THE Indicator

APRIL 2009 Vol. 90 • No. 4 ISSN0019-6924

Spring...

A time for renewal...
for our country,
in our personal goals,
dreams, attitudes,
and commitment
toward each other.

Let's all get
to work on it!

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

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

Education

THIS MONTH IN CHEMICAL HISTORY

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

Although I was born in London, England, my most formative years were spent in Sussex, in the twin towns (now unified) of Brighton and Hove. I have enjoyed cooking since my graduate student days at Cambridge; a group of us would gather on Sunday evenings to enjoy a home-cooked meal with the responsibility for its preparation rotating among the group members. Later in life, I became quite interested in baking bread, a pursuit I continue to this day, and I regularly prepare home-baked bread for my family. And what, you may ask, has all this to do with the history of chemistry? Well, it explains why I recently purchased a book published in 1886.

This volume, deaccessioned [no hyphen per Webster's] from the public library of the city of Cincinnati, is titled The Chemistry of Wheat, Flour, and Bread: and Technology of Breadmaking. [is that the correct title? I googled it, and other variations Jago's book came up, but not that title] The author is William Jago, Analytical and Consulting Chemist, Headmaster, Science Schools, Brighton [England], and it was self-published by William Jago of Springfield Road, Brighton. The Open University's biographical database of the British chemical community is informative about Mr. Jago. He was born in 1854 in Cornwall and died in 1938 in Hove. At the Royal School of Mines, he studied under the distinguished British chemist Edward Frankland. He became an Associate and then a Fellow of the Institute of Chemistry, and later in life, at the age of 50, became a Barrister. He was head of the Department of Science at Brighton College (a public school) and a teacher at the Brighton School of Science and Art (a technical college). He was a friend of Magnus Volk, a local inventor who built the first electrically powered train line in Britain (it still runs along the Brighton seafront), and the first telephone line in Brighton that connected the houses of Jago and Volk.[as meant?] Jago was also the author of Inorganic Chemistry: Theoretical and Practical, one of Longmans, Green and Co. Elementary Science Manuals, the 10th edition of which appeared in 1889.

The Chemistry of Wheat, Four, and Bread was considered as sufficiently significant when it was published to receive a substantial, and generally favorable, review in Nature (Sept. 30, 1886), though the reviewer urged the author to employ pruning shears if the work went to a second edition. It is bulky, running to 465 closely printed pages. It is based in part on a lecture by Jago to the Annual Meeting of the National Association of British and Irish Millers, which was followed by a series of articles requested by the Editor of the Millers' Gazette. Sixty-four (!) of these articles appeared, and then Jago revised them into the book. It was intended for students studying in Applied Chemistry Departments specializing in milling and baking, and for those studying for technological examinations of the City and Guilds of London Institute. In addition to the topics that I will outline later, it does include some original research by Jago on yeasts and fermentation.

In looking over Jago's magnum opus CWFB (if I may so abbreviate its lengthy title), it strikes me that the Nature reviewer was unduly harsh, perhaps being misled by the book's title. Jago's intent is clear from the book's contents. He begins by writing three substantial chapters on, respectively, an introduction to the science of chemistry, the chemical elements and their inorganic compounds, and organic compounds. Thus the beginning of the text can be seen as either a refresher course in chemistry, or even a self-contained brief introduction to the science. Chapter 4 on the microscope and polarized light is the first chapter that is specific to the book's title. I conclude this first of two columns on this interesting book with some comments on inorganic chemistry. Jago is a firm believer in the reality of chemical atoms, and he includes a table of "Combining or Atomic Weight" values, somewhat blurring over the idea of chemical equivalents. Included in this table are also values of the atomicities of elements, what we would term their maximum valencies. Somewhat unexpected, to me at least, is the complete absence of any reference to the Periodic Law and the Periodic Table, which many chemistry texts of even a decade earlier were including as a useful device for organizing inorganic chemistry.

APRIL HISTORICAL EVENTS IN CHEMISTRY

By Leopold May, The Catholic University of America, Washington, DC 20064

April 1, 1972
Julian Stone reported on this date in Applied Physics Letters on new type of fiber made of quartz & filled with tetrachloroethylene that may be able to carry light.

April 2, 1877
Carl L. Alsberg, who was born on this date, was a researcher in the chemistry of food.

April 4, 1923
Ira Remsen awarded first Priestley Medal.

April 6, 1928
James D. Watson born on this day. He was a researcher on the double helix structure of the deoxyribonucleic acid (DNA) molecule. He shared the Nobel Prize in 1962 with Francis H. C. Crick and Maurice H. F. Wilkins for their discoveries concerning the molecular structure of nuclear acids and its significance for information transfer in living material.

April 6, 1927
Edmond H. Fischer, who was born on this date, is a researcher on protein phosphorylation as a biological regulatory mechanism. In 1992, he shared the Nobel Prize in Medicine with Edwin G. Krebs for their discoveries concerning reversible protein phosphorylation as a biological regulatory mechanism.

April 7, 1795
New law instituted the metric decimal system in France and the nomenclature for this system was established on this day.

April 8, 1911
Melvin Calvin, who received the Nobel Prize in Chemistry in 1961 for his research in photosynthesis, was born on this date.

April 9, 1971
Ignacio Tinoco,Jr. proposed a simple method for estimating secondary structure of rbonucleic acid (RNA) from sequence of nucleotides on this day.

April 10, 1900
Seventy-five years ago in 1934, Arnold O. Beckman founded Beckman Instruments. He developed the pH meter and was born on this date.

April 10, 1863
Paul Louis Toussaint Héroult discovered the electrolytic aluminium process in 1886, the same year that Charles Martin Hall discovered the same process for isolating aluminum, which is called the Hall-Heroult process. In 1900, He invented the electric arc furnace for steel, which replaced some giant smelters for the production of a variety of steels. He was born on this date.

April 11, 1799
Humphry Davy discovered nitrous oxide, laughing gas on this date.

April 12, 1884
One hundred and seventy-five years ago, Otto F. Meyerhof was born. He was a researcher on muscle metabolism and in 1922, he shared Nobel Prize in Medicine for his discovery of the fixed relationship between the consumption of oxygen and the metabolism of lactic acid in the muscle with Archibald V. Hill for his discovery relating to the production of heat in the muscle

April 12, 1773
Thomas Thompson, who was born on this date, invented the instrument known as Allan's saccharometer. He identified a zeolite mineral named thomsonite; promoted Dalton's atomic theory and Prout's hypthosis in his journal Annals of Philosophy and his book System of Chemistry.

April 13, 1784
Three hundred and twenty-five years ago, Tobern Bergman confirmed Müller von Reichenstein's results that the substance isolated from a bismuth ore was a new element tellurium.

April 14, 1969
NASA's Nimbus III weather satellite made the first civilian use of nuclear batteries on this day.

April 15, 1861
Ernest Solvay received his first patent entitled "Industrial Production of Sodium Carbonate by Means of Marine Salt, Ammonia, and Carbon Dioxide".

April 16, 1838
Ernest Solvay, who developed the Solvay process for making commercial soda cheaply, was born on this date.

April 17, 1946
Seventy-five years ago in 1984, Georges J.F. Kohler, Niels K. Jerne, and Cesar Milstein shared the Nobel Prize in Physiology or Medicine for theories concerning the specificity in development and control of the immune system and the discovery of the principle for production of monoclonal antibodies. Georges J.F. Kohler codiscovered techniques for producing monoclonal antibodies and was born on this date.

