

THE Indicator

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and for All the
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THE INDICATOR**Manager / Editor** - LINDA ATKINS

1 Milbark Court West, Homosassa, FL 34446

973-981-4383; Fax 352-503-7613

linatkins@tampabay.rr.com**Advertising Manager** - VINCENT GALE

MBO Services

PO Box 1150, Marshfield, MA 02050-1150

781-837-0424

vincegale@mboservices.net**INDICATOR COMMITTEE****Chair**

DR. LES McQUIRE

17 Crown Drive, Warren, NJ 07059

908-334-5473, Les@LesMcQuire.org**New York Section Rep.**

DR. NEIL JESPERSEN

Chemistry Dept., St. John's University

8000 Utopia Parkway, Jamaica, NY 11439

718-990-5221, jespersn@stjohns.edu**North Jersey Section Rