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Dr. Ambarish K. Singh
2010 North Jersey Section Chair

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Staff.

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Modern aspects of drug discovery, enzyme inhibition and receptor antagonism; pharmacokinetics; structure-activity relationship; recent case studies.

Prereq.-Organic Chemistry

Prof. Ganguly

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Role and mechanism of signal transduction in mammalian cells: transduction pathways, tissue organization, processes controlled by cellular signal transduction pathways. Implications for stem cell biology, human disease, tissue regeneration.

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Prof. Xu

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Advanced Inorganic Chemistry – Ch 610 (*Fri eve*)

Kinetics & Thermodynamics – Ch 620 (*Tue eve*)

Advanced Physical Chemistry – Ch 520 (*Mon eve*)

Biochemistry I – Ch 580 (*Wed eve*)

Biophysical Chemistry – Ch 582 (*Thu eve*)

Immunology – Ch 686 (*Tue eve*)

Molecular Biology Lab Techniques – Ch 684 (*Sat, 9am-5pm*)

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**THE
Indicator** 

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Visit Uswww.TheIndicator.org

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

December Calendar

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Tuesday, December 8, 2009

Nanoscience Discussion Group
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Thursday, December 10, 2009

Chemical Marketing & Economics Group
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Hudson-Bergen Chemical Society
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Biochemical Topical Group
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Friday, December 18, 2009

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NORTH JERSEY SECTION

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Careers in Transition
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Thursday, December 3, 2009

Teacher Affiliates Executive Committee
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Tuesday, December 8, 2009

Younger Chemists Committee
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Thursday, December 10, 2009

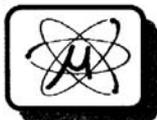
ChemTAG
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Monday, December 14, 2009

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**Deadline for items to be included in the
February 2010 issue of
The Indicator
is December 15, 2009.**

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



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THIS MONTH IN CHEMICAL HISTORY

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

In my previous column I discussed the discoveries of the first two transuranium elements neptunium and plutonium, elements number 93 and 94, by McMillan, Seaborg and their colleagues at U.C. Berkeley. The source material came from a pamphlet "Nuclear Milestones" which includes speeches given by Seaborg while he was Chairman of the U.S. Atomic Energy Commission from 1961 – 1971. In this column I continue the transuranium story with the next two elements, numbers 95 and 96, as presented in a speech given in 1969 – at the Mendeleev Centennial at the Robert A. Welch Foundation Conference in Houston, Texas.

The discoveries of these elements came from experiments at the Metallurgical Laboratory in the New Chemistry Building at the University of Chicago, a key laboratory in the work that led to the first atomic bombs. (By the way, if you want to read a comprehensive and absorbing account of the Manhattan Project I strongly recommend Richard Rhodes' *The Making of the Atomic Bomb* published in New York by Simon & Schuster in 1987 and available in paperback). By 1944 Seaborg had moved to Chicago and his co-workers included Albert Ghiorso, Ralph A. James, and Leon O. Morgan. They began their work by bombarding plutonium 239 with deuterons; plutonium was now available in quantity – that is to say milligrams rather than the micrograms on which its original discovery was based – from the Clinton Laboratories in Tennessee. These experiments did not yield positive results. Similarly bombarding plutonium 239 with neutrons, though giving valuable experience to the team, did not yield new transuranium isotopes.

By now the chemistry of neptunium and plutonium had suggested to the team that the new elements they sought should be regarded as a group, the actinides, with affinities to the lanthanides, the rare-earth elements. The first positive indications came in early 1944 as a result of bombarding plutonium 239 with high energy alpha particles (helium ions). The target material was dissolved, oxidized, and co-precipitated with insoluble lanthanum fluoride. Alpha decay was recorded from this material distinct from plutonium's known alpha decay. Both the chemistry and the alpha decay indicated production of element 95 or 96. While re-reading the notebooks of the group Seaborg came across the entry by Ralph James dated June 15, 1944: "Time out to get married"! James was back at work on June 19. As the work progressed it became more and more likely that the new activity was due to the isotope of mass 242 of element 96. In September, after receiving 200 milligrams of plutonium 239, deuteron bombardment of this "macro" sample was undertaken and eventually yielded definitive evidence of the production of an isotope of element number 95. Then long-term bombardment of plutonium 239 with neutrons gave clear evidence of the production of isotopes of both elements 95 and 96.

Workers at Los Alamos carried out mass spectrographic examinations of irradiated plutonium samples from Chicago and identified an isotope of element 95 of mass 241. This turned out to have a half-life of 13 years. Further irradiation of plutonium at Berkeley with higher energy alpha particles produced two isotopes of element 96, of masses 240 and 242.

The announcement to the world of the production of two new elements, planned for presentation at an ACS symposium at Northwestern University in November 1945, was actually anticipated on a "Quiz Kids" radio broadcast a little earlier in the same month! Seaborg was a guest on the program and was asked by a participant if any new elements had been discovered? Seaborg replied: "... Recently there have been two new elements discovered – elements with atomic numbers 95 and 96 – out at the Metallurgical Laboratory here in Chicago. So now you'll have to tell your teachers to change the 92 elements in your schoolbook to 96 elements."

There remained the question of naming the new elements. Morgan referred to them as "pandemonium" and "delirium" but those names were not deemed acceptable to the community of science. At a talk given at the ACS meeting in April 1946 the group presented the names. Element 95 was called "americium" following the model of the lanthanide europium. To honor the great pioneers of radioactivity element 96 was called "curium" again following the lanthanide example of gadolinium named for its discoverer Johan Gadolin.

DECEMBER HISTORICAL EVENTS IN CHEMISTRY

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

December 1, 1909

One hundred years ago on this date, the first production of calcium cyanamide in North America was started by American Cyanamide Co.

December 2, 1859

One hundred and fifty years ago, Ludwig Knorr was born. He synthesized heterocyclic compounds.

December 6, 1778

Two hundred years ago, Joseph L. Gay-Lussac discovered the law of combining volumes of gases. He was born on this date.

December 7, 1909

One hundred years ago, the patent for the first thermosetting man-made plastic from a reaction of phenol with formaldehyde was granted.

December 9, 1919

William N. Lipscomb, researcher on boranes, was among the first to describe 3-dimensional structure of enzymes and proteins. In 1976, he received the Nobel Prize in Chemistry for his studies on the structure of boranes illuminating problems of chemical bonding. He was born on this date.