April 18, 1838
P-E. Lecoqde Boisbaudran, born on this date, discovered gallium, dysprosium, and samarium.

April 18, 1924
Quantum Chemical incorporated as National Distillery Products Corp. on this day.

April 19, 1912
Fifty years ago in 1958, Glenn T. Seaborg codiscovered nobelium. He was born on this date and shared the Nobel Prize in Chemistry in 1951 with Edwin M. McMillan. He also co discovered americium, 1944, berkelium, 1950, californium, 1950, curium, 1944, einsteinium, 1952, fermium, 1953, mendelevium, 1955, plutonium, 1940, and element 106, 1974.

April 20, 1889
Paul Karrer, who was born on this day, synthesized vitamins A in 1931, B2 (riboflavin) in 1935, and E (tocopherol) in 1938. He shared the Nobel Prize in 1937 with Walter N. Haworth.

(concluded on page 27)

WATER POLLUTION ANALYSIS IN NEW JERSEY — EMPLOYING THE CUTTING EDGE ANALYTICAL TECHNOLOGY OF 1876

By Kevin K. Olsen, Montclair State University

Part Two: Taking to the Hills

In part one of this article we examined the water analysis methodology available to chemists of the mid 1870s. This was a period when the germ theory of disease was just emerging. Chemical testing was the only effective tool for identifying waters contaminated with sewage.

One of the problems addressed in the report was determining whether the impurities reported in Newark's municipal water supply were from sewage or simply salt water brought northwards on the incoming tide. Newark had its water intake on the west bank of the river in the town of Belleville, located a few miles north of the city.

The authors of the report began by noting that the concentration of "mineral matter" at the water intake was four times greater than found farther upstream. They began by looking up the chemical constituents of both seawater and urine in the literature. The ratios of chlorine to sulfuric acid were 8.5 and 3.5 in seawater and urine, respectively. Samples taken from the lower Passaic at different tidal stages were analyzed for chlorine and sulfuric acid. The resulting ratios convinced the authors that the Passaic was clearly contaminated by sewage. This conclusion was then verified by field observation.

For all of the emphasis they placed on detecting sewage contamination and then avoiding it, the authors of the report made a rather surprising statement:

"Water contaminated with filth and sewage, however offensive it may be, is not always, or even generally poisonous."

They attributed illnesses caused by drinking this water to the decomposition of organic matter. This produced "new and unwholesome substances" that were the direct cause of typhoid, cholera, and other diseases.

Although decomposition seemed to occur fastest in the summer months, the authors noted that only exposure to air and oxidation destroys the poisons. Freezing the water is not sufficient to purify it.

The report gives several examples of outbreaks associated with exposure to impure water. An 1863 outbreak of intestinal illness in Camden, New Jersey, was traced to the Kensington district of Philadelphia. Commuters and other visitors to the district were exposed to the disease and brought it back to New Jersey Kensington took its water from the Delaware River at a point where "filth from numerous privies, sinks, culverts, etc." was present in the river.

In December of 1874 typhoid broke out at St. Mary's Hall, a school for girls, in Burlington, New Jersey. Eighty cases were reported and five deaths resulted. The well supplying water to the school was located next to a cesspool. When cracks developed in the brick and mortar lining of the cesspool, sewage leaked into the drinking water supply. Repairing the crack halted the outbreak. The teachers and staff, who drank mostly coffee or tea, were not affected.

The state of medical knowledge in the 1870s was summed up by Dr. A. Hagler of Basel, Switzerland. He made the following conclusions from his studies of disease outbreaks in rural communities:

1. Water supplies that have received the "dejections" from persons affected with typhoid will cause the disease only in those persons who drink or cook with the water.

2. Contaminated water will still be capable of spreading disease even after filtration.

3. Spring water that has been polluted by excrement before seeping into the earth, will still not be safe for human use if has visible turbidity after returning to the surface.

4. Water polluted with normal, as opposed to infected, excrementitious material will be safe for human consumption.

(Yeah, right, uck!)

Hagler, unlike the authors from the New Jersey Geological Survey, strongly suspected that

the “poison” that caused typhoid was “almost certainly organized and living, it is likely to resist oxidation much longer than the dead organic matters with which it is associated.”

So where did that leave the towns of northern New Jersey?

We have seen in part one of this article that they were able to use ammonia and chlorine concentrations to determine if water had been contaminated by sewage. Even though the germ theory of disease was still not fully developed, the sewage-choked Passaic River was clearly no longer an acceptable source of potable water.

The Geological Survey recommended the mountainous region in the upper Passaic River basin as the new source of domestic water. They noted that in the 750 square miles of the upper basin the human population was between 50,000 and 60,000 and there were no areas of dense settlement.

To confirm this conclusion, they consulted John Cooke, president of the Danforth Locomotive Works and Machine Company in Paterson. Cooke was asked about the quality of water in the upper Passaic River that was used by both the locomotive works and many of its employees. Cooke replied to the inquiry by assuring the Geological Survey that when used in boilers it did not produce scale and seemed to be free of scale-causing minerals. Paterson’s dyers and bleachers preferred using the river water, especially the silk dyers. Cooke also assured them that the Ivanhoe Paper Mill used the water in the manufacture of all but their finest papers.

In the initial round of testing, the chemists of the Geological Survey did test a number of samples from the upper Passaic River and its major tributaries. It may not be clear to the modern reader, why they then asked a locomotive builder for an endorsement instead of obtaining a second set of samples and performing additional analysis.

At the time however, it was common for people who were successful businessmen and recognized community leaders to be consulted on a wide range of topics. Perhaps John Cooke’s assurance was exactly what was needed to convince elected officials that the scientists had made the right recommendation. It makes as much sense as having the actress Daryl Hannah endorse the Sea Shepherd Conservation Society or Leonardo DiCaprio as a spokesman against global warming.

As I write the last lines of this article the coffee cup at my elbow is filled with coffee made with water from the New Jersey Highlands. The decision to take water from this region has insured the people of northern New Jersey a reliable source of clean water for over a century.

Today there are a total of 13 reservoirs in northern New Jersey with a combined storage capacity of 76.2 billion gallons (BG). They are owned and operated by four agencies, United Water of New Jersey (4 reservoirs, 13.9 BG), North Jersey District Water Supply Commission (2 reservoirs, 36.6 BG), Jersey City Water Department (2 reservoirs, 11.4 BG), and the Newark Water Department (5 reservoirs, 14.4 BG). In addition, there are two pumping stations on the Pompton and Ramapo rivers which the North Jersey District Water Supply Commission uses to refill their reservoirs.

New York Meetings

www.newyorkacs.org

ACS NEW YORK SECTION MEETINGS FOR 2009

The Board of Directors Meetings for the New York Section in 2009 are as follows:

April 17
June 5
September 11
November 13

The regular Board Meetings will be held at St. John's University, 8000 Utopia Parkway, Jamaica, NY. These meetings are open meetings and all are welcome. If you are not a member of the Board of Directors and wish to attend please inform the New York Section Office at 516-883-7510 or **njesper1@optonline.net**.

