, Pascrell said "creating and keeping highly skilled jobs in America must be our top priority.

"When it comes to jobs in the life sciences sector, it only makes sense to keep them here in New Jersey," the congressman stated. "I will continue to work toward creating federal policy that encourages jobs, in every sector, to remain and grow in the Garden State."

Call for Volunteers

Come Join Us at the Liberty Science Center

Last year The North Jersey Section of American Chemical Society 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 20, 2012** 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 "Nanotechnology". Engage visitors in exploring the positive impacts of chemistry as it relates to the emerging field of "Nanotechnology". Check out the National Chemistry Week web page at **http://portal.acs.org/** Click on "Education" and then "National Chemistry Week" 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 repeat 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 **roselleram s@yahoo.com** or Mita Chaki at **mitachaki@gmail.com** and let us 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 "ChemExpo" and sent to Jacqueline Erickson, 33 Ronald Road, Lake Hiawatha, N, 07034-1121.

Please fill out the following forms and return them to Mita Chaki at **mitachaki@gmail.com**.

Form 1. Count me in.
My name is: _____

I am volunteering to work on: **Saturday, October 20** (Check appropriate box)
- O 10:00am-11:30 am,
- O 11:30 am – 2:00 pm,
- O 10:00am-2:00pm

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?

_____

_____

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 ____ _____

* *

Complete Name: Institution: Address (snail mail):_____

_____ _____ _____

Activity _____ Time Volunteering ____ _____

* *

Complete Name: Institution: Address (snail mail):_____

_____ _____ _____

Activity _____ Time Volunteering ____ _____

* *

Acknowledge letters should be sent to: _____

_____

Thanks very much for all of your help. The Section is most appreciative of your efforts.
Mita Chaki and Valerie Kuck, American Chemical Society, North Jersey Section

New York Meetings

www.newyorkacs.org

NEW YORK SECTION BOARD MEETING DATES FOR 2012

The dates for the Board Meetings of the ACS New York Section for 2012 were chosen and approved at the September 2011 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.

The 2012 Board Meetings will be held on the following Fridays at 6:00 PM at St. Johns University, Writing Center, Jamica, NY. Dr. JaimeLee Iolani Rizzo will chair the meetings.

Friday, June 8
Friday September 14
Friday November 16

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

For a listing of the New York Section's 50 and 60 Year Members, see our June issue.

WESTCHESTER CHEMICAL SOCIETY

THE DISTINGUISHED SCIENTIST AWARD AND COLLEGE STUDENT ACHIEVEMENT AWARDS

Biomarkers of Cell Proliferation and Death Applicable for Multiparameter Cytometry

Speaker: Zbigniew Darzynkiewicz, MD, PhD
New York Medical College
Valhalla, NY

Advances in instrumentation and new methodologies are the driving force for progress in research in cell biology and medicine. Major methodological developments from my laboratory, which led to the establishment of novel biomarkers to investigate individual cells in large cell populations by flow and laser scanning- cytometry, will be reviewed. Our methods to concurrently assess cellular DNA and RNA content as well as the degree of chromatin condensation have found worldwide application in studies of cell proliferation, in programmed cell death (apoptosis), and in male fertility assays. The methodology that relies on detection of DNA strand breaks in cell nuclei is now widely used in studies of cell death. Methods designed to assess DNA damage signaling as well as cell senescence, now widely used to study the mechanism of action of anticancer drugs, will also be presented. Major applications of these methods in the fields of cell biology and medicine will be outlined.