December 12, 1866

Alfred Werner, who was born on this date, was a researcher in coordination chemistry. He was awarded the Nobel Prize in Chemistry in 1913 for linkage of atoms in molecules, complex inorganic compounds, stereochemistry, & coordination theory of valency.

December 14, 1909

One hundred years ago, Edward L. Tatum was born on this date. He discovered the genes that regulate certain chemical processes and shared the Nobel Prize in Physiology or Medicine (1958) with George W. Beadle for their discovery that genes act by regulating definite chemical events and Joshua Lederberg for his discoveries concerning genetic recombination and the organization of the genetic material of bacteria.

December 16, 1809

Two hundred years ago, Antoine F. de Fourcroy died. With Antoine L. Lavoisier and Claude L. Berthollet, he devised chemical nomenclature. He described salts such as calcium chloride and was born on June 15, 1755.

December 17, 1920

Allied Chemical and Dye Corp. incorporated.

December 19, 1813

Thomas Andrews, who discovered that every gas has a critical temperature above which it cannot be liquefied, was born on this date.

December 20, 1890

Fifty years ago, Jaroslav Heyrovsky received the Nobel Prize in Chemistry for his discovery and development of the polarographic methods of analysis. He was born on this date.

December 22, 1884

One hundred and twenty-five years ago, St. Elmo Brady, the first black man to earn a Ph. D. in chemistry, was born on this date. He received his degree in 1916 from the University of Illinois and authored three monographs on Household Chemistry for Girls.

December 24, 1834

One hundred and seventy-five years ago on this date, Augustus G. Vernon-Harcourt invented standard lamp of 10 candle-power using pentane.

December 26, 1838

Clemens A. Winkler discovered germanium (Ge, 32) in 1886. He also researched the analyses of gases and was born on this date.

December 29, 1800

Charles Goodyear, who was born on this date, invented the vulcanization of rubber. It was in the year 1839, by an accident, that he discovered the true process of vulcanization, which cured not the surface alone but the whole mass. He was trying to harden the gum by boiling it with sulphur on his wife's cook stove when he let fall a lump of it on the red-hot iron top. It vulcanized instantly.

December 31, 1921

Gilbert Stork did research in alkylation, acylation, and vinyl ring radical cyclization. He also developed the theory of concerted polyene cyclization and was born on this date.

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

New York Meetings

www.newyorkacs.org

ACS NEW YORK SECTION MEETINGS FOR 2009

There will be no Board Meeting in December.

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.



LONG ISLAND SUBSECTION

BOARD ELECTIONS, HOLIDAY PARTY
AND SEMINAR

Ancient Science and Technology

Speaker: Dr. Alfredo Mellace
Nassau Community College

Ancient societies, like our modern society, had their own method of producing items and goods for construction, clothing, military, and other everyday uses. The objective of this presentation is to discuss aspects of the science behind ancient military technologies especially during the Greco-Roman periods. Some of the technologies with respect to building raw materials, metal/wood work, leather/textile dyeing, and the design and function of machines used in construction, war, and seafaring will be discussed. To this end, fully functional reconstructions of Ancient Roman weapons and clothing will be displayed illustrating first hand the technology of the time.

Date: Thursday, December 3, 2009

Time: Board Elections 6:00PM
Followed by seminar and
complimentary buffet dinner

Place: Nassau Community College
CCB Building, Room CCB-252
Garden City, NY

Directions:

www.ncc.edu/About/directions.htm

NEW YORK NANOSCIENCE DISCUSSION GROUP

Hosted by: Department of Chemistry
New York University

The next meeting of the New York Nanoscience Discussion Group will take place on **Tuesday, December 8, 2009**.

Mark you calendars for the Spring 2010 meetings, to be held on February 2 and April 6.

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, December 8, 2009

Times: Refreshments 7:00 PM
Presentations 7:30 PM

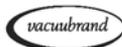
Place: New York University, Silver Center
Department of Chemistry
31 Washington Place, Room 1003

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

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CHEMICAL MARKETING & ECONOMICS GROUP — JOINT MEETING WITH THE METRO NEW YORK SECTION OF THE AMERICAN INSTITUTE OF CHEMICAL ENGINEERS

Fourth Annual Energy & Resources Conference — “From Concept to Commercialization: Funding Innovation for a New Economy”

Introductory Remarks:

Introduction by Conference Chair:

• Dr. Joseph V. Porcelli
President, JVP International Inc.

Welcome by Conference Host:

• Ed Ecock, Con Edison Ventures

Early AM Session

“Sources of Funding: Governmental”
Session Chair: Dr. Nada Anid
Dean of Engineering
New York Institute of Technology

Speakers:

- Ben Schrag
National Science Foundation
SBIR (Small Business Innovation Research)/STTR (Small Business Technology Transfer) Program
“The NSF SBIR/STTR Program”
- Charles Russomanno
U.S. Dept. of Energy
- Speaker from NYSERDA (New York State Energy Research & Development Authority)

Late AM Session

“Sources of Funding: Universities”
Session Chair: Dr. Herbert W. Cooper
President, Dynalitics Corp.

Speakers:

- Kevin B. Albaugh
University of Buffalo, Technology Transfer
“Open Innovation: University Tech Transfer and the Startup Enterprise”
- Dr. Dan Abraham
Director, Columbia Technology Ventures

Keynote Address

Introduction: Luke J. Verdett
Principal, Specialty & Fine Chemicals

Speaker:

- Dr. John C. Warner
President and Chief Technology Officer,
Warner Babcock Institute for Green Chemistry
“Introduction to Green Chemistry”

Early PM Session

“Sources of Funding: Venture Groups”
Session Chair: Dr. Herbert W. Cooper,
President, Dynalitics Corp.

Speakers:

- Dr. Misti Ushio
Vice President, Harris & Harris Group
- David A. Kalow
Founding Partner, Kalow & Springut, LLP
on Legal Matters
- George Jee
Con Edison Ventures - Long Island
Offshore Wind Project

Late PM Session

“Case Studies: New Tech Start-ups”
Session Chair: Mary K. Lynch
Senior Instructor, Con Edison

Speakers:

- Mitrajit Mukerjee
President, Exelus Corp.
- Michael Newell
CEO, Ener-G-Rotors Inc.
- Paul Woods
CEO, Algenol Biofuels Inc.

Date: Thursday, December 10, 2009

Times: full-day conference
Place: Con Edison Building
4 Irving Place
New York, NY

Cost: \$100 for members of the CM&E
or AIChE, Metro NY Section.
\$125 for all others.