WESTCHESTER CHEMICAL SOCIETY

Challenges Designing And Implementing An Emerging Pharmaceutical Infrastructure in Africa

Speaker: Dr. Rolande R. Hodel
Founder, President of
AIDSfreeAFRICA

The presenter's design of AIDSfreeAFRICA, a 501-C-3 non-profit organization, recently advanced into the semifinals of the Buckminster Fuller Design Challenge. Buckminster himself stated the "after decades of tracking world resources, innovations in science and technology, and human needs,." Buckminster Fuller asserted that "options exist to successfully surmount the crises of unprecedented scope and complexity facing all humanity." He issued an urgent call for a design science revolution to make the world work for all. AIDSfreeAFRICA is grateful to be a part of this revolution. It took research – although not the traditional lab bench definition thereof – to find out what the challenges are and how to overcome them. A first hypothesis called for production of antiretroviral drugs and was soon disproved. Sinking mortality rates pointed towards success in making antiretrovirals available. However, infection rates did not follow that trend. The connection between HIV/AIDS infection rates and untreated STI's (sexually transmitted infections other than HIV) emerged strengthening AIDSfreeAFRICA's resolve to focus on production of essential generic drugs. What is takes to accomplish that goal is the focus of this presentation.

Dr. Rolande R. Hodel received the 2009 Astellas USA Foundation Humanitarian Award for her work as founder and president of AIDSfreeAFRICA, a non-profit organization based in New York (**www.AIDSfreeAFRICA.org**). Born in Germany, Dr. Hodel is a US citizen and a legal resident of Cameroon. She has worked for BASF, Germany; Nanocrystals Technology, New York; Pharmaceutical Discovery Corporation, New York; and Emisphere Technologies, New York. She received her Masters of Science in Inorganic Chemistry from the University of Kansas and her PhD in Organic Chemistry from the City University of New York, Queens College.

Date: **Thursday, April 2, 2009**
Times: Refreshments – 5:45 PM
Presentation – 6:15 to 7:15 PM
Dinner – after presentation
Place: Polytechnic University (Route 9A)
Westchester Graduate Center
40 Saw Mill River Road
Hawthorne, NY
Cost: Free and Open to the Public

DIRECTIONS:
http://www.poly.edu/west/info/dir.cfm

LONG ISLAND SUBSECTION

Green Nanostructure Synthesis

Speaker: Dr. Stanislaus S. Wong
SUNY Stony Brook

Environmentally friendly synthetic methodologies have gradually been implemented as viable techniques in the synthesis of a range of nanostructures. In this talk, we focus on the application of green chemistry principles to the synthesis of complex metal oxide and fluoride nanostructures. In particular, we describe advances in the use of the molten salt synthetic methods, hydrothermal protocols, and template-directed techniques as environmentally sound, socially responsible, and cost-effective methodologies that allow us to generate nanomaterials without the need to sacrifice on sample quality, purity, crystallinity, in addition to control over size and shape.

Date: **Thursday, April 2, 2009**
Times: Coffee 5:30 PM
Seminar 6:00 PM
Place: Hofstra University
Chemistry/Physics Building
Lister Auditorium
Dinner: 7:00 PM
Place: Neighboring restaurant
Cost: $20.00

CHEMICAL MARKETING & ECONOMICS GROUP

Growth Models for the Chemical Industry in Emerging Economies

Speaker: Dr. Ravi Shanker
Corporate Director
Ventures and Business Development
Dow Chemical

Date: Thursday, April 2, 2009
Times: Cocktails 11:30 AM
Luncheon 12 noon
Presentation 1:15 PM
Place: Club Quarters
40 West 45th Street
New York, NY
Cost: $45 discount price for Members who reserve by Tuesday before the meeting (12 noon).
$55 for Guests and Members (at the door without reservations)

To reserve: Please reserve early to be eligible for discount price. Call Vista Marketing at (917) 684-1659 or via e-mail to: **cmegroup@mac.com**. You can also pay online (via PayPal): go to our Website: **http://www.nyacs-cme.org/** and click the proper payment button.

*** * * * * Next Meetings * * * * ***

Bio-Based Renewable Plastics

Speaker: Frederic Sheer
Chairman & CEO
Cereplast, Inc.

Date: Thursday, May 7, 2009

* * * * *

Finding the Upside in the Downturn

Speaker: Eric Vogelsberg
Senior Vice President and Global Practice Leader
Chemicals & Materials
Kline & Co.

and

Tom Aldred
Director of Performance Improvement
Kline & Co.

Date: Thursday, June 4, 2009

HIGH SCHOOL TEACHERS TOPICAL GROUP

"Demo Derby"

Demo Derby is an evening of non-stop demonstrations (5-8 minutes max.) If you want to participate, just bring your demo along with clean-up equipment and your safety apparel, and write your name on the board. Remember, it°¶s quick, quick, quick. You°¶re not teaching, just showing what can be demonstrated in the classroom.

Date: **Friday, April 3, 2009**
Time: Social and Dinner — 5:45 PM
Place: No reservations required
Caffe Pane e Cioccolato
10 Waverly Place at Mercer Street
(South-west corner)
New York, NY
(You eat, you pay cash only, no credit cards.)
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

Security at NYU requires that you show a picture ID to enter the building. In case of unexpected severe weather, call John Roeder, 212-497-6500, between 9 AM and 2 PM to verify that meeting is still on; 914-961-8882 for other info.

Note: Street parking is free after 6:00 PM. For those who prefer indoor attended parking, it is available at the Melro/Romar Garages. The entrance is on the west side of Broadway just south of 8th Street, directly across from Astor Place. It is a short, easy walk from the garage to the restaurant or meeting room.

LONG ISLAND SUBSECTION

Event: The 8th Chemistry Challenge

The Long Island subsection of the NY-ACS invites you to participate in the Chemistry Challenge. This is a chemistry knowledge competition between student teams from area two- and four-year institutions. Thirty multiple choice questions (approximately 75% General and 25% Organic Chemistry) are asked in a friendly and exciting atmosphere that brings colleges and their students and faculty together. Each team is made of three members and all are welcome. Barnes and Noble gift certificates are awarded to the winning team.

Date: **Friday, April 10, 2009**
Time: Refreshments 5:00PM
Competition 5:30 PM
Place: Queensborough Community College
Science Bldg S-111

Contact: Paris Svoronos at **psvoronos@qcc.cuny.edu** or (718) 631-6280 for directions and parking information or visit the LI-ACS website at **http://www.newyorkacs.org/sub_island.html**.

NEW YORK NANOSCIENCE DISCUSSION GROUP

Hosted by: The Department of Chemistry
New York University

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

place the work in a context understandable to a broad audience.

Date: Tuesday, April 21, 2009

For more information, contact: James Canary (**james.canary@nyu.edu**)
http://www.nyu.edu/projects/nanoscience

HUDSON-BERGEN CHEMICAL SOCIETY — JOINT MEETING WITH THE CHEMISTRY CLUB OF RAMAPO COLLEGE AND SIGMA XI, THE SCIENTIFIC RESEARCH SOCIETY

Global Warming Is Real, and What You Can Do About It

Speaker: Professor Alan Robock
Department of Environmental Sciences
Rutgers University
New Brunswick, NJ

Abstract

2005 was the warmest year on the planet in more than 1000 years. The Earth has warmed by almost 1°C during the past 150 years, and by 0.6°C (1°F) in just the past 30 years. Was this just by chance or caused by human pollution of the atmosphere, especially by carbon dioxide? I will explain why the recent Intergovernmental Panel on Climate Change report said, "Most of the observed increase in globally averaged temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic greenhouse gas concentrations." I will explain the science behind global warming and describe how global warming will affect us, including sea level rise, stronger hurricanes, and threats to water resources and our food supply. Finally, I will discuss policy options for addressing the problem.

