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See page 5.

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THE Indicator

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January 2005	November 14
February	December 13
March	January 14, 2006
April	February 14
May	March 15
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December	October 13



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

November Calendar

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Long Island Subsection
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Friday, November 18, 2005
High School Teachers Topical Group
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Saturday, November 19, 2005
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NORTH JERSEY SECTION

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Careers in Transition
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ChemTAG
See page 10.

Thursday, November 17, 2005
No. Jersey Group of Small Chemical
Businesses
See page 10.

Monday, November 23, 2005
North Jersey Executive Committee
See page 9.

2005 LEO HENDRIK BAEKELAND AWARD SYMPOSIUM AND PRESENTATION

Shape-Controlled Synthesis of Nanostructures: Simple Chemistry Meets Complex Physics

Recipient: Professor Younan Xia
Department of Chemistry
University of Washington

Date: Thursday, November 10, 2005
Place: Lucent Technologies
Murray Hill, New Jersey



Program

1:00 – 1:30	Registration	
1:30 – 2:30	"Controlling Inorganic Crystallization at the Nanoscale Using Organic Templates: Lessons from Biomineralization"	Dr. Joanna Aizenberg Bell Labs Lucent Technologies
2:30 – 3:30	"Materials and Patterning Techniques for Macroelectronics"	Professor John Rogers University of Illinois at Urbana-Champaign
3:30 – 4:00	Break	
4:00 – 5:00	"Catalytic Motors and Pumps"	Professor Tom Mallouk Pennsylvania State University
5:00 – 6:00	"Soft Lithography. Recent Results in Techniques for Fabrication of Functional Micro- and Nanostructures Using Stamping, Molding, and Derived Techniques"	Professor George Whitesides Harvard University
6:00 – 7:30	Reception, Dinner, and Presentation of the Baekeland Medal	
7:30	"Shape-Controlled Synthesis of Nanostructures: Simple Chemistry Meets Complex Physics"	Professor Younan Xia University of Washington

Pre-registration is recommended. Please register online at www.njacs.org. Deadline is Thurs, Nov. 3, 2005. The site also has directions, maps and parking information etc.

Price: \$75.00 (students: \$30). Payable at the symposium, or in advance using the form below: Cash or check, no credit cards, please!

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**Deadline for items to be included in the
January 2006 issue of *The Indicator* is
November 14, 2005.**

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THIS MONTH IN CHEMICAL HISTORY - PART I

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

Prepared for SCALACS, the Journal of the Southern California, Orange County, and San Geronio Sections of the American Chemical Society

I recently acquired through a used book outlet a copy of Volume II of the Extra Series, Numbers 5 and 6, bound with the Second Edition numbers 1 and 2, of the magazine "The New World: A Weekly Journal of Popular Literature, Science, and Music." These issues of "The New World" are dated October 1842 and March 1843 respectively and were edited by Park Benjamin, himself a writer, and published by J. Winchester.

These were enterprising gentlemen. In November 1842 the magazine published the first book of Walt Whitman, a potboiler of a temperance tale entitled "Franklin Evans or the Inebriate. A Tale of the Times". A couple of years later Winchester pirated Charles Dickens' latest novel, "Martin Chuzzlewit" and after publishing it serially in "The New World" issued the first American Edition in book form well before Harpers were able to produce the authorized edition. By now my readers are surely asking what all this has to do with chemical history? Patience, and all will be revealed. These Extra Series numbers of the magazine contain the complete texts, translated into English, of two of Justus Liebig's most important books, namely "Chemistry in its Applications to Agriculture and Physiology"; and "Animal Chemistry; or Organic Chemistry in its Applications to Physiology and Pathology." This demonstrates, I believe, an interest of the literate public in the science of the day which is strikingly in contrast to the situation in our times. A comparable publication is unimaginable in a modern general interest magazine.

In the early 1840s Liebig was regarded as the most important European chemist. He had been at Giessen for 15 years and had established the best known research school in chemistry. His work with Woehler on the benzoyl radical was already regarded as path-breaking, and his improvements in organic analysis had placed that science on a sound footing. He began to investigate chemical aspects of agriculture and, more generally, biochemical phenomena (as we would now call them) in the 1830s. It was his close friend and colleague Woehler who had discovered in 1828 the remarkable transformation of ammonium cyanate into urea, thus forging a link between inorganic chemistry and the chemistry of living organisms. Liebig decided to follow up this link.

"Chemistry in its Applications to Agriculture and Physiology" was originally presented to the British Association for the Advancement of Science as a part of a Report by Liebig on the state of organic chemistry. It was translated into English by Lyon Playfair, a distinguished chemist and, later, a noted politician. Liebig states: "I have endeavored to develop... the laws of Organic Chemistry in particular, in their applications to Agriculture and Physiology; to the causes of fermentation, decay, and putrefaction; to the vinous and acetous fermentations; and to nitrification". Liebig pays tribute to Humphrey Davy's pioneering work on "Agricultural Chemistry" which initiated reforms in farming practices in the early nineteenth century.