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<http://tinyurl.com/Conf/Reserve.html>

Future CM&E Luncheon Dates:

2010 Economic Outlook

Date: Thursday, January 7, 2010

Pharmaceutical Review

Date: Thursday, February 4, 2010

2010 Petrochemical & Energy Outlook

Speaker: Dr. Fred M. Peterson
President, Probe Economics LLC

Date: Thursday, March 4, 2010

Times: Cocktails 11:30 AM

Luncheon 12 noon
 Presentation 1:15 PM
 Place: Club Quarters
 40 West 45th Street
 New York, NY
 Cost: \$45 for Members who reserve by
 Tuesday before Meeting.
 \$55 for Guests and Members
 (at door without reservations)

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

Life Is a Risky Business

Speaker: Dr. Ariel Fenster
 McGill University

We are constantly bombarded with information about the risks we face in life. As a result we worry. We worry about the safety of our food supply, toxins in the environment and the dangers of climate change. Life is indeed a risky business and we will not come out of it alive. But to be able to enjoy every moment it is important to know what is worth worrying about. Science teachers have the background and are well placed to sort out myths from facts, and to show that the real dangers are not always where they are thought to be.

Ariel Fenster teaches at McGill University, where he is a founding member of the Office for Science and Society, an organization dedicated to disseminating up-to-date information in the areas of food, food issues, medications, and the environment and health topics in general. Dr. Fenster is well known as an outstanding communicator and an exceptional promoter of science with an extensive program, developed over nearly three decades. Over that period he has given close to 600 lectures and public presentations in English and in French across North America and Overseas. He appears regularly on TV and radio to discuss health, environmental and technology issues and has presented numerous science segments for children's television. Recently he was

seen in French on Radio-Canada's popular daily health show "37,5" and in English on the "Discovery" science show "What's that all about?" His contributions to teaching, and to the popularization of science, have been recognized by numerous awards. Among them: the "Award for Excellence in Chemistry Teaching" by the U.S. Chemical Manufacturers Association and the "McNeil Medal for the Public Awareness of Science" from the Royal Society of Canada (inaugural award). Ariel Fenster, who is a native of the wine-growing region of Bergerac, France, holds a Master's degree from the University of Paris and a Ph.D. from McGill University.

Date: Friday, December 11, 2009

Time: Dinner 6:00 PM

Seminar 7:00 PM

Place: Ramapo College of New Jersey
 Room SC-138 (Alumni Lounge)
 Mahwah, NJ

Cost: \$20; \$10 for students
 (no cost for seminar only)

Please contact Ms. Sherrill Cox by e-mail at scox@ramapo.edu by December 4, 2009.

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

**Deciphering Bipolar Disorder: Insights
for Improved Research Strategies**

Organizers: Michele Kelly
Wyeth Pharmaceuticals

Dan Widzowski
Astra Zeneca

Speakers: Haim Einat
University of Minnesota

Rifaat S. El-Mallakh
University of Louisville
School of Medicine

Todd Gould
University of Maryland
School of Medicine

Alexander B. Niculescu, III
Indiana University
School of Medicine

This symposium will highlight new developments in Bipolar disorder models and biomarker identification, and will reveal how these new strategies can further our understanding of the disease and our ability to identify new therapies.

Date: Tuesday, December 15, 2009

Time: 1:00 – 5:00 PM

Place: New York Academy of Sciences
Conference Center
7 World Trade Center – 40th floor
250 Greenwich Street
(at Barclay Street)
New York, NY

Reserve a seat on-line at:

www.nyas.org/events

NYAS Members, BPDG Affiliates, and NY-ACS Members may attend BPDG meetings free of charge. Non-members may attend for a fee of \$20 per event; Student Non-members for \$10.

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**HIGH SCHOOL TEACHERS
TOPICAL GROUP**

The Physics of Metals

Speaker: Julie Nucci, Ph.D.

Director of Education Programs
Center for Nanoscale Systems
(CNS)

CNS Institute for Physics
Teachers (CIPT)
632 Clark Hall, Cornell University
Ithaca, NY

jn28@cornell.edu

The electrical, thermal, and mechanical properties of metals are explained as a function of their electronic structure, atomic structure, and defects. Electromigration, the electric current biased diffusion of atoms in a conductor, will be discussed and its relevance to the semiconductor industry explained. This presentation will also include a paper activity designed to eliminate student misconceptions regarding electron motion.

Date: Friday, December 18, 2009

Time: Social and Dinner — 5:45 PM

Place: M&G Pub (Murphy and Gonzales)
21 Waverly Place (at Green Street,
North-east corner)
New York, NY

No reservations required

Time: Meeting 7:15 PM

Place: New York University
Silver Center Room 207
32 Waverly Place (South-east
corner Washington Sq. East)
New York, NY

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.

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58TH 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, presentation of student papers (15 minute talks to small groups), followed by a luncheon.

Last year's URS, at Pace University in Pleasantville was a great success; we had over 120 presentations by students from all over the New York region. The keynote address was given by Dr. Michael Alekshun from Schering Plough.

For more information go to:

http://newyorkacs.org/grp_students.html

Date: Saturday, May 8, 2010

Place: Adelphi University

If you have any questions please contact:
Alison Hyslop, Co-chair
hyslopa@stjohns.edu

Sharon Lall-Ramnarine, Co-chair
slallramnarine@qcc.cuny.edu

JaimeLee Rizzo, Co-chair
jrizzo@pace.edu



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.



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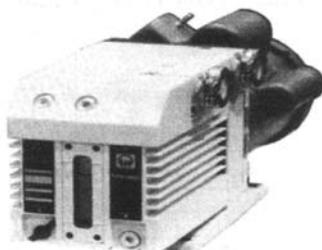
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North Jersey Chair's Message

Dear Fellow Members of the American Chemical Society,

I am truly honored and excited to represent you as the Chair of 2010 American Chemical Society-North Jersey Section (NJ-ACS). I want to take this opportunity to thank Joseph Potenza (2009 Chair) and Michael Miller (2008 Chair) for their leadership. I also wish to acknowledge the hard work and dedication of our members, who have served the Section in various capacities. The self-less service and hard work of the volunteers are admirable. My hearty congratulations to Jeannette Brown, Maureen Chan, Edwin Chandross, George Heinze, Elsa Reichmanis, Marian Smith, Susan Fahrenholtz, Malcolm Sturchio (posthumous) and William Greenlee for being inducted into the Inaugural class of ACS Fellows for Excellence in Chemistry, Service to Society. Well deserved!