How the climate will change and the impacts of global warming can be addressed by science. What society chooses to do about this is a political decision, influenced by different values and interests. However, clear understanding of the science is a necessary input to these decisions, and in this talk I will clearly separate the science aspects from the policy aspects.

Biography

Alan Robock is a professor of climatology in the Department of Environmental Sciences at Rutgers University and the Associate Director of its Center for Environmental Prediction. From 1977 until the end of 1997, he was on the faculty of the Department of Meteorology of the University of Maryland, where he was a Professor and the State Climatologist of Maryland (1991-1997). He moved to Rutgers University in January, 1998, where he is the Director of the Meteorology Undergraduate Program and a member of the Graduate Program in Atmospheric Science.

Date: Thursday, April 23, 2009
(rescheduled from March 26)
Times: Social 5:45PM
Seminar 6:00 PM
Place: Ramapo College of New Jersey
Room SC219 (Friends Hall)
Mahwah, NJ

Contact: Dr. Stephen Anderson, Ramapo College, **standers@ramapo.edu**

THE HUDSON-BERGEN CHEMICAL SOCIETY AND THE SCHOOL OF NATURAL SCIENCES OF FAIRLEIGH DICKINSON UNIVERSITY

The 11th Annual Undergraduate Research Symposium

The chemistry programs of the following colleges are members of the Hudson-Bergen Chemical Society:

- Essex County College
- Fairleigh Dickinson University
- New Jersey City University
- Ramapo College of New Jersey
- St. Peter's College
- Stevens Institute of Technology

This is a forum for undergraduate students and their faculty mentors from colleges and universities that participate in the subsection's activities to present the results of their research. Outstanding graduating students are also being recognized (they receive the Hudson-Bergen Chemical Society Award consisting of a certificate and a book,

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THE HUDSON-BERGEN CHEMICAL SOCIETY

(continued from page 13)

courtesy of John Wiley and Sons). All the presenters will receive certificates and a book, courtesy of McGraw-Hill.

Students who wish to present posters must send an abstract via e-mail to **mleonida@fdu.edu** by **April 6, 2009**. The abstract should be in MS Word format and must include the names and addresses of the student(s) and their faculty adviser(s) in addition to the title of the abstract. The abstract should not exceed 200 words. The name of the student presenting the poster should be underlined. There is no registration fee.

PolyAspirin: From Invention to Innovation

Speaker: Dr. Kathryn Uhrich
Rutgers University

Aspirin is a drug that is broadly used by millions of Americans to treat aching joints, headaches, and prevent heart attacks. The oldest version of aspirin is the poultice prescribed by Hippocrates in the fifth century BC obtained from the bark of willow trees and myrtle. The latest version of aspirin is PolyAspirin, a plastic version of aspirin that was first synthesized by an undergraduate chemistry student in Uhrich's lab at Rutgers University. Since that discovery, several other polymer (or plastic) versions of drugs have been invented, which led to the formation of Polymerix Corporation. Polymerix works with pharmaceutical and medical device companies to enhance their products; for example, PolyAspirin-coated cardiovascular stents may be more beneficial to patients because the drug is located exactly where it needs to be – on the stent – rather than in the stomach.

Dr. Kathryn Uhrich is a Professor of Chemistry at Rutgers University. She received a B.S. degree (1986) in Chemistry at the University of North Dakota, and Ph.D. degree (1992) in Organic Chemistry from Cornell University. Before moving to her present post at Rutgers in 1995, she held post-doctoral positions at AT&T Bell Laboratories Massachusetts Institute of Technology. Her research is funded by National Institutes of Health and the National Science Foundation. Kathryn has received the Johnson & Johnson Discovery (1996), Hoechst Celanese Innovative Research (1996 and 1997), and National Science Foundation CAREER (2000) awards. She is co-founder of Polymerix (2000-08), recipient of the 2003 recipient of New Jersey's "Best Life Sciences/ Healthcare Company". Recent awards include the Thomas Alva Edison patent award (2003), New Jersey's Outstanding Scientist in Biomedical Research (2004), ACS-sponsored Buck-Whitney award (2005) and the New York Academy of Sciences Blavatnik Award (2007). Currently, she is co-Director of an NSF IGERT program on "Biointerfaces" (2004-08) and on "Stem Cells (2008-12). Her research accomplishments have been recognized and disseminated in hundreds of publications and conference proceedings along with hundreds of invited presentations at local, national and international levels. In addition, she currently has over one hundred US and world-wide patents and applications. Her innovative research in polymer chemistry and biomaterials at Rutgers has trained nearly one hundred graduate and undergraduate students.

Date: **Friday, April 24, 2009**
Times: Social/Poster Session 5:00 PM
Dinner 6:00PM
Awards/Lecture 7:00PM
Place: Dickinson Hall Café
Fairleigh Dickinson University
Teaneck, NJ
Cost: $10.00 for dinner. The lecture is free. (Dinner cost for student presenters and awardees is waived.)

Reservations: Dr. Mihaela Leonida (201) 692-2338, email: **mleonida@fdu.edu** by **April 20, 2008**.

NY-ACS BIOCHEMICAL TOPICAL GROUP— JOINT MEETING WITH THE NYAS BIOCHEMICAL PHARMACOLOGY DISCUSSION GROUP

Protein Kinases: Structure-Guided Drug Discovery

Organizers: Stephen K. Burley
Eli Lilly and Company

George B. Zavoico
Westport Capital Markets, LLC

X-ray crystallography and solution NMR spectroscopy are playing ever increasing roles in the drug discovery process. At this symposium leading scientists from academe and the pharmaceutical/biotech indus-

try will discuss recent advances and future challenges of this burgeoning field.

Date: **Tuesday, April 28, 2009**
Time: 1:00 – 5:00 PM
Place: New York Academy of Sciences
7 World Trade Center
250 Greenwich Street – 40th Floor
New York, NY

Space is limited. Reserve a seat on-line at: **http://www.nyas.org/events**

NYAS Members and BPDG Affiliates may attend BPDG meetings free of charge.

Non-members may attend for a fee of $20 per event; Student Non-members for $10.

To become a Member of the Academy, visit **http://www.nyas.org/landing.html**

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.

CHEMISTS CELEBRATE EARTH DAY — APRIL 22

Illustrated Haiku Contest

Go to the ACS website: **chemistry.org.** Search-Chemists Celebrate Earth Day for information regarding Haiku rules.

Haikus are to be sent to:

Joan Laredo-Liddell
391 Palmer Road
Yonkers, NY 10701-5239

Haikus must be received **by Monday, April 6, 2009**.

LONG ISLAND SUBSECTION

Twelfth Annual Frances S. Sterrett Environmental Chemistry Symposium

Reducing Our Ecological Footprint

The annual Frances S. Sterrett Symposium is dedicated to presenting the public with up-to-date, factual scientific information on environmental topics. Watch for updates at the New York section web site: **www.newyorkacs.org**.

SAVE THE DATE!

Date: **Thursday, May 21, 2009**
Time: 8:30 AM – 2:00 PM
Place: Hofstra University

LONG ISLAND SUBSECTION — JOINT MEETING WITH DOWLING COLLEGE

National Science Foundation Symposium

Featuring: Dr. Paul Bishop

Keynote Speakers: Robert J. Gaffney
President Dowling College

Hon. Steve Israel
House of Representatives (to be confirmed)

Dr. Paul Bishop, program director from the National Science Foundation, will lecture from his personal research and findings related to the topics of science and the environment. Additionally, Dr. Bishop will provide an insiders' view on the prospects of grant making and seeking as well. Dr. Bishop will be available for 1 on 1 fifteen minute meetings to be scheduled between the hours of 2pm and 4pm. Robert J. Gaffney and Representative Steve Israel will speak on science research and technology and its relationship to Higher Education. Light refreshments will be served.

Date: **Friday, June 5, 2009**
Tme: 9:00 AM – 11:30 AM
Place: Fortunoff Hall Ballroom
Dowling College
Oakdale, NY

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, April 27, 2009**
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 **http://maps.rutgers.edu/maps/default.aspx?campus=4**.

Reservations: call (732) 463-7271 or email **njacsoffice@aol.com** prior to **Wednesday, April 22, 2009.**

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, April 2, 2009**, 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 **vjkuck@yahoo.com**, if you plan on attending this meeting.

TEACHER AFFILIATES

Executive Committee Meeting

Date: **Monday, April 13, 2009**
Time: 4:30 PM
Place: Chatham High School
255 Lafayette Avenue
Chatham, NJ

Contact: Paul Sekuler
researchehs@hotmail.com

ChemTAG MEETING

Inquiry Based Activities

Date: **Tuesday, April 21, 2009**
Time: 4:00 – 6:00 PM
Place: Franklin High School
500 Elizabeth Avenue
Somerset, NJ 08873

Directions:
http://www.franklinboe.org/fhs/lib/fhs/directions_to_fhs.pdf

Hostess: Mita Chaki
mchaki@franklinboe.org
(732) 302-4200

SURPRISE

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

POLYMER TOPICAL GROUP

Polymers for Sensory and Energy-Related Applications

Organizer: Frieder Jäkle
Rutgers University - Newark

Speakers:

"Separator Design for Lithium Ion Batteries"
Pat Brant
Exxon Mobil Chemical Company

"Conjugated Polymer-Gold Nanoparticle Assemblies in Sensory Applications"
Uwe Bunz
Georgia Institute of Technology

"Polymeric Material Strategies in OLEDs"
Kelly Chichak
GE Global Research

"Conducting Polymer/Single Walled Carbon Nanotube Composites for Biosensor Applications"
Huixin He
Rutgers University - Newark

"Basic Research in Polymer Science for Chemical and Biological Defense"
Douglas Kiserow
Army Research Office, ARO

"Selective Potentiometric Detection of Macromolecules"
Kalle Levon
Polytechnic Institute of NYU

This symposium will focus on functional polymers for applications as sensors, in optoelectronic devices including OLEDs, and in the emerging field of energy-related materials. Prominent researchers from academia, industry, and government labs will provide an overview of the state-of-the-art and discuss exciting new developments in these areas. The presentations will be accompanied by a poster session, and ample opportunities for networking with professionals involved in polymer chemistry will be provided. Updates will also be posted at the PTG website **http://www.njacs.org/ptg.html**.

Date: **Thursday, May 14, 2009**
Times: 1:00 to 6:30 PM
Place: Paul Robeson Campus Center
Bergen Room
Rutgers University
Newark, NJ

POSTER SESSION:
Poster submissions on any polymer-related topic are welcome!

CONTACT FOR POSTER SESSION:
Dr. Bin Wei, Henkel Corporation
(**bwei01@gmail.com**)

EXHIBITS & COMMERCIAL POSTERS:
Dr. Nicole Harris, Sun Chemical
(**nicole.harris@sunchemical.com**)

GENERAL INFORMATION: Prof. Jäkle, Rutgers University (**fjaekle@rutgers.edu**).

Early Registration: Members: $40; Non-members: $50; Students: $25; free for Rutgers students and staff with ID. **Early registration and poster submission deadline is April, 30, 2008.**

Regular Registration: Member, $45; Non-member; $55; Student, $30. Online registration will start in late February **http://www.njacs.org/ptg.html** OR send your full contact information along with a check made payable to NJACS-Polymer Group to Dr. Willis B. Hammond, Treasurer, NJACS-PTG, 128 Center Ave., Chatham, NJ 07928, with the appropriate amount (please indicate whether you want your contact information shared with other participants).

Directions: Can be found at the Rutgers website **http://www.newark.rutgers.edu/maps/** .

Co-sponsors: ChemPharma, ACS North Jersey Local Section, Rutgers University.

Endorsing Organizations: NYSTAR sponsored College of Staten Island CUNY Center for Engineered Polymeric Materials, NJIT Medical Device Concept Laboratory.

ACS NORTH JERSEY SECTION TEACHER AFFILIATES — JOINT MEETING WITH NEW JERSEY INSTITUTE OF TECHNOLOGY

The 24th Annual New Jersey Chemistry Olympics - 2009

Last year 29 teams from 18 High Schools competed. We can handle more.

Parents talk to your HS chemistry teachers to see how you can help their school prepare for this significant competition or help with other related events like career day. Students who have taking or completed chemistry will find this a good preparation for further competitions like the Chemistry Olympiad which is not a related event.

Date: Wednesday, May 20, 2009
Place: Tiernan Hall
New Jersey Institute of Technology

Registration deadline was March 1, 2009. Additional information may be found at: **http://geocities.com/njchemistryolympics/**

THE NEW JERSEY GROUP OF SMALL CHEMICAL BUSINESSES

Continues its 2008 / 2009 Season
Surviving the Economic Downturn

Fairleigh-Dickinson Institute for Sustainable Enterprise

- Grow your business by learning how to make it a "sustainable venture" thereby preparing it for, and aligning it with the challenges and opportunities in the evolving Green Business environment.

Date: Thursday, May 21, 2009

act4chemistry.org

Do You Know This Website?

Here is a great opportunity to have your voice heard in Washington. The ACS Office of Public Policy and Communications maintains a website which will give you timely information on legislation important to the science community. It is your gateway to the LAN (Legislative Action Network), a free ACS advocacy program. As a LAN member you easily can contact your Members of Congress as relative legislation on topics like science education and R&D funding are proposed. About eight times a year you will receive email from the ACS asking you to log onto the website to send letters on pending bills. The website makes this easy and has information on how you can join many of your North Jersey colleagues as a LAN participant. Keep up to date and log into **act4chemistry.org**.