Liebig draws attention to the disconnect, so apparent at the time, between the views of chemists on natural phenomena of the kinds mentioned in the previous paragraph, and those of botanists and physiologists. He states: "Physiologists reject the aid of chemistry in their inquiry into the secrets of vitality, although it alone could guide them in the true path." He offers much useful advice to agriculturists, reinforcing with chemical reasoning such practices as alternation of crops, the use of natural and artificial manures. He also points out the value of chemical analysis of soils.

Liebig's views on fermentation brought him into conflict with Pasteur some years later. Liebig compared yeast with an inorganic catalyst, and said that in the fermentation of sugar solutions by yeast both the sugar and the yeast underwent decomposition. Pasteur opined that yeast was a living organism which grew during fermentation drawing its nourishment from the sugar, a view which corresponds to our present ideas.

There is much more of interest in the 63 closely printed large format quarto pages that make up Liebig's "Agricultural Chemistry" but space and time do not allow me to give more than this short abstract of its contents. In Part II, I will discuss the second of the Liebig books, that on "Animal Chemistry".

SEASHORES, SOIL CHEMISTRY, AND HADROSAURS

Or how the need for a good soil conditioner led to the discovery of New Jersey's state dinosaur.

By Kevin Olsen

Between 140 million and 70 million years ago, or during the Cretaceous and Tertiary periods, the action of the seas began to form the coastal plain that today stretches from Newfoundland to the Yucatan. To the north and east of the Raritan River subsequent glaciers would cover the original marine sediments. But in central New Jersey an exposed ridge formed from Cretaceous sediments gives us a glimpse into an ancient world.

During those 70 million years the sea levels repeatedly rose and fell many times. What is today northern New Jersey has still not been uplifted so that sometimes, the coastline was as far west as Scranton, Pennsylvania. At other times, the shoreline was found along a line running from New Brunswick to Trenton, and down the west bank of the Delaware River as far as Wilmington. And at other times, it ran along what we call today the continental shelf.

The earth's climate was warmer during the Cretaceous. Along the Jersey Shore, the ocean temperatures were mild year round and the coastline was lined with swamps and subtropical forests. At least 5 different species of dinosaurs inhabited this area along with marine reptiles, sharks, turtles, and thousands of invertebrate species. Two of the dinosaur species were Hadrosaurs, the Hadrosaurus foulkii and Hadrosaurus minor. They were tall, two-legged, duck-billed, herbivores. Because their bones are often found in marine sediments, paleontologists believe they adapted to life in coastal estuaries or along the banks of rivers. Skin imprints from Hadrosaur fossils in the western United States even show evidence of webbed feet. Some paleontologists believe that these animals lived in large herds, nesting in the uplands and periodically migrating to the shore. (New Jersey's first Shoebies?) Others believe that the animals lived there all year.

While the Hadrosaurs were grazing in the estuaries, oceanic conditions were right for the formation of glauconite. This greenish clay mineral in the mica family consists of hydrated iron aluminum potassium silicates. It also contains trace amounts of phosphorus. During a period of 140 million years, the seas would deposit some 12 to 24 (depending on which geologist is counting) distinct layers of clays, sand, gravels, and marls in what is today central New Jersey. (Marl is generic term for a mottled marine clay or shale. It often contains calcium in the form of fossil shells.) Some of the deposits are less than 20 feet thick, while the deepest extends 3,800 to 6,400 feet down to Precambrian rocks.

Except for some of the deeper formations, the Cretaceous and Tertiary sediments remained unconsolidated, that is, they never turned into rock. Subsequent soil formation and deposition left them largely uncovered or at least near the ground surface. By the time Europeans arrived this mineral wealth could be tapped with nothing more sophisticated than a shovel and a cart.

By the middle to late 1700s portions of New Jersey had already been farmed for more than a century and contrary to popular mythology, many colonial farmers were poor stewards of their soil. Visitors noted that some fields were so depleted that no crops would grow and they were reverting back to forest. For many the solution was to pack up and move west. Others used a crude form of crop rotation or used their depleted fields for grazing. In an era when all labor was done by muscle power and land was relatively cheap, it often made little sense to waste effort on the long-term care of the soil.

Not everyone shared this view. Both gentleman farmers and ordinary yeomen experimented with ways to restore soil fertility. Manuring and spreading lime were both well-known techniques. The use of wood ashes as soil conditioner was also coming into vogue. These were plentiful wherever land was being cleared. Other farmers tried plowing under rotting vegetable matter and even salt. Starting in the middle 1700s farmers began to try mudding their fields. Silt from stream beds, sand, and muck from swamps, were all mixed with soil. Some worked better than others and the mudd that worked best was the glauconite-rich Greensand Marls. This material was most commonly found in a belt some 6 to 13 miles wide

(continued on page 8)

SEASHORES

(continued from page 7)

and up to 30 feet deep stretching from the coastline south of Sandy Hook, through Freehold, Mullica Hill, Woodstown, and Salem. Substantial amounts were also found in Monmouth, Burlington, Gloucester, and Salem counties. The town of Marlboro in northwestern Monmouth County was named for the marls found there.