Over the last 85 years, the NJ-ACS has grown to become one of the largest Sections, with over 7000 members. This has been possible because you believe in what ACS and NJ-ACS offer to you. We should all be very proud that under the leadership of Michael Miller, NJ-ACS was the winner of three ChemLuminary Awards for 2008: (1) Outstanding performance by a local Section in the very large category, (2) Greatest community involvement in Chemists Celebrate Earth Day and (3) Outstanding community involvement in National Chemistry Week.

NJ-ACS is committed to the goal of bringing quality programs during the upcoming year. However, we are living in difficult times and it is becoming increasingly challenging to run a non-profit organization such as NJ-ACS. Due to economic hardships, I no longer can rely on the generous support provided by the local companies. The issues we face over the coming year(s) cannot be addressed by me alone or the executive committee. Your help as an individual is crucial. The Power of One can be multiplied several hundred times over if you get involved.

NJ-ACS executive committee supports activities of a number of Topical Groups — from Organic Chemistry to Chromatography, from Drug Metabolism to Polymer sciences. I believe it is also important to continue to support and promote programs such as Project SEED and National Chemistry Week. These programs are the life blood of NJ-ACS. So, how do we continue to support such programs? I believe it is doable through innovation, collaboration and effective communication. Let me elaborate on this further.

Innovation will come from your involvement in the activities of the topical groups and other programs. Become a member of the ACS, join the topical group of your choice and discuss your innovative ideas that will not only benefit the organization but also benefit the society. I must admit that the value of my own membership was not apparent until I started doing the voluntary work for the Organic Topical Group. You will find that such voluntary work is highly satisfying and rewarding.

The time may be ripe to create additional Topical Groups to address the needs of those colleagues whose line of work may not be distinctly covered by the current Topical Groups. For example, it might be worthwhile to consider creating a "Regulatory Science" Topical Group as a forum to discuss issues and challenges faced by the pharmaceutical industry in getting approval of a new drug in this ever changing regulatory climate.

Through joint collaboration, we can tap into the talents of other local Sections in NY/NJ/PA to organize major events. This will require up-front creative thinking and planning but the rewards are enormous. We will need to explore how we could effectively use webinars to bring the various sections in NY/NJ/PA together, which will keep the overall cost down without compromising the quality of the programs.

Effective communication within the Section and across Sections is of paramount importance. As an example, *The Indicator* is now delivered to you electronically. This has improved the coverage of the Section activities, while reducing the cost. Likewise, we need to think about the types of electronic communication that would be suitable for other activities. I'd also like to see that we remain focused on those activities that provide greater rewards and satisfaction; we make timely and crisp decisions and maintain transparency.

I am committed to ride through the challenges with your involvement, commitment and collaboration. I welcome your ideas. I encourage you to visit our website www.njacs.org to learn about what this Section offers you and how you could help the Section. If you have any questions or would like to share your thoughts, please do not hesitate to contact me at asingh.njacs@gmail.com.

I wish you a very joyful and peaceful New Year.

With kind regards,

Ambarish K. Singh, 2010 Chair, ACS-North Jersey Section • asingh.njacs@gmail.com

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, December 14, 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, December 9, 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, December 3, 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.

Learn more about the
North Jersey Section at
www.NJACS.org

Education



A NYSTAR Designated College Applied
Research and Technology Center

One Day Short Course *Introduction to Polymer Synthesis*

Instructor:

Prof. George Odian
Emeritus Professor of Chemistry
College of Staten Island, CUNY

Date: January 26, 2010

Location:

College of Staten Island
2800 Victory Blvd
Staten Island, NY 10314



Registration Fees*:

\$150.00 Industry
\$50.00 Academia

*includes lunch and refreshments and parking

Contact:

Auerbach.cepm@mail.csi.cuny.edu

Phone: 718-982-3936

Fax: 718-982-4240

Website: www.chem.csi.cuny.edu/cepm/

Registration Deadline January 8, 2010

TEACHER AFFILIATES

Executive Committee Meeting

Date: Thursday, December 3, 2009

(Call first to verify) 732-821-1781

Place: JP Stevens High School
855 Grove Street
Edison, NJ

Contact: Paul Sekuler

researchehs@hotmail.com



NORTH JERSEY YOUNGER CHEMISTS COMMITTEE

Rutgers Science Careers Symposium

Sponsored by: Rutgers Chemical Society
and the NoJ Younger
Chemists Committee

Keynote Speaker: Valerie Kuck
ACS Career Consultant

Chemists are encouraged to come and share their story with students who are developing their career plans. This is not just limited to Younger Chemists, but others who started out as science students and who adjusted their plans as needed, adjusting to opportunity, interests and experience.

Students will be able to network with company representatives and various scientific career stations.

Valerie Kuck, a long time ACS Career Consultant and Presenter will share her observations on optimizing one's career course, based on the individual's unique strengths and interests.

A Panel of Scientists will share their career story and answer student questions.

Date: Tuesday, December 8, 2009

Time: Refreshments, registration, and networking session 7:00 PM
Keynote Speaker 8:00 PM
Panel Discussion 9:00 PM

Place: Rutgers University
Busch Campus Center
604 Bartholomew Road
Piscataway, NJ

Fee: Free

Parking is available across the street and South of the building.

Visit www.njacs.org for further details and registration.

ChemTAG

Date: Thursday, December 10, 2009

Time: 4:00-6:00 PM

Place: J. P. Stevens High School
855 Grove Avenue, Edison, NJ
<http://www.jpstevens.org>

Paul Sekuler researchehs@hotmail.com



METRO WOMEN CHEMISTS COMMITTEE

The Chemistry of Chocolate

The Chocolate Path will provide a 9-flight chocolate tasting and will discuss the chemistry of chocolate!

Date: Thursday, January 28, 2010

Time: 6:00 PM

Place: The Chocolate Path
94 Walnut Street*(New Location!!)
Montclair, NJ
www.chocolatepath.com

Cost: ~ \$25.

*close to the Walnut Street train station

Please RSVP to Kelly George
(Kelly.george@roche.com) by Friday,
January 22, 2010.