Zbigniew Darzynkiewicz, M.D., Ph.D. is the Director of the Brander Cancer Research Institute at the New York Medical College and the Professor of Pathology, Medicine and Microbiology/Immunology at the same College. Dr. Darzynkiewicz has been a Member of the Sloan-Kettering Institute for Cancer Research, New York, N.Y. and Professor of Cell Biology and Genetics at Cornell University Medical School. He received his M.D. (with the highest honors) and Ph.D. degrees from the Medical University of Warsaw, Warsaw, Poland and completed post-graduate studies at the State University of New York at Buffalo and at the Medical Nobel Institute of the Karolinska Institute, Stockholm, Sweden. His research concentrates on cell biology with a focus on molecular mechanisms associated with cell proliferation, apoptosis, and sensitivity to anti-cancer drugs and he has developed analytical methods with world-wide application. He has been the president of the Cell Kinetics Society and the International Society for Analytical Cytology. His research has been supported, by grants from the NIH (including a prestigious MERIT award) and NASA. Dr. Darzynkiewicz is the Editor or Co-editor of 5 scientific journals and a Member of the Editorial Board of 11 other scientific journals. He is a Foreign Member of the Polish Academy of Sciences (PAN; Warsaw), Polish Academy of Learning (PAU, Krakow) and a Fellow of American Institute for Medical and Biological Engineering (AIMBE). He has published over 680 peer-reviewed articles, and has authored and/or edited 15 books. He holds eight US patents. His publications have been cited over 28,000 times in the scientific literature and 86 of his publications were cited over 86 times, which ranks him at # 86 citation metrics Hirsch "h-index". He has presented over 345 invited lectures and seminars at national and international congresses, symposia, and in various research institutions.

Date: **Wednesday, May 2, 2012**
Times: Social 5:00 PM
Lecture and Awards 6:00 PM
Dinner 7:00 PM
Place: Pace University
861 Bedford Road – Entrance #2

The Campus Center, Butcher Suite
Pleasantville, NY
Cost: Students $25
ACS Member $25
ACS Non-members $30

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

For more information, contact Paul Dillon:
E-Mail **PaulWDillon@hotmail.com**
Phone (914) 524-3313

For Pace University information:
eweiser@pace.edu

Westchester Chemical Society Webpage:
http://www.newyorkacs.org/sub_west.php

CHEMICAL MARKETING & ECONOMICS GROUP

Investing in Latin America-Part 2

A panel of industry leaders will be moderated by George Rodriguez, Director at Argeni LLC and Chair of CM&E. The issues to be discussed include:

- What is the Latin American (Latam) outlook over the next decade?
- Where are the investment opportunities?
- How can investors and companies manage risks in the region?

Since Latam's population is expected to double - to one billion - in 2050, technological innovation, consumer-driven demand and public works will continue to spur economic growth. Brazil, Peru, Chile, Colombia are rising stars with sound economic policies, abundant natural resources and a growing population eager to reap the fruits of economic development.

What resources does LATAM have? The largest rain forest in the world, the largest mountain range on earth (and the tallest outside of Asia), shale gas and petroleum-rich fields, the world's top fisheries, and many other superlatives in agro-based industries, mining, petroleum. It also has a variety of resources that has led to a dominant role in materials strategic to high technology and energy industries.

CM&E has assembled a panel of experts who will give their insights on investment challenges and opportunities. This event will be webcasted, so that if you cannot attend you may watch it at your convenience. More information available on **www.cmeacs.com**

Date: **Thursday, May 3, 2012**
Time: 11:15 AM - 2:00 PM
Place: The Yale Club of New York
50 Vanderbilt Avenue
New York, NY
Cost: $70 for CM&# Members who paid 2012 Dues; $90 for non-members or 2011 CM&E members.

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.

ACS NY SECTION—60TH ANNUAL UNDERGRADUATE RESEARCH SYMPOSIUM (URS)

Presented by The New York Chemistry Students' Association, Student Affiliate Committee – New York Section American Chemical Society

Nanoscience: Semiconductor Quantum Dots and Carbon Nanotubes

Speaker: Prof. Louis E. Brus
Dept. of Chemistry
Columbia University, NY

The talk is aimed for a broad audience. I describe the chemistry and physics of semiconductor nanocrystals and carbon nanotubes. Both materials are intermediate between molecules and crystalline solids in their electronic properties. Simple molecular orbital ideas help us to understand the size dependence of their properties. Novel synthesis is the key to scientific progress in both materials. Rigorous understanding and characterization requires that the properties of single nanocrystals and tubes be observed.

The Keynote Address will be followed by original research presentations given by students from colleges and universities throughout the tri-state area.

Date: **Saturday, May 5, 2012.**
Times: 8:00 AM - 3:00 PM
Place: SUNY College at Old Westbury
Old Westbury, NY
Cost: 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. Breakfast, luncheon and award reception included.

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

Checks for the registration fee should be made out to: "NY ACS URS" and sent to: Prof. Justyna Widera, Adelphi University, Department of Chemistry, 1 South Avenue, Garden City, NY 11530.