The idea of using Greensand Marls was slow to catch on. In 1815 several papers on the use of marl were presented at the Philadelphia Society for Promoting Agriculture. Marls had also been used in England as a soil conditioner since the 1600s. Sadly, the knowledge of its use did not cross the Atlantic with the first generations of English farmers. With steady persuasion however its use increased and by the time Henry Darwin Rogers was appointed State Geologist in 1835, some 80 farmers were mining and using the material.

As State Geologist, Henry Rogers gave the marl the name "Greensand" but was at a loss to explain its color. French marls were also green but those found in England could be gray, blue, yellow, or red. Rogers undertook the first systematic mapping of the beds. He also analyzed the material and determined that it consisted of silica, iron oxides, potash, lime, magnesia and water. This was very similar to results obtained by French chemists for the marls near Le Havre. English marls on the other hand, contained larger proportions of magnesia and only traces of potash.

Rogers published instructions so that farmers determine if their local marls contained enough Greensand for agricultural use. They should first make a rough estimate of the Greensand content using a magnifying glass. Then the marl should be washed to separate the clay from the Greensand. If accuracy was desired, the proportion of Greensand should be measured with an apothecary's balance. Alternatively, the marl could be placed on a hot stove and the Greensand would turn red. Lastly the marl could be tasted. An inky taste indicated the presence of copperas (an iron sulphate) or aluminum sulphate. (Copperas was used at this time to make ink.) The presence of these materials would render the marl unsuited for agriculture.

By the middle 1800s mining marl had become a major industry. Cheap railroad transportation expanded the market for the material. In an era before commercial fertilizers were available, it must have seemed miraculous.

In the mid-1850s a professor of natural science and chemistry at Rutgers College named George H. Cook made another systematic study of the Cretaceous and Tertiary formations. He traveled extensively through the region carefully delineating, mapping and describing each one. But his greatest enthusiasm was for the Greensand Marls, which he promoted extensively among New Jersey's farmers. Appointed State Geologist after the Civil War, Cook used the 1868 Report of the State Geologist to advocate expanding the marl mining operations by consolidating smaller pits and even suggested that huge areas of central New Jersey be devoted to mining marls.

In 1858 William Parker Foulke, a member of the Academy of Natural Sciences, was on vacation in Haddonfield, New Jersey. Haddonfield was a sleepy, largely Quaker community whose main claim to fame was that it was the site of several Revolutionary War skirmishes. Foulke befriended a local landowner John Hopkins who showed the visiting scientist some enormous vertebrae that had been found in a marl pit some twenty years earlier. Foulke quickly obtained Hopkins' permission to dig in the abandoned pit. He hired some local marl diggers and after about ten feet of digging they found a layer of fossil seashells and large, heavy bones.

Foulke called in his fellow Academy member, Dr. Joseph Leidy, a professor at the University of Pennsylvania. Together they excavated what was then the most complete dinosaur skeleton yet discovered. Sadly, only a small portion of the lower jawbone was found and so the head of Hadrosaurus Foulke (literally Foulke's bulky lizard) remained conjectural. Hadrosaurus Foulke was the first mounted dinosaur skeleton to be displayed anywhere in the world as well as being the first dinosaur known to walk on two legs.

(continued on back cover)

North Jersey Meetings

<http://www.njacs.org>

EXECUTIVE COMMITTEE AND SECTION MEETING

All ACS members are welcome to attend.

Date: Monday, November 28, 2005
Times: 5:30 PM
Place: Fairleigh Dickinson University
Rice Lounge
New Academic Building
Madison, NJ

Cost: Dinner approx. \$10.00.
(Pizza and soda)

Reservations: For dinner, call 732-463-7271 or email njacsoffice@aol.com prior to **Wednesday, November 23, 2005.**

For reservations, call (732)463-7271 or email jppenna@aol.com and state your wish to make reservations for the ACS Dinner **before Wednesday, November 23, 2005.**



CHEM CENTRAL MEETING

Date: Wednesday, November 2, 2005
Time: 4:00 PM
Place: Princeton Board of Ed
Technology Department
Princeton, NJ

Contact: Bob Corell at
robert_corell@monet.prs.k12.nj.us

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 searching.