NORTH JERSEY YOUNGER CHEMISTS COMMITTEE

We are pleased to announce the new executive committee for 2009-2010:

Monica Sekharan - Chair
Batsal Devkota - Vice Chair
Chenghua Shao - Vice Chair
Jing Zhou - Secretary/Treasurer
Tomeka Saxon - Membership
Ruoqiu Wu - Webmaster
Lauren Castelli - Public relations

YCC goals for the upcoming year involve growing the committee, exploring new programs to link younger chemists together, and carrying on all of the wonderful events established in years past. We will continue to work to help students and young professionals along their career paths by involving them in national and local events.

The new executive committee members look forward to an eventful 2009-2010.

Sincerely,
Jing Zhou
Past chair, YCC of NJACS

CHEMISTRY OLYMPIAD

Westfield High School Student Saluted in Congressional Record

High School student **Yixiao Wang** was presented a copy of the Congressional Record containing praise for his academic excellence and his win of a gold medal at this year's annual International Chemistry Olympiad. Rep. Leonard Lance (R-NJ) inserted remarks praising Wang in the Record and made the presentation Friday, October 2, at the high school which is located in Lance's congressional district.

The Congressman saluted Wang's academic success and pointed out the need for U.S. students to excel in math and science.

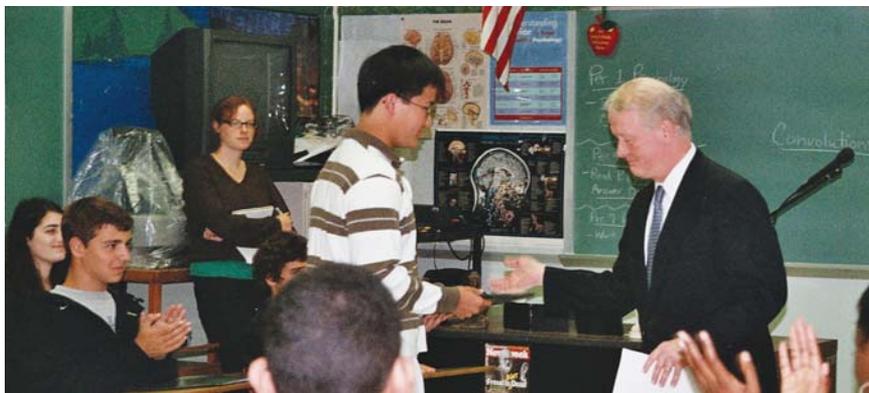
In attendance were Westfield Mayor Andy Skibitsky, Superintendent of Schools Dr.

Margaret Dolan, Westfield High School Principal Peter Renwick and Westfield Science Supervisor Dr. David Stoneback.

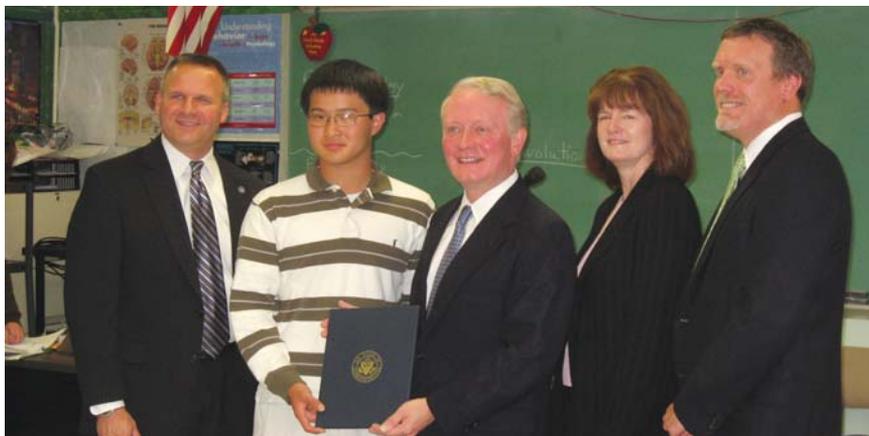
Also attending the event were Chair of the North Jersey Olympiad Committee Dr. Ray Baylouny, Secretary of the North Jersey Section Bettyann Howson, and Chair of the North Jersey Government Affairs Committee Maureen Chan. Yixiao Wang's Olympiad win is one of many academic honors he has won. He is also a member of the high school marching band and the youth symphony. His hobbies include playing the flute, reading and swimming.

The American Chemical Society is a major sponsor of the U.S. team for the annual International Chemistry Olympiad.

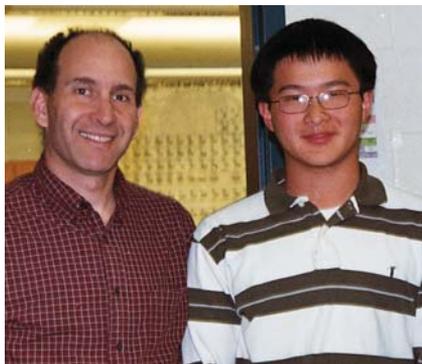
(continued on page 16)



Congressman Leonard Lance presenting citation to Yixiao Wang



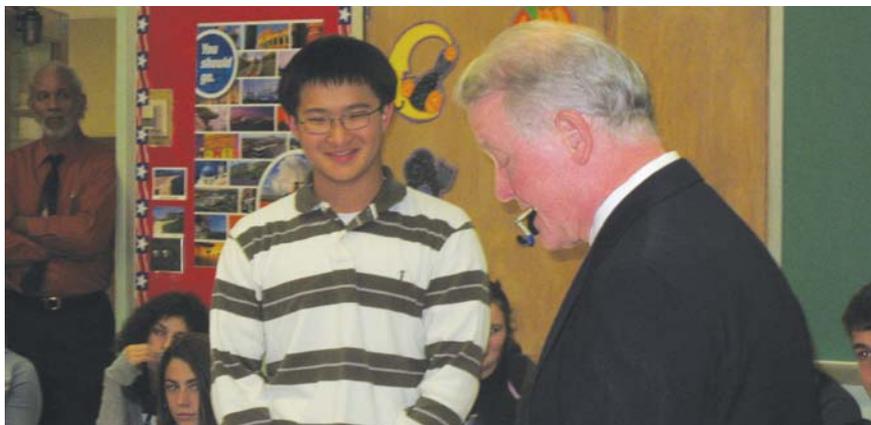
Mayor Andy Skibitsky, Yixiao Wang, Congressman Leonard Lance, Superintendent Margaret Dolan, and Principal Peter Renwick