In order to receive the advanced registration benefits, checks need to be **received by April 21, 2012. Early registration fee (Deadline April 11th).**

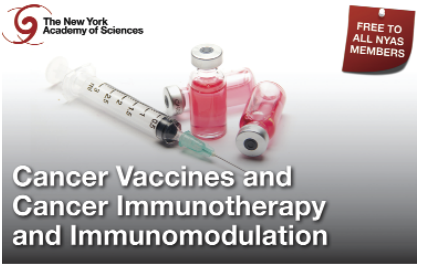
If you have any questions please contact: **nyacsurs2012@gmail.com** or **widera@adelphi.edu**, (516) 877 4135.

SIGNFICANT DATES FOR 60TH URS
Notification of the abstract acceptance will be announced by April 4, 2012.

Deadline for Symposium Advanced Registration - April 11, 2012

E-mail questions to:
nyacsurs2012@gmail.com

BIOCHEMICAL TOPICAL GROUP — JOINT MEETING WITH THE NYAS BIOCHEMICAL PHARMACOLOGY DISCUSSION GROUP



Cancer Vaccines and Cancer Immunotherapy and Immunomodulation

Organizers: Eyal Talor, PhD
CEL-SCI Corporation

George Zavoico, PhD
MLV

Jennifer Henry, PhD
The New York Academy of Sciences

Speakers: Francesco Marincola, MD
National Institutes of Health

Rachel L. Sabado, PhD
NYU Langone Medical Center

Eyal Talor, PhD
CEL-SCI Corporation

John S. Yu, MD
Cedars-Sinai Medical Center and Immunocellular Therapeutics, Ltd.

Sangkon Oh, PhD
Baylor Institute of Immunology Research

Cancer vaccines target specific tumor antigens yet spare the immune suppressive effects of radiation and chemotherapy. This symposium reviews the current approaches in cancer immunotherapy, immunomodulation, and highlights emerging cancer

vaccines.

Date: **Tuesday, May 15, 2012**
Time: 12:30 – 6:00 PM
Place: 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/CancerVaccines

To become a Member of the Academy, visit
www.nyas.org/benefits

WESTCHESTER CHEMICAL SOCIETY

The Westchester Chemical Society met March 6, 2012 to hear a presentation by Robert Adamo, the Director of the Division of Forensic Science at the Westchester County Department of Laboratories and Research, in Valhalla, New York. Mr. Adamo's fascinating talk described the various activities of his laboratory including DNA analyses, controlled substance investigation, trace evidence investigation and visual-audio processing. He also described the mobile laboratory that can be taken to crime scenes and touched on several interesting cases. His talk was very well attended (35 to 40 attendees) and enthusiastically received. We thoroughly enjoyed Mr. Adamo's interesting talk and the spirited discussion that followed.

WCS Board Members with our speaker: Back Row: Peter Corfield, Paul Dillon, Robert Adamo; Front Row: Joan Laredo-Liddell, Rolande Hodel, Elvira Longordo.

(Photo courtesy of Paul Dillon

Students from the College of New Rochelle with our speaker: Deborah Jimenez, Felix Jimenez (VP Network Engineering, Millenium Partners, LP), Elvira Longordo (CNR Faculty), Robert Adamo and Missiel Munoz.

(Photo courtesy of Mary Virginia Orna, OSU)

2012 SECTIONWIDE CONFERENCE, ST. JOHN'S UNIVERSITY

The annual Section-wide conference of the New York Section was held on January 28th at St. John's University. Dr. JaimeLee I. Rizzo, 2012 New York Section Chair, hosted the event. The conference began with a bountiful and appetizing continental breakfast for all attendees. Dr. Rizzo opened the event by welcoming the Project SEED students, invited ACS Scholars, all students, all mentors, and the Officers and Committee Chairs, and the Office Administrator. The Sectionwide conference included the presentation of awards for volunteerism and achievement, a keynote address by Dr. Gerard Parkin of Columbia University and recipient of the 2011 Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring, poster presentations by Project SEED students, breakout planning sessions for the year 2012, and a luncheon at Acquista Trattoria.