The next meeting for the Careers In Transition Group will be held **Thursday, November 3, 2005**, 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, November 7, 2005
Time: 4:30 PM
Place: Chatham High School
255 Lafayette Avenue
Chatham, NJ

Contact: Diane Krone at (201) 385-4810 or kroned@optonline.net



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ChemTAG MEETING

Date: **Thursday, November 17, 2005**
Time: 4:00 PM
Place: McNair Academic High School
123 Coles Street
Jersey City, NJ

Contact: Jeremy Stanton at
JSTANTON@jcboe.org
for more details and a registration form.



NJ GROUP OF SMALL CHEMICAL BUSINESSES

"Mini OSHA 10-Hour Course"

Presented by Mike Yarnell
OSHA Compliance
Assistant
Avenel, NJ Area Office
Member, OSHA Chemical
Specialized Response Team

Abstract:

There is vast amount of information resident at the OSHA area office that can help a manufacturer, in particular a small chemical manufacturer, take steps to compliance with OSHA standards. Here is your chance to get a valuable overview of OSHA 10-hour course. The course provides the students with an overview to: Identify hazards and determine appropriate safety procedures; Identify methods to abate the hazards; Understand and define OSHA standards; Recognize how to be in compliance with OSHA standards. Upon satisfactorily completion of all 10 hours of training, the individual will receive an OSHA 10-hour general industry safety completion card.

This presentation is a "Mini OSHA 10-hour course". It contains the same subject matter as the real OSHA 10, but less detail (and less time of course). It is intended to increase audience knowledge of hazards and OSHA requirements. The Mini OSHA 10 hour program is intended to provide glance of the variety of general industry safety and health standards covered in the full course. You must attend all 10-hours to receive certification.

Biography:

In addition to being trained to Process Safety Management, Level 1, Mike Yarnell is a member of the 10 person Chemical Specialized Response Team, set up under Homeland Security, which functions as the nationwide response to chemical disasters and terrorist attacks. As a Compliance Officer, his function is to provide manufacturers, and other business owners, the benefit of extensive technical expertise and field investigation experience by implementing outreach programs for the business community. He has many years' experience in Industrial Hygiene, including being a Regional Industrial Hygienist, which makes the organizational assistance and development of partnerships and alliances with industry that he implements all the more valuable.

Date: **Thursday, November 17, 2005**

Times: Networking - Cash Bar, Hors
d'Oeuvres 5:30 PM
Dinner - Attendee Introductions
6:30 PM
Presentation 7:15 PM
Q&A - Networking - Dessert
8:00 PM
Place: Holiday Inn
North Frontage Road
Newark, NJ
On north side of Newark Airport

Advance Registration is required.

Reserve electronically at our web site:
<http://NJChemBus.org>.

Reserve by: **November 17, 2005**. Please
reserve early.

Cancellation Policy: Please cancel 48 hours
before the meeting, or be invoiced.

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NORTH JERSEY PROJECT SEED WINS CHEMLUMINARY AWARD!

At the ACS fall national meeting in Washington DC, local sections and their volunteers were recognized for their efforts at the ChemLuminary Awards. The North Jersey Section won a ChemLuminary Award for best Project SEED program in 2004. In addition, the North Jersey YCC received an honorable mention for Outstanding Event for Younger Chemists. Congratulations to all involved!



(L to r) Sue Fahrenholtz, Jackie Erickson, Steve Waller, Anne O'Brien and Alan Cooper.

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CHEMISTRY AS A LIFE SCIENCE SYMPOSIUM XIII

Friday the 17th of March, 2006

The thirteenth in this series of biennial symposia will be held at:

**The Paul Robeson Campus Center
Rutgers, The State University
Newark, New Jersey**

Distinguished Speakers:
Robert H. Grubbs,
California Institute of Technology

Amir H. Hoveyda,
Boston College

Madeleine M. Joullie,
University of Pennsylvania

Koji Nakanishi,
Columbia University

Matthew D. Shair,
Harvard University

F. Dean Toste,
University of California at Berkeley

This symposium is free and open to the public. Further information regarding the symposium is available on the website for the North New Jersey Section of the American Chemical Society. Due to limited seating, advance registration is required using a form located on the website.

<http://njacs.org/caals2006.html>

New York Meetings

www.newyorkacs.org

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**Neowater: Redefining Water for New
Uses in the Life Sciences**

Speaker: Eran Gabbai
Chief Technology Officer
Do-Coop Technologies Ltd.
Yehuda, Israel

Date: Thursday, November 3, 2005

Place: The Chemists' Club
40 West 45th Street
New York, NY

Times: Cocktails 11:30 AM
Luncheon 12 noon
Presentation 1:15 PM

Fees: \$40 discount price for Members
who reserve by **Tuesday,
November 1st** (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 (718) 961-8958, or via e-mail to: cmegroup@yahoo.com. To pay online by credit card (via PayPal), go to the CM&E Website: <http://www.nyacs-cme.org/>



LONG ISLAND SUBSECTION

**Integrated Optics: A New Focus for
Inorganic Chemistry**

Speaker: Harry D. Gafney
Queens College of CUNY
Department of Chemistry
Flushing, NY


Estimates differ, but one quarter to as much as one half of the optical fiber buried in the US is unused. Full utilization of the extraordinary capacity and speed of this resource rests on the development of integrated optics, i.e., optical circuits capable of guiding and modifying light. Passive elements guide, focus and diffract light, whereas active elements modify its frequency, phase and/or wavelength. One approach to optical

circuitry utilizes the photodeposition of metals and metal oxides in commercially available porous Vycor glass and dried porous xerogels followed by thermal consolidation to a nonporous, optical medium. Deposition changes the polarizability of the medium thereby changing its refractive index. Although both matrices are chemically and structurally similar, the materials deposited and the extent of particle growth within the two matrices differs. Nonetheless, the spectroscopic properties of the deposits in the two matrices are equivalent. This seminar will focus on the factors that influence optical performance of the gradient index structure, and if time permits, the use of this methodology to create new sensor architectures useful in homeland security.

Date: Thursday, November 3, 2005

Times: Coffee 5:30 PM
Seminar 6:00 PM
Dinner 7:00 PM

Place: Hofstra University
Lister Auditorium
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ANALYSIS FOR THE CHEMICAL ELEMENTS

HIGH SCHOOL TEACHERS TOPICAL GROUP

Celebrating National Chemistry Week, "The Joy of Toys in the Science Classroom"

Speaker: Prof. David Katz
Pima Community College
Tucson, AZ

Please refer to <www.chymist.com> for
easy to do, fun demonstrations.

Date: Friday, November 18, 2005
Times: Social and Dinner — 5:45 PM

Place: 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.)

No reservations required

Times: Meeting — 7:15 PM

Place: New York University
Silver Center Room 207

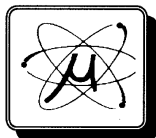
32 Waverly Place (south-east
corner Washington Sq. East)
New York, NY

Registration: Meeting is free but advance
registration is required. Send an e-mail
by **November 10** to Lewis Malchick at
<BT_Quant@yahoo.com>. Include your
name, your professional organization affilia-
tion and HSTTG Nov. 18.

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 park-
ing, it is available at the Melro/Romar
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WESTCHESTER CHEMICAL SOCIETY

**The Joy of Toys in the K-12 Science
Classroom** — A Special Meeting for High
School Teachers and their students to
celebrate the theme of National Chemistry
Week

Speaker: Prof. David Katz
Pima Community College
Tucson, AZ

Please refer to <www.chymist.com> for
easy to do, fun demonstrations.

Date: Friday, November 18, 2005
Times: 10:00 AM - 11:00 AM

Place: Purchase College
735 Anderson Hill Road
Purchase, NY
Building and room to be announced

Registration: Admission is free but advance
registration is required. Registration dead-
line is **October 31**. To register, contact: Prof.
Peter Corfield <pwrc@ns.purchase.edu>

Directions: To Purchase College and camp-
us map: [http://www.purchase.edu/
admissions/adm_vis_directions.asp](http://www.purchase.edu/admissions/adm_vis_directions.asp)



WESTCHESTER CHEMICAL SOCIETY

**The Joy of Toys in the K-12 Science
Classroom** — A Special Meeting for
Chemists and High School Teachers

Speaker: Prof. David Katz
Pima Community College
Tucson, AZ

Please refer to <www.chymist.com> for
easy to do, fun demonstrations.

Date: Saturday, November 19, 2005
Times: Check-in and refreshments 9:00 AM
Presentation 9:30 AM - 11:00 AM
Place: Purchase College
Natural Science Building
Room 1001
735 Anderson Hill Road
Purchase, NY

Registration: Admission is free but advance
registration is required. Registration dead-
line is **November 10**. To register, send your
name, your professional organization affilia-
tion and "WCS Nov. 19" to: Prof. Peter
Corfield <pwrc@ns.purchase.edu>

Directions: To Purchase College and camp-
us map: [http://www.purchase.edu/
admissions/adm_vis_directions.asp](http://www.purchase.edu/admissions/adm_vis_directions.asp)

Parking: go past control booth and park in
lot #1. There is a \$6.00 parking fee.



WESTCHESTER CHEMICAL SOCIETY

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a subsection of the New York Section, is set-
ting up an email meeting notification net-
work.

If you would like to receive an email reminder
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NEW YORK SECTION NOMINATING COMMITTEE

The New York Section Nominating Committee will meet in December to choose candidates for the 2006 elections.

Positions available are:

Chair-elect 2007

Secretary for 2007-2008

Directors-at-Large 2007

Councilors and Alternate Councilors for 2007 – 2009

If a member of the New York Section wishes to suggest a member for consideration by the Nominating Committee, please do so in writing by **December 1, 2005** to the American Chemical Society, New York Section, Inc., St. John's University, Department of Chemistry, 8000 Utopia Parkway, Jamaica, NY 11439 or send an e-mail to the New York Section office at njesper1@optonline.net. Thank you.