CHEMISTRY OLYMPIAD*(continued from page 15)*

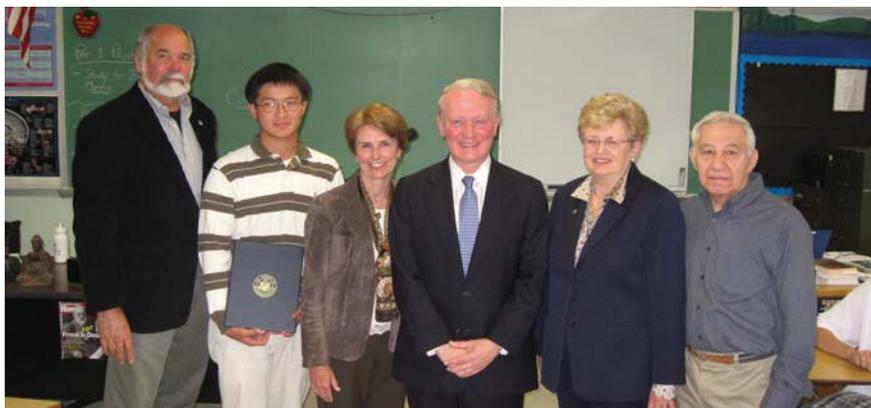
Mr. Louis Casagrande (AP Chem Teacher) with Yixiao Wang



Ray Baylouny with Yixiao Wang



Congressman Leonard Lance reading citation to Yixiao Wang



Science Supervisor Dr. David Stoneback, Yixiao Wang, Bettyann Howson, Congressman Leonard Lance, Maureen Chan, and Ray Baylouny

Call for Nominations

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 submit nominations for the Edward J. Merrill Award, North Jersey Section, for Outstanding High School Chemistry Teacher for the year 2010.

Go to njacs.org/education.html#merrill and obtain your preliminary nomination form and guidelines. The full packet takes time to do a good job! The deadline is **December 1, 2009**.

We all know an outstanding high school chemistry teacher. Perhaps one from your town, your son's or daughter's teacher or

(continued on page 18)

Education



Department of Chemistry and Biochemistry Spring 2010 - Graduate Courses January 19 – May 7, 2010 *Registration: January 14, 2010

Courses and programs leading to the M.S. and Ph.D. degrees are offered on a full or part time basis. Classes meet during the evening or on weekends to accommodate busy working professionals. Non-matriculated students welcome.

Course Number	Title	Day	Time
CHEM 6204 NA	Spectrochemical Methods Of Analysis	Mon.	6:00 PM-9:00 PM
CHEM 6212 NA	Stats-Applied Analytical Chemistry	Wed.	6:00 PM-9:00 PM
CHEM 6402 NA	Chemical Kinetics	Thurs.	6:00 PM-9:00 PM
CHEM 7399 NA	Special Topics in Organic Chemistry: Catalysis	Tues.	7:00 PM-10:00 PM
CHEM 7512 NA	General Biochemistry II	Tues.	7:00 PM-10:00 PM

*For more information, please visit the Department of Chemistry and Biochemistry website at <http://artsci.shu.edu/chemistry/> or call us at 973-761-9414, or email Prof. Cecilia Marzabadi, Director of Graduate Studies at Cecilia.marzabadi@shu.edu

CALL FOR NOMINATIONS

(continued from page 17)

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, njmxoie1@verizon.net.



2010 SISTER MARIAN JOSÉ SMITH EXCELLENCE IN EDUCATION AWARD

This American Chemical Society award consists of \$1,000 prize and a recognition plaque. It recognizes a Chemistry professor from a degree-granting Institution in the North Jersey area for inspiring students and launching them on successful careers in chemistry as manifested by their accomplishments.

Please submit nominations and supporting letters to Jiwen Chen, Awards Committee Chair, c/o NJ ACS, 4 Cameron Road, Piscataway, NJ 08854. Tel: 609-818-6319, email: jchen@njacs.org. Nominations must be received by **February 19, 2010**. Visit <http://www.njacs.org/awards.html#jose> for more information and a list of past recipients.



DISTINGUISHED SCIENTIST AWARD

The **Westchester Chemical Society**, New York subsection, is seeking nominations for the its Distinguished Scientist Award. The nominee must either work or reside in Westchester county, New York. The award is presented in May, 2010. Send nominee resume to: Dr. Joseph Sencen, 5 Summit Circle, Somers, New York, 10589 or jsencen@optonline.net

Others

EARTH AND ENVIRONMENTAL SCIENCE LECTURE SERIES AT MONTCLAIR STATE UNIVERSITY

The public is welcome to attend this series of lectures sponsored by the Earth and Environmental Science Department.

Date: Tuesdays

Time: 4:00 PM

Place: Mallory Hall Room 265

Cost: Free and open to the public.

December 8

Dr. Judith Weis, Rutgers University (Author Presentation), "Salt Marshes: A Natural and Unnatural History"

(Dr. Weis will be available for book signing after the seminar)

For information about these lectures contact Kevin Olsen, 973-655-4076 or

OlsenK@Mail.Montclair.Edu



TWO 2009 NOBEL PRIZES AWARDED IN BIOCHEMISTRY

By Leopold May

The Catholic University of America
Washington, DC

Two Nobel Prizes were awarded this year in the field of biochemistry. The first, the Nobel Prize in Chemistry, for studies of the structure and function of the ribosome was awarded to Venkatraman Ramakrishnan, MRC Laboratory of Molecular Biology, Cambridge, UK, Thomas A. Steitz, Yale University, New Haven, CT, and Howard Hughes Medical Institute, and Ada E. Yon, Weizmann Institute of Science, Rehovot, Israel. The ribosome is an organelle in the living cell whose size is about 200 Å, composed of protein and ribosomal RNA that is the site of protein synthesis in the cytoplasm. They contain tRNA (transfer RNA) and mRNA (messenger RNA) that are used in the synthesis of proteins. Using x-ray crystallography, the awardees determined the molecular structure of the ribosome and generated three-dimensional models that show how different antibiotics bind to ribosomes.

The second, the Nobel Prize in Physiology or Medicine, was awarded to Elizabeth H. Blackburn, Carol W. Greider, and Jack W. Szostak for the discovery of how chromosomes are protected by telomeres and the enzyme telomerase. Their research revealed that DNA in the chromosomes is copied by the DNA polymerase enzyme during cell division. The ends are capped by telomeres without which, the chromosomes would be shortened during each cell division, a key part of the cell's ageing mechanism. The telomerase contains a key RNA sequence that acts as a template for the telomere DNA, which attracts proteins to form a protective cap around the ends of the DNA strands.