At the award ceremony, Dr. Hiroko Ito Karan received the ACS plaque, past chair pin, and a flower arrangement in appreciation of her excellent work as Chair of the New York Section in 2011. The 2011 Outstanding Service Award went to Dr. Barbara Hillery of SUNY, Old Westbury College, Chair of the New York Section in 2009. The Section presented the Nichols Foundation High School Chemistry Teacher Award for 2011 to Dr. Ara Nicholas Kahyaolu of Bergenfield High School. Mr. Stephen Radice introduced Dr. Kahyaolu and enumerated his many accomplishments as an outstanding chemistry teacher. Dr. Philip Mark, 2012 Chair-elect of the New York Section, then presented the names of the candidates for the upcoming 2012 elections and introduced those candidates and introduced those candidates who were present.

Dr. Gerard Parkin, ACS Fellow and Professor of Chemistry at Columbia University, presented the keynote address, "The Good, the Bad and the Ugly: From Carbonic Anhydrase to the Biorganometallic Chemistry of Mercury and Approaches to Detoxification". The audience was most attentive to Dr. Parkin's informative and exciting presentation.

Project SEED students, accompanied by Project SEED coordinator, Nadia Makar, attended the conference and displayed the results of their research. Their posters were excellent and their appreciation of the support for Project SEED by the Section was evident. During the high school years, they have thoroughly enjoyed working with local chemists as they developed their research skills.

The last hour of the conference is always devoted to a planning session for subsections, topical groups, and committees and it concludes with reports from the Chairs of each of the groups. The traditional luncheon with colleagues was enjoyed by many at Acquista Trattoria. This year we invited our ACS Scholars to join us as guests for lunch along with our Project SEED students, our keynote speaker, and other Section members.

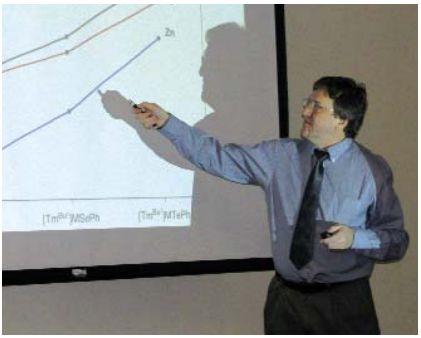
New York Section Chair JaimeLee Rizzo greeting the guests at the 2012 annual Sectionwide Conference.

Former chair pin & gift being presented to 2011 NY Section Chair Hiroko Karan in appreciation of her dedicated service.

Frank Romano, 2011 Chair of the Outstanding Service Award Committee, presenting the OSA award for 2011 to Barbara Hillery for her continued and outstanding service to the New York Section.

Stephen Radice, Chair of the Nichols Teacher Award Jury, presenting the Nichols Foundation Chemistry Teacher Award for 2011 to Dr. Ara Nicholas Kahyaolu of Bergenfield High School for excellence in teaching at the high school level.

2012 Chair-elect Phil Mark describing the Leadership workshop offered by National ACS. He also presented the slate of candidates for the 2012 New York Section elections.



Columbia Professor and ACS Fellow Ged Parkin presenting an excellent and enjoyable keynote address at the conference, along with a surprise magic trick.

(Photos courtesy of Marilyn Jespersen)

Others

TRI-STATE CHINESE AMERICAN CHEMICAL SOCIETY (CACS)

Annual Symposium — "A New Paradigm for Innovation and Reinvention in Chemistry"

Speakers: Senior R&D leaders from Pharma (Merck, Pfizer, Sanofi), Chemicals (Dow Chemical, Henkel), Cosmetic (Revlon), and chemistry-related industries, ACS leaders

Vendor show: Welcome to participate

Job fair: Professional ACS career consultant

CACS- tristate chapter is a nonprofit organization with the purposes of promoting fellowship among Chinese chemical professionals, interactions between US and Greater China in chemical and pharmaceutical industries, and public appreciation of science. Since its founding in 1981, CACS has been sponsoring the annual symposium, which features speeches from ACS presidents, corporate leaders, entrepreneurs and policy makers. Vendor show, job fair and networking will accompany the symposium throughout the event.

Date: **Saturday, June 16, 2012**
Time: 8:30AM – 4 PM.
Place: Rutgers University
Bush Campus Center
604 Bartholomew Road
Piscataway Township, NJ 08854
Cost: Free and open to public, breakfast and lunch provided, donation welcome

Register: **http://tristatecacs.org** for more info and updates

Contact: Wendy Zhong at **wenqingzhong@yahoo.com**

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