2006 WILLIAM H. NICHOLS MEDAL AWARDEE

The Nichols Medal Jury is pleased to announce that, following careful deliberations, the Jury unanimously selected **Professor K. Barry Sharpless** of The Scripps Research Institute as the 2006 Nichols Medal awardee.

The Nichols Distinguished Symposium and Medal Award Dinner will be held on Friday, March 10, at the Crowne Plaza Hotel, White Plains, NY. The program for the Symposium is available on the New York Section website (<http://www.NewYorkACS.org>) and will be published in the January, February and March issues of *The Indicator*. A brochure describing the events and registration will be sent to all New York Section members in January. Please reserve this date to support the Section's most important event.

Congratulations and Best Wishes to Professor Sharpless.

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

Endogenous Cannabinoid Ligands: Metabolism and Therapeutic Potential

Organizers: Charles A. Lunn
Schering-Plough
Research Institute
Kenilworth, NJ

Dale Deutsch
SUNY at Stony Brook
Stony Brook, NY

The therapeutic value of the cannabinoid system has been a topic of increasing scientific debate/interest in recent years. In addition to the anecdotal evidence that smoked marijuana treatments can moderate pain, positive Phase III clinical trials have demonstrated the efficacy of marijuana extracts on the symptoms of multiple sclerosis and neuropathic pain [Sativex (organic plant extract containing Δ^9 -tetrahydrocannabinol and cannabidiol); GW Pharmaceuticals]. In addition, clinical trials of a compound specific for the cannabinoid CB1 receptor [Acomplia (rimonibant); Sanofi Aventis] continues to show significant positive effects on obesity and on other obsessive disorders.

Recognizing the increasing appreciation of the therapeutic potential of the cannabinoid system, we will discuss the biology of the endogenous ligands for the cannabinoid receptors, the endocannabinoids, as potential therapeutic targets. The symposium will include a discussion of the metabolism of the endocannabinoid anandamide by the fatty acid acylhydrolase (FAAH) and in situ imaging studies showing how inhibiting the activity of this enzyme alters endocannabinoid distribution in the brain. Biology presentations will demonstrate that inhibiting FAAH activity can alter memory in mice. Finally, we will discuss the peripheral effects of modulating endocannabinoids, specifically as they impact pain and immune functions.

"Biosynthesis and Degradation of Anandamide, and Endogenous Ligand of Cannabinoid Receptors"

Dale Deutsch
SUNY, Stony Brook

"Imaging the Regional Inhibition of Fatty Acid Amide Hydrolase (FAAH) Activity in the Mouse Brain"

Sheryle Glaser
Brookhaven National Laboratory

"FAAH-getting: Evidence for a Role of the Endocannabinoid System in Extinction Processes"

Aron Lichtman
Virginia Commonwealth University

"Endocannabinoid-induced Suppression of Interleukin-2 Involves Cyclooxygenase-2, is Mediated in Part Through a Nuclear Receptor, and Occurs Independently of CB1 and CB2"

Norbert Kaminski
Michigan State University


Date: **Tuesday, December 6, 2005**
Time: 1:00 – 5:00 PM
Place: New York Academy of Sciences
2 East 63rd Street
New York, NY

Space is limited. To reserve a seat, go to the calendar at www.nyas.org/bpdg and fill out the online reservation form, e-mail BPDG@nyas.org or call (212) 838-0230 x322.

NYAS Members and BPDG Affiliates may attend BPDG meetings free of charge. Non-members may attend for a fee of \$20 per event. To become a Member of the Academy, visit

<http://www.nyas.org/landing.html>





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THE NEW YORK SECTION WINS TWO ACS CHEMLUMINARY AWARDS

The ACS New York Section was presented with two ChemLuminary Awards at the 230th National ACS Meeting held in August in Washington D. C. – the Outstanding Performance Award in the Very Large Section Category and the Outstanding High School Student Program Award. Mrs. Joan A. Laredo-Liddell, 2006 NY Section Chair-elect, accepted the awards on behalf of the New York Section. Many members contributed numerous hours sponsoring and supporting many wonderful programs, under the chairmanship of Dr. Vijaya Korlipara. The New York Section is grateful to them for their time and efforts.

The 2004 annual report for the New York Section, that describes the events for that year, can be viewed at the Section's website at <http://www.NewYorkACS.org>. The report includes many excellent photos and reports from the chairs of the subsections, topical groups and committees.