ACS News

WANT TO SUPPORT YOUR LOCAL CHEMISTRY TEACHERS? NEED MATERIALS FOR A HIGH SCHOOL EVENT?

Consider the *ChemMatters* publication. *ChemMatters* is a bimonthly magazine for high school students published by the ACS Education Division, and its mission is to help students find connections between the chemistry they learn and the world around them. Each issue brings intriguing stories informing readers about creative applications of chemistry or real-life mysteries solved by chemistry. A free, web-based Teacher's Guide contains background information, follow-up hands-on activities, classroom demonstrations, and other resources allowing teachers to incorporate *ChemMatters* into their instruction, or assign it as supplemental reading. A 25-year archive of the *ChemMatters* magazine is now also available on CD.

Support high school teachers and students in our area and present them with a gift of a *ChemMatters* subscription (only \$14) or *ChemMatters* CD (\$30). For more information about these great resources visit www.acs.org/ChemMatters. To receive a limited number of free copies of *ChemMatters* contact Marta Gmurczyk at m_gmurczyk@acs.org or 202-452-2105.



UNDERGRADUATE STUDENTS CAN NOW PARTICIPATE IN LOCAL SECTIONS

Effective June 2009, all ACS Student Affiliates are now Student Members. Last fall, the ACS membership voted to change the Society bylaws to grant all undergraduates the rights of full membership as Student Members, including membership in ACS Local Sections. For further details regarding the membership categories changes, please refer to the June 15, 2009 article in *Chemical & Engineering News*.

ACS is now actively recruiting undergraduates to become members of the ACS. Undergrad.ACS.org is the primary recruitment tool for this audience. Please refer students to this Web site if they are interested in joining ACS. The site describes all of the

benefits of ACS membership geared specifically for undergraduates. We hope that by bringing in new undergraduate student members, ACS Local Sections such as North Jersey and New York will benefit from an increase in participation and contributions from the next generation of chemical scientists.

We encourage you to reach out to this audience of new members and welcome them into our local sections. Additional information can be found at <http://undergrad.ACS.org>. Feel free to send any questions to ACS Membership Marketing by clicking on "Contact Us," which is found at the bottom of every page on the National ACS Web site.

Volunteer Corner

As we approach the winter holidays and the end of 2009, we reflect on the gifts we have been given all year. We also think of gift-giving. The greatest gift is the gift of time and now is the season to plan how we will express that in the coming year. A constant concern in the organization is how important it is to develop a love of science early in a child's life. Certainly many of our programs are aimed at cultivating that attitude and aiding in resources to develop and nurture this talent. I wonder if we ever step back to reflect on another attitude that is constantly modeled...the spirit of volunteerism. We do not always point that out as an outcome of giving our time because we are focused on a specific goal. Recent celebrations like National Chemistry Week help to project a good image of chemistry, but upon deeper reflection, this type of intergenerational event communicates a deeper message to young people. Not only do adults model the value of "giving back" but, by their participation in the event, young people experience "giving back" early on and soon this attitude becomes a habit. Even in a recession, we can continue this practice. Think about the ways you will contribute in 2010.

By Bobbi Gorman
North Jersey Section

Learn how you could get involved in ACS by e-mailing
Volunteer@TheIndicator.org

Going Places

This column will highlight members of our Sections who have moved out of our area or are otherwise less visible locally but still involved in ACS and chemistry. This month:

Chuck Jewell.

I joined the ACS around 1980 when I started graduate school at Florida State. By 1982 I moved to Northern New Jersey to work as a medicinal chemist at Sandoz in East Hanover. Since I did not complete my Ph.D. yet, I was encouraged to learn all I could, so I took advantage of the many symposia in the area, many sponsored in part by the North Jersey Section. I especially remember the Chemistry as a Life Science Symposium, held on the Rutgers Newark Campus every other year. I remember being there when Professor Peter Schultz literally brought down the house. Those of you that were there know what I am talking about. The fine education available in the North Jersey area for chemistry was better than university graduate training, and it inspired me to go back and finish what I started at Florida State. After gaining my Ph.D., I came back to North Jersey and Sandoz and continued a wonderful career, trying to knock down the barriers to diabetes and cardiovascular drugs, and even getting to ride the wave of combinatorial chemistry. Sandoz became Novartis, I got to move from East Hanover to the wonderful labs at the Ciba Geigy site in Summit. Since then I have continued to evolve at Biogen and again with Novartis in Cambridge, MA. Now I am serving the American people by helping to ensure that drugs remain safe and effective as a chemistry reviewer at the FDA in Maryland. Chemistry has been a fine career for me with some of my fondest memories in New Jersey with the support of the North Jersey ACS, under the mentorship of Dr. James Wareing at Sandoz, and working with many wonderful associates.

If you have comments or suggestions of people to highlight e-mail NoJOnTheMove@TheIndicator.org

Partners

TRI-STATE CHINESE AMERICAN CHEMICAL SOCIETY (TRI-STATE CACS)

Tri-State CACS is the most active local chapter of Chinese-American Chemical Society (CACS). Members of Tri-State CACS come from New Jersey, New York, Connecticut, Pennsylvania, and Delaware. Founded in 1981, CACS is a nonprofit, professional organization and does not have political affiliation of regional or national bias. Membership is open to professionals and students in chemistry, chemical engineering, and related fields, and to individuals and corporations supporting the objectives of the society. The objectives of CACS are to promote interactions among its members, to increase awareness of the issues and contributions of this collective community, and to facilitate cross-Pacific exchanges. The Annual Symposium of Tri-State CACS in June every year attracts hundreds of its members and friends in the greater Tri-State area. Tri-State CACS also serves as a bridge between China and US and has in recent years successfully organized three international conferences in Beijing. This summer, Tri-State CACS, together with China Intellectual Property Society (CIPS) and ACS Division of Chemistry & the Law, successfully organized the Second Beijing International Pharmaceutical & Chemical Intellectual Property Forum in Beijing, China on August 5-8, 2009. Three of the four commissioners from the State Intellectual Property Office of the People's Republic of China (SIPO) including Mr. TIAN Lipu attended the forum and many IP experts from around the world presented talks at the forum addressing Chinese and international practices in IP law, especially patent laws, as applied in the pharmaceutical and chemical industries. For more information about Tri-State CACS and upcoming activities, please visit our website at <http://www.tristatecacs.org/>

Give us feedback on The Indicator by completing the survey at www.TheIndicator.org/survey.html

Division Spotlight

DIVISION OF PROFESSIONAL RELATIONS

The Division of Professional Relations (DPR) is one of 33 ACS technical divisions. Formed in 1972, it is different from most of the other divisions in that it focuses on the profession of chemistry, and not a technical specialty.