Maureen Chan, North Jersey Government Affairs Committee **mgchan@verizon.net**

2009 CECIL BROWN LECTURER — PROFESSOR ROBERT LANGER OF MIT

By MaryAnn Kerins, Reporter-NJ-ACS

Robert S. Langer, Graduate of Cornell in 1970 and ScD in Chemical Engineering from MIT in 1974, was invited to speak by the Chemistry Graduate Student Association (GSA) of Rutgers University as the Annual GSA Lecturer on February 3, 2009. Learning that such an esteemed scientist would be at Rutgers, the NJ-ACS partnered with the GSA and awarded Dr. Langer the prestigious Cecil Brown Lectureship, which was established by the NJ-ACS in 1969. This bridging of distinguished chemists with local universities includes seven Nobel Laureates and other prestigious figures in the field of chemistry. Together, the Chemistry GSA and the NJ-ACS put on a truly amazing day, capped by a riveting lecture by Dr. Langer.

Dr. Robert Langer holds multiple commendations that line walls in the field including 600 patents issued and others pending that have changed the history of medicine. They include such topics as: Drug Delivery Systems, Tissue Engineering, Stem Cell Research, Biomaterials and Angiogenesis Inhibition.

Dr. Langer noted his work with the Institute of Medicine and the NIH-National Institute of Health as be began his talk.

To open his lecture, Dr. Langer began to speak of his unconventional career path after graduation. With many anecdotal stories of perseverance that brought much laughter, he recalled how he researched and explored many avenues before finding the cause that would make him a pioneer in industry. Instead of choosing the Petroleum Industry, Dr. Langer chose a post-doctoral position in cancer surgery research with Judah Folkman.

Dr. Langer spoke of childhood fears of public speaking, to which we could all relate, and of difficulties that he first encountered being an industry pioneer in which he presented groundbreaking concepts that industry leaders simply shunned at the time.

When Dr. Langer spoke, particularly with respect to angiogenesis inhibition and drug delivery relating to tumor growth, he spoke of how, at the time, industry leaders simply told him that it could never be done. However, with Dr. Langer's perseverance and time, this has become the forefront of industry.

Dr. Langer moved forward in conversation and then spoke about drug delivery systems that could disperse large molecule medications through "chips" or "wafers" designed to be implanted into the brain or other parts of the body. This invention would dispense the therapeutic locally to a specific site, causing no harm to surrounding areas.

This approach was then explored for use in many other applications: multiple therapeutic categories with cancer, diabetes, etc. The idea of therapeutics having a dissolution time that would dispense medication in a sustained manner through the use of polymers was further developed through clinical use for different applications.

Dr. Langer also spoke of methods to perform internal stitching using shape-memory polymers, utilizing body temperature to control them to close and coil much like polymers used for vascular stents.

It was important for Dr. Langer to note that many materials used in early biomaterials for medical devices stemmed from doctors in the medical field using traditional methodologies. He gave several examples of this including the artificial heart, which came from the concept of a woman's girdle. Dr. Langer's most important comment about the evolution of these biomaterials was the collaborative efforts between the polymer scientists and medical doctors.

Dr. Langer moved on through time as he began to speak about tissue engineering to create liver, skin, nerves, blood vessels, and cartilage. He cited many case studies using biodegradable polymers that would biodegrade over time as cells were able to create new tissue or organs on scaffolds. The use of stem cells or other cells make this possible. Dr. Langer showed several studies in which they grew an ear on a rabbit, grew a human nose, new skin tissue, and cartilage pieces on mice. However, he noted that the materials still do not have the physical endurance of a knee, but that may not be far off in the future.

He showed real case studies of a burn victim whose skin was replaced, as well as a child

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PROFESSOR ROBERT LANGER

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born without a breastbone that they were also able to replace.

Dr. Langer's devotion to the field to eradicate disease by leveraging his abilities is simply remarkable, and exists over several decades of time.

Colleagues mostly enjoyed Dr. Robert Langer's witty repartee combined with serious intellectual concepts that evolved over time within the field. The combination of a profound intellect with such a personable nature is truly uncharacteristic of what many would expect from such an intellectual mind. Many left with a better understanding of the field and an extremely light heart.

When asked what his most important or proudest accomplishments were to date, Dr. Langer noted throughout his lecture many of his graduate students and their thesis projects that assisted in forging these advancements. Dr. Langer spoke of how his students had gone on to become presidents of many prestigious companies in the field, 150-200 have earned top positions in industry and about 190 have became professors at top institutions.

In closing, I would like to quote from Robert Frost's "The Road Not Taken." In relation to Dr. Robert Langer, it is quite fitting of such a profound man, his journey in life and his dedication to his field:

Two roads diverged in yellow wood,
And sorry I could not travel both
And be one traveler, long I stood
And looked down one as far as I could
To where it bent in the undergrowth;

Then took the other, as just as fair
And having perhaps the better claim,
Because it was grassy and wanted wear;
Though as for that the passing there
Had worn them really about the same,

And both that morning equally lay
In leaves no step had trodden black
Oh, I kept the first for another day!
Yet knowing how way leads go onto way,
I doubted if I should ever come back.

I shall be telling this with a sigh
Somewhere ages and ages hence:
Two roads diverged in a wood, and I —
I took the one less traveled by,
And that has made all the difference.

Dr. Robert Langer with North Jersey Section Chair, Dr. Joseph Potenza (right).

Bill Suits greets registrants at the Cecil Brown Lecture.

A view of the audience at the Cecil Brown Lecture, February 3, 2009.

Others

LABORATORY ROBOTICS INTEREST GROUP — MID-ATLANTIC CHAPTER

7th Annual Automated Sample Storage and Retrieval Meeting

Agenda: Secure sample storage, automated tracking, and automated retrieval are increasingly important in many fields such as, biological research, forensics, and drug discovery. The High Throughput Screening industry was one of the first to confront this particular bottleneck. An increasing amount of lead compounds made automated compound storage and retrieval a necessary process to achieve the desired assay throughputs. In 2005 a D&MD report noted: "... it may no longer be sufficient to provide increased throughput for screening while doing nothing to affect downstream bottlenecks in later-stage screening. Alternatively, it may no longer be sufficient to provide high-throughput screening solutions that fail to effectively interface with compound storage and retrieval systems."

This meeting is focused on current and future approaches in Automated Sample Management, Storage & Retrieval technologies, as well as compound stability and integrity issues.

A preliminary list of presentations includes the following:

"A Mixed Phase 21st Century, World Class Biobanking Story"

Speaker: Steve Arsenault
Biobanque Génome Québec

"Engineering Tests on the Performance of Mechanical ULT Chambers"

Speakers: Timothy Romig
Lynn Wetherwax, and
Karen Manz
Amgen

Gustov Sujo and
Cynthia Barrinuevo
PharmBio Inc.

"Development of QC Methods to Monitor Cross-contamination from Fixed-tip Automation Used to Extract DNA from Clinical Blood Samples"

Speakers: Stephanie K. Hall
Jason Harraden and
Diane L. Johnson
Pfizer Global Research & Development

"DNA Extraction Technology Overview - Increasing Capacity 10X"

Speakers: Robert J.Corr
Pfizer Global Research & Development

A complete list of speakers, talks, schedules, registration information, and other meeting details is available on the Mid Atlantic Chapter's web site at: **http://lab-robotics.org/Mid_Atlantic/**

Date: **Tuesday, April 7, 2009**
Place: Groton Inn & Suites
Groton, Connecticut

The staff of Pfizer's automated bio-repository will be our hosts for the meeting. Tours of the facility are being arranged and details will be posted on the LRIG Mid-Atlantic's web site: (**http://lab-robotics.org/Mid_Atlantic/**)

The Groton Inn & Suites is offering a special rate for this meeting of $94 per person, including breakfast, with a check in date as Monday April 6.