In 2004 the New York Section also had a very successful high school student program. Listed below is the summary of events for 2004 that was presented for nomination for the student program award

At least 12 excellent programs reached out to high school students to increase their appreciation of chemistry and to award their achievements. Some programs assisted science teachers in improving their teaching skills. Disadvantaged and minority students highly benefited from the programs. The major activities were: (1.) **H. S. CHEMISTRY OLYMPIAD:** 332 students competed at the local level at 11 sites to reach the National ACS competition. Of the 20 New York Section students who took the National Exam five obtained honors and four obtained high honors. Students received participation certificates and honors recognition certificates. Many were honored at subsection meetings; (2.) **PROJECT SEED:** Over 75 SEED I and II students conducted research at 21 academic industrial and medical institutions. Project Seed students presented at the ACS National Meeting in Philadelphia and the Eastern Analytical Symposium in NJ. 30 SEED students displayed their work at the first Harlem Street Fair held in NYC. Ten students from NY

Section received the Project Seed scholarship and now are majoring in chemistry. Seed students have been accepted to many Ivy League schools; (3.) **10th HIGH SCHOOL RESEARCH POSTER SESSION:** 52 students displayed excellent research posters at St. Joseph's College on Oct. 23. Judges (including faculty and graduate students) determined the winners of 4 monetary awards. All participants received certificates; their teachers were recognized for their inspiration; and all were treated to a demo/slide presentation called Light and Life by Dr. Lesley Davenport; (4.) **FIRST CHEMAGINATION PROGRAM:** In May 2004 the Section held the science essay and poster contest for grades 9-12. Notices were sent to 400 high schools. The local winners were successful at the Regional Level and moved on to the National Level; (5.) **NINTH EXPANDING YOUR HORIZONS:** This annual program was held on May 5th for Middle HS girls (Girl Scouts). It was a very successful, lab-based, science/career program that was found to be very interesting and creative. They received souvenir t-shirts and certificates of participation. At lunch they enthusiastically discussed careers in chemistry; (6.) **THE HARLEM STREET SCIENCE FAIR AND THE HARLEM CHILDREN'S SOCIETY:** This new program gives our NYC disadvantaged high school students an excellent opportunity to perform research as interns at numerous academic and medical institutions. Over 200 people attended the science street fair held in Harlem, NY at which many Project Seed students displayed their work and explained the wonders of chemistry, to the public and other high school students; (7.) **SUBSECTION ACHIEVEMENT AWARDS PROGRAMS:** Over 140 awards were presented to HS chemistry students by the subsections. H.S. teachers nominated the students for the awards. Five students received ACS awards at the Brooklyn H. S. Chemistry Day Program attended by 150 students and teachers who were treated to a session of experiments, a tour of the labs and the Friedman Lecture. The Long Island Subsection awarded 91 students with handsome wooden custom-made plaques. 31 of the students accepted their award at the annual award dinner attended by 75 persons (students, teachers and family). Staten Island recognized 15 students at a special dinner at Wagner College, following a tour of the labs. Lastly, 26 Bronx and

Manhattan students from 19 schools were sent beautiful certificates from the Section. A large amount of certificates were presented to H.S. students for participation in chemistry programs – poster sessions, NCW activities, competitions, etc.; (8.) **THE HIGH SCHOOL TEACHERS TOPICAL GROUP:** Joint with the Chemists Teacher Club of NY, it contributed greatly to improving the skills of science teachers through demos, sharing ideas and seminars during its 10 local meetings. This group attended and presented at state and national meetings; (9.) **THE NICHOLS FOUNDATION CHEMISTRY TEACHER AWARD OF THE NY SECTION:** An ACS award plaque and \$1000 was presented to Josephine Parlagreco at the Section-wide Conference in Jan. 2004 for excellence in and dedication to high school chemistry teaching. She was nominated by colleagues and chosen by the Nichols

Teacher Award Jury, composed of HS teachers from all subsections. The 2004 awardee is Richard Goodman of H. Greeley H.S. in Chappaqua, NY. He accepted his award at the Jan 2005 Section-wide Conference; (10.) **THE ANNUAL MAGIC OF CHEMISTRY NCW EVENT:** Held at Ramapo College and sponsored by the Hudson Bergen Subsection, it had sold out shows for over 300 middle and high school students. These highly successful and much anticipated two-hour chemistry presentations were offered by Prof. Fenster of McGill University in Canada; (11.) **MOLE DAY:** was celebrated in area schools throughout the NY Section in our public and private high schools such as Samuel Gompers HS in the Bronx; (12.) **STUDENT MENTORING PROGRAM:** Between Emerson High School students and Fairleigh Dickinson University in Teaneck, NJ. Students are invited to FDU's clinical laboratories to learn about chemistry and life beyond H.S. and to perform experiments with Hudson Bergen Subsection mentors. The New York Section is grateful to all its members who sponsored and supported these programs.



Joan Laredo-Liddell with ACS President, William F. Carroll, Jr. (right) and Will Lynch, Chair of LSAC accepting the Outstanding Performance by a Local Section - Very Large Category Award for Dr. Vijaya Korlipara, NY Section 2004 Chairperson.



Jean Delfiner and Joan Laredo-Liddell, co-chairs of the NY High School Teachers Topical Group, holding the ChemLuminary Award for the Outstanding High School Student Program.