The mission of the division is to serve as a home for all ACS members concerned with professional development and to be an advocate for members of the Society concerned with professionalism. Within the division, there are newly formed subdivisions for Women Chemists, Younger Chemists, Minority Affairs, Chemists with Disabilities and Ethics.

Programming by the Division is done mostly at national meetings, and is often done in collaboration with committees and other divisions, especially the Committee on Economic and Professional Affairs and the Ethics Committee. Recent programs have focused on consulting careers, ethics, public policy, and globalization. The division also sponsors ethics workshops at regional meetings.

Additionally, DPR sponsors two awards, the Henry Hill Award and the Lou Sacco Award. The Henry Hill Award is given annually to a person who has served the profession in the area of professional relations in a unique and distinguished manner. The Lou Sacco award is given to someone who has served the Division of Professional Relations in a meritorious and exemplary manner over a significant period of time.

Because DPR focuses on the profession, it is relevant to all ACS members, and all members should consider joining the division. The division is looking for additional members and volunteers to provide programming and services, especially at regional meetings.

If you are interested in joining or obtaining more information on volunteering within the division, please visit the website at <http://membership.acs.org/p/prof/>

**Send any suggestions
for articles to
Suggestions@TheIndicator.org**

Tools That Work

E-MAIL TITLES IN THE AGE OF FACEBOOK AND TWITTER

Why are your e-mail titles meaningless when your teenage family and friends can describe their situation in a few words on Facebook or 140 characters on Twitter? OK, maybe you give your e-mails useful titles – well done, but you are in a minority (and do you edit the title as the e-mail discussion continues?) Most e-mails have generic titles that do not command attention, create urgency or indicate what is contained in the e-mail.

How do you cut through the e-mail noise and get busy people to pay attention? Be clear, be concise and be respectful of others time. Everyone is busy, buried under e-mails and they may not have time to open your e-mail unless it is clear why they should open it and what it is about.

Consider this situation. You get an e-mail with title “seminar”, you open it to find only an attachment which you then open to find an invitation to a seminar on a topic you do not care about, at a time you will be busy, by a speaker you dislike. This only took a minute but it was a wasted minute and you are probably not pleased. The key information could have been visible before you even opened the message.

Include the organization or project name in the e-mail title and if there is a sub-team or a committee include that as well. Summarize the contents and indicate the reader has to do next e.g. “FYI”, “RSVP”, “Action Required”, “Distribute” etc. If there is no text in the actual body of the e-mail say so with “EOM” (End of Message).

You may feel this approach is rude, and some recipients may agree, but most busy colleagues will be pleased. Certainly you may need to adjust your approach for some people.

For example this column was sent to the Editor in an e-mail titled “Indicator: Tools article – e-mail titles (Dec)” – there is no doubt about what the e-mail is about and it will be easy to file and retrieve.

You can find more thoughts on e-mail etiquette at www.emailreplies.com/ and www.netmanners.com/

If you have comments or suggestions of tools to highlight in this column e-mail Tools@TheIndicator.org.

In the News

HARVARD CHEMIST ACCEPTS INAUGURAL DREYFUS PRIZE IN THE CHEMICAL SCIENCES

NEW YORK, October 1— Dr. George M. Whitesides, the Woodford L. and Ann A. Flowers University Professor of Chemistry at Harvard University, accepted the inaugural Dreyfus Prize in the Chemical Sciences, on September 30, 2009, at an afternoon ceremony at Harvard University's Pfizer Lecture Hall in the Department of Chemistry and Chemical Biology.

The prize, given biennially by the Camille and Henry Dreyfus Foundation, recognizes exceptional and original research in a selected area of chemistry that has advanced the field in major ways. Conferred this first year in materials chemistry, the prize consists of a monetary award of \$250,000—one of the largest awards dedicated to the chemical sciences in the U.S.—a citation and a medal.

"I'm particularly pleased and honored by this award from the Dreyfus Foundation. Its work in raising public awareness of chemistry is helping to educate young people about the transformative power of this science," said George Whitesides. "Chemistry has the opportunity of a century to do something profound for society. The whole area of materials chemistry, including challenges in energy, water, conservation, sustainability — commodity infrastructure — is up to us, as chemists, to work through."

After opening remarks by Michael Smith, Dean of the Faculty of Arts and Sciences at Harvard University, Henry C. Walter, President of the Dreyfus Foundation, reviewed the history of the Dreyfus brothers, chemists who founded the Celanese Corporation, and then presented the award. Marye Anne Fox, Chancellor of the University of California, San Diego, and Chair of the Dreyfus Scientific Affairs Committee, introduced Dr. Whitesides.

Whitesides has had a major and sustained impact in the chemical sciences and materials chemistry. One of the most innovative and prolific chemists of our time and the most highly cited living chemist in the world, he has developed powerful methods for the creation of new materials that have significantly advanced the field of chemistry and its societal benefits. His research extends across multiple disciplines, centered on chemistry, but touching biochemistry, drug design, and materials science. His work extends to the

engineering of functional systems and the applications of these systems in areas ranging from biology to microelectronics.

George Whitesides has received many prestigious awards, including the National Medal of Science, the Priestley Medal, the Benjamin Franklin Medal in Chemistry and the Kyoto Prize for Advanced Technology. In addition to his academic research, Whitesides has helped found 12 companies in biotechnology and materials science and holds more than 50 patents.

Over the past decade, the Camille and Henry Dreyfus Foundation has provided more than \$50 million in support of the chemical sciences. The programs support young faculty of exciting potential or early accomplishment, develop leadership in environmental chemistry, and openly solicit for projects that advance the chemical sciences at all levels.

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Dr. George M. Whitesides (r) accepting the inaugural Dreyfus Prize from Henry C. Walter, President of the Dreyfus Foundation.

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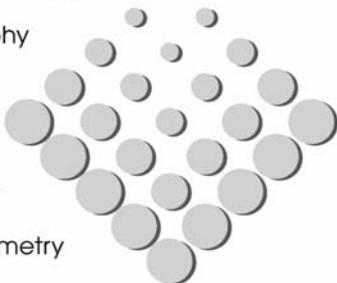
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