Groton, Connecticut, is two hours and twenty-five minutes from New York's Penn Station by Amtrak or one hour and fourty minutes from Boston's South Station. The hotel is five minutes from Amtrak's New London station and taxi service is available.

This meeting is free of charge but advanced registration is requested. Additional information available from Kevin Olsen at: **OlsenK@Mail.Montclair.Edu** or (973) 655-4076.

NEW JERSEY INSTITUTE OF CHEMISTS — STUDENT AWARDS DINNER

Date: **Wednesday, April 15, 2009**
Times: Registration, Social Hour 6:00 PM
Dinner 7:00 PM
Place: Snuffy's Pantagis
Route 22 East
Scotch Plains, NJ
Cost: $35.00

Respond to: Dr George Karustis, Treasurer, NJ Institute of Chemists, 832 Carleton Road, Westfield, NJ 07090; (908) 232 4943 **marlenek2@verizon.net**

ASSOCIATION OF CONSULTING CHEMISTS & CHEMICAL ENGINEERS — JOINT MEETING WITH AIChE

Using Standards to Drive Quality Improvements at Dow Jones Newspaper Manufacturing Facilities

Speaker: Paul L. Cousineau
Dow Jones & Company, Inc.

Dow Jones manufactures *The Wall Street Journal* and *Barron's* at 14 company owned and 8 contract printing plants. Print and procedural standards have been developed and implemented over the past eight years to achieve a consistent national result from this infrastructure.

Mr. Cousineau is Director of National Production for *The Wall Street Journal* (Dow Jones) and has been in this role since January 2006. He was recently appointed to the Graphic Communications advisory board at California Polytechnic State University in San Luis Obispo, is currently on the board of directors for the Technical Association of the Graphic Arts (TAGA), is chairperson of the recently formed Printing Technology Committee (a select group of newspaper industry leaders).

Mr. Cousineau has developed several unique technologies that are currently employed in the daily production of *The Wall Street Journal* and *Barron's*. He is recognized as one of the leading production and printing experts in the newspaper industry.

Date: **Tuesday, April 28, 2009**
Times: Networking/Cash Bar 6:00 PM
Dinner 6:30 PM
Presentation 7:30 PM
Place: Snuffy's Restaurant
Park & Mountain Ave.
Scotch Plains, NJ
Cost: ACC&CE Members $35.00
Non-members $45.00

To Reserve: Call 1-973-729-6671 or e-mail: **accce@chemconsult.org**

Advanced registration is required.

Please visit **www.chemconsult.org** for more details.

NEW JERSEY INSTITUTE OF TECHNOLOGY — OTTO H. YORK DEPARTMENT OF CHEMICAL, BIOLOGICAL AND PHARMACEUTICAL ENGINEERING

Seminar Series – Spring 2009

April 6
"Nanocatalysts for the Production of Clean Hydrogen and the Efficient Operation of Fuel-Cells"
Jose Rodriguez
Senior Chemist, Chemistry Department
Building 555
Brookhaven National Laboratory
P.O. Box 5000, Upton, NY

April 13
"Direct Catalytic Conversion of Cellulose to 5-Hydroxymethylfurfural (HMF)"
Z. Conrad Zhang
Director of Science and R&D, KiOR Inc.
2600 South Shore Blvd., Suite 100
League City, TX

P.S. TO THE A.P. BORODIN ARTICLE IN THE JANUARY ISSUE

I am one of the *The Indicator*'s subscribers and with great interest read the H. H. Fuchs article about A.P. Borodin. But I believe one of the most fascinating facts is missing.

"..... His passionate music and unusual harmonies proved to have a lasting influence on the younger French composers Debussy and Ravel (in homage, the latter composed in 1913 a piano piece entitled "À la manière de Borodine").

"The evocative characteristics of Borodin's music made possible the adaptation of his compositions in the 1953 musical *Kismet*, by Robert Wright and George Forrest, perhaps most notably in the song, "Stranger In Paradise". In 1954, Borodin was posthumously awarded a Tony Award for this show."

http://en.wikipedia.org/wiki/Alexander_Borodin extracted 01/28/2009

I hope you know this song "Stranger In Paradise," and will enjoy listening to Tony Bennet one more time. What a wonderful lyric synthesis of music and poetry!

http://www.last.fm/music/Tony+Bennett/_/Stranger+in+Paradise extracted 01/28/2009

Anatoliy Khusid

THE CHINESE AMERICAN CHEMISTS HELD THEIR CHINESE NEW YEAR PARTY

Dr. Duxi Zhang, the President-Elect, announced the recipients of this year's Young Chemist Award. Among the many highly qualified candidates, four outstanding high school students, Lingfeng Zhou from West Windsor Plainsboro High School South, Kenneth Pu from John P. Stevens High School, Erica Lai from Holmdel High School, and Monica Yang from Montgomery High School, were recognized for their outstanding academic achievements in chemistry-related disciplines. This annual award encourages interest in chemistry and science among high school students, and has been a popular program since its inception in 2003.

The event provided entertainment as members and their families and friends performed songs and dances. The entertainment portion of the program included vocal performances by the well-known singer and now lifetime member Mingzhen Gu, a Mongolian dance by Wei Li (a member), two Chinese folk dances "The South of Rainbow" and "Pretty Actresses" by children of our members, a Spanish dance by Boya Xia, ballroom dancing by Tao Ying, and mini harmonica performances by George Chiu. Special gifts were also presented at the party to members who were the first to arrive at the party, who drove the longest distance to the party, who brought the youngest child to the party, and who has been a member the longest.

(See photo below.)

2009 Recipients of CACS Young Chemist Award with Tri-State CACS officers Duxi Zhang (president-elect), Monica Yang, Erica Lai, Lingfeng Zhou, Kenneth Pu, Longqin Hu (immediate past-president), and Sunny Wang (2009 president).

Call for Nominations

THE WILLIAM H. NICHOLS MEDAL AWARD FOR 2010

The New York Section is accepting nominations for the William H. Nichols Medal Award for the year 2010. This distinguished award, established in 1902 by Dr. William H. Nichols, for the purpose of encouraging original research in chemistry, is the first award authorized by the American Chemical Society. It is presented annually in recognition of an outstanding contribution in the field of chemistry, and consists of a gold medal, a bronze replica and $5000. The medals are presented at the William H. Nichols Meeting that consists of a Distinguished Symposium related to the medalist's field of expertise and a Medal Award Dinner.

Investigators who have published a significant and original contribution in any field of chemistry during the five calendar years preceding the presentation meeting are eligible for consideration by the Nichols Medal Jury.

Each nomination requires a completed Nomination Form, biographical and professional data, and seconding letters. Since the nomination procedure now will utilize the New York Section website, please access

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THE WILLIAM H. NICHOLS MEDAL AWARD FOR 2010

(continued from page 23)

the forms and instructions at **http://www.NewYorkACS.org**. Nominations must be received **by May 31, 2009**. The Nichols Medal Award Jury will meet in June 2009 to select the Nichols Medalist for 2010.

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

ACS NEW YORK SECTION'S OUTSTANDING SERVICE AWARD FOR 2009

Each year since 1958 the New York Section presents an Outstanding Service Award to a most deserving member of the section. Many members of the New York Section provide their time, leadership talent, and educational skills to the New York Section. The tradition of excellence of the New York Section is attributable directly to the cumulative effect of these individuals. Please help the New York Section to recognize the efforts of our colleagues by nominating them for this award. Nominations will be reviewed by a committee consisting of the previous five winners of the award. The Outstanding Service Award for 2009 will be presented at the New York Section's Section-wide Conference in January 2010.

Nominations with supporting data should be mailed to the OSA Committee Chair, Dr. Robert H. Beer, Department of Chemistry, Fordham University, 441 East Fordham Road, Bronx, NY 10458, or emailed to **beer@fordham.edu**.

For more information about the award along with a list of former award recipients, please visit the New York Section's website at **http://www.newyorkacs.org/awards_nyacs.html**.

EDWARD J. MERRILL AWARD FOR OUTSTANDING HIGH SCHOOL CHEMISTRY TEACHER FOR 2010

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 2010.

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 George Gross, **njmoxie1@verizon.net**.

Call for Papers

57TH ANNUAL UNDERGRADUATE RESEARCH SYMPOSIUM

Sponsored by: The New York Chemistry Students' Association of the American Chemical Society's New York Section

The symposium provides an excellent opportunity for undergraduate chemistry students in the NY metropolitan area to present the results of their research. The program includes a keynote address by a Pace University graduate, Dr. Michael Alekshun, of Schering-Plough Corporation, speaking on "Contemporary Issues in Antibiotic Resistance: Problematic Bugs and the Therapeutic Strategies Used to Treat Them", presentation of student papers (15 minute talks to small groups), followed by a luncheon.

To:
1. Submit an abstract on-line
2. Print a flyer for posting - Print "Call For Papers" frame
3. Obtain directions to Pace University at Pleasantville. Go To: **http://newyorkacs.org/grp_students.html**

Date: **Saturday, May 2, 2009**
Place: Pace University
Pleasantville, NY

If you have any questions please contact:
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Call for Posters

LABORATORY ROBOTICS INTEREST GROUP — MID-ATLANTIC CHAPTER

Fifth Annual Student Poster Contest

The contest will feature both High School and College Divisions.

Student Posters may be on ANY TOPIC in engineering, or the biological, chemical, earth, environmental, and physical sciences.

Content related to robotics or automation is NOT required for entry.

Cash prizes will be awarded in both divisions as well as special members' choice awards. Participants in the high school division should plan to be at their posters between 4 and 5 PM to meet with the judges and participants in the college division should plan to be at their posters between 5 and 6 PM. An awards ceremony will follow the judging at 7:00 PM.

A career seminar is available for high school students before the meeting begins.

There is no charge to attend the meeting. There will be FREE FOOD and CASH PRIZES.

Reimbursements of travel expenses for entrants in the college division are available.

The contest is held in conjunction with the chapter's annual technology exposition. One of New Jersey's largest scientific meetings, this event is attended by more than 700 scientists and more than 90 laboratory technology companies.

Date: **Tuesday, May 19, 2009**
Times: High School Poster Session
4:00 - 5:00 PM
College Poster Session
5:00 - 6:00 PM
Awards Ceremony 7:00 PM
Place: The Hilton East Brunswick
3 Tower Center Boulevard
East Brunswick, NJ
Cost: No Charge (FREE Food and Cash Prizes

Please pre register for the meeting at: **http://lab-robotics.org/** (Click on the Mid Atlantic Chapter's link listed under "Upcoming LRIG Meetings.")

To enter a poster, simply send your name and the title of the poster to Kevin Olsen at the address below anytime **before May 7**.

Olsenk@Mail.Montclair.edu (973-655-4076)

Contribute to *The Indicator*

The Indicator is interested in adding new features to the publication. Your input would be appreciated. Please let us know features you would like to see in future issues; i.e., historical stories, book reviews, member news, short articles about your research or other ideas. It has been suggested that we might include a "Remember When?" section where our readers could provide photos (with captions) and/or short articles about their careers, awards, memorable symposia they attended, or to honor a colleague. In the past we have run crossword and CHEMdocu puzzles. We have recently had an article about a famous composer who had a background in chemistry, which led to the P.S. article in this month's issue on page 22. This was all prompted by an entry in Leopold May's calendar of events column which appears each month as a feature article. In addition, Kevin Olsen's article in the December issue about the relationship between holiday decorations and chemistry was very informative, as is his 2 part article on water pollution analysis which concludes on pages 8 and 9 of this issue. If you would like to contribute,

Contact the Editor at:
linatkins@tampabay.rr.com or Fax: (352) 503-7613

APRIL HISTORICAL EVENTS IN CHEMISTRY

(continued from page 7)

April 21, 1970
The first Earth Day was founded by Sen. Gaylord Nelson, Father of Earth Day and organized by Denis Hayes. It is celebrated by ACS on April 22.

April 23, 1858
One hundred and fifty years ago, Max K. E. L. Planck was born on this date. In 1900, he introduced the quantum theory and was awarded the Nobel Prize in Physics in 1918 in recognition of the services he rendered to the advancement of Physics by his discovery of energy quanta.

April 25, 1953
James D. Watson and Francis H. C. Crick, "Molecular Structure of Nucleic Acids: A Structure for Deoxyribose Nucleic Acid" was published in Nature on this day.

April 25, 1900
Wolfgang Pauli, who was born on this day, discovered the exclusion principle and received the Nobel Prize in Physics in 1945 for the discovery of the Exclusion Principle, also called the Pauli Principle.

April 26, 1834
Two hundred and seventy-five years ago, Hugo Joseph Schiff, was born. He discovered condensation products of aldehydes and amines, Schiff Bases, and invented a color test to distinguish aldehydes from ketones. He died on April 11, 1884.

April 26, 1775
Antoine L. Lavoisier reported on this day that heating mercury in air forms red calx, HgO, while the air is reduced in volume and no longer supports combustion. He heated red calx to liberate oxygen.

April 28, 1753
Three hundred and twenty-five years ago in 1784, Franz K. Achard was first to prepare a platinum crucible. He invented the process for extraction of sugar from sugar beets and opened first beet sugar factory in1801. He was born on this date.

April 28, 1941
K. Barry Sharpless who discovered and developed many catalytic oxidation processes for stereoselective oxidation, was born on this date. He shared the Nobel Prize in Chemistry in 2001 with William S. Knowles and Ryoji Noyori for their work on chirally catalyzed hydrogenation reactions

April 29, 1893
Seventy-five years ago in 1934, Harold C. Urey was awarded the Nobel Prize in Chemistry for the discovery of heavy hydrogen or deuterium (D, 1). He was the first to isolate heavy water (D2O) in 1932 and was born on this date.

April 29, 1904
Nashua incorporated as Nashua Card, Gummed & Coated Paper on this day.

April 30, 1958
Fifty years ago, Albert Ghiorso, et al., announced the discovery of mendelevium based upon research done at the University of California, Berkeley.

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

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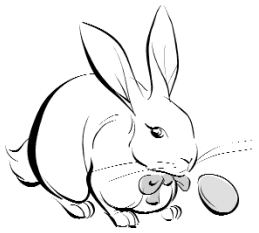
Professional/Product Directory

Spring Is Here, I Hear



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