Call for Nominations

YOUNGER CHEMISTS LEADERSHIP DEVELOPMENT AWARD - APPLY NOW!

The Younger Chemists Committee (YCC) 2006 Leadership Development Award is now available. The award covers transportation, lodging, meal and conference materials associated with attending the YCC Leadership Development Workshop. This workshop will be held in conjunction with the 2006 ACS Leaders Conference in Baltimore, MD from January 27-29, 2006.

Leadership development workshop participants will explore the behaviors and characteristics exhibited by effective leaders at any level. Potential leadership opportunities, both within and outside the workplace, will be discussed and personal plans for improving leadership skills will be developed. Participants will also work along side other ACS local, regional, and national leaders who are looking to strengthen their own leadership, management, and communication skills. Past attendees indicated that this workshop provides an excellent opportunity to network and witness first hand the qualities successful leaders possess!

ACS members interested in applying for the award should submit an application to the YCC, American Chemical Society, 1155 16th, St., N.W., Washington, D.C. 20036 by December 1, 2005. Both electronic and printable versions of the applications are available online at chemistry.org/ycc.

Moreover, members who are not award recipients are encouraged to seek outside support if they wish to attend the workshop. Space is available for up to 15 members who obtain external support to attend this workshop. You are welcome to forward questions to ycc@acs.org.



ADVANCING DIVERSITY IN THE CHEMICAL SCIENCES

The American Chemical Society Committee on Minority Affairs is pleased to announce a Call for Nominations for the Stanley C. Israel Regional Award For Advancing Diversity in the Chemical Sciences.

The American Chemical Society Committee on Minority Affairs is pleased to announce a Call for Nominations for the Stanley C. Israel Regional Award For Advancing Diversity in the Chemical Sciences

Purpose: To recognize individuals and/or institutions that have advanced diversity in the chemical sciences and significantly stimulated or fostered activities that promote inclusiveness within the region.

Nature: The award consists of a medal and a \$1,000 grant to support and further the activities for which the award was made. The award also will include funding to cover the recipient's travel expenses to the ACS regional meeting at which the award will be presented.

Rules of Eligibility: Individuals nominated for the award may come from any professional setting: academia, industry, government, or other independent facility. Nominees may also be organizations, including ACS local sections and divisions. The awardees will have increased the participation and leadership of persons from diverse or underrepresented minority group(s), persons with disabilities, or women.

To Nominate: For nomination of individuals, a letter of nomination of no more than three pages and a CV or resume is required. For institutions or corporations, a brief description of the institution or organization must be included. Nominations may also include up to two supporting letters of no more than three pages and up to five different samples of program materials.

Send nominations to:
Committee on Minority Affairs
American Chemical Society
1155 16th Street NW
Washington, DC 20036

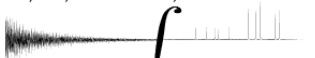
For information regarding the award, contact Stephanie Allen, 800/227-5558 ext. 6262, or e-mail: s_allen@acs.org.

Deadline for receipt of nominations is **January 13, 2006**.

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SEASHORES

(continued from page 8)

The discovery of Hadrosaurus Foulke brought other fossil-hunting scientists into the region including the now infamous duo of Othniel Charles Marsh and Edward Drinker Cope. Marsh and Cope went on to become the most productive dinosaur fossil hunters of the late 1800s. Their hasty excavation techniques and destructive professional rivalry still serves as an outstanding example of how NOT to conduct field research.

By the late 1800's marl had ceased to be an important fertilizer although it continued to be mined for use as a water conditioner. Today the Inversand Company in the Gloucester County town of Sewell runs the last-remaining Greensand mining operation in the United States. Most of the other the marl beds were largely forgotten except by paleontologists who to this day explore them for fossils. Leidy would go on to make many more important paleontological discoveries both in New Jersey and throughout the United States. While George Cook was not primarily interested in fossils, he maintained his own contacts among the marl diggers and also accumulated a large number of specimens. Cook was best remembered for his tireless efforts to bring the benefits of scientific agriculture to New Jersey's farmers. He was instrumental in having Rutgers designated New Jersey's Land Grant College in 1864. He also established the state's Agricultural Experiment Station in 1880. Cook College was named for him. Hadrosaurus Foulki was named the New Jersey State Dinosaur in 1991 after four years of lobbying by Joyce Berry and her fourth grade classes at Strawbridge Elementary School in Haddonfield.

Readers interested in learning more should consult, William Gallagher's *When Dinosaurs Roamed New Jersey*, Rutgers University Press, 1991; Jean Wilson Sidar's *George Hammell Cook - a Life in Agriculture and Geology 1818-1889*, Rutgers University Press, 1976; and Kemble Widmer's *The Geology and Geology of New Jersey*, D. Van Nostrand Company, 1964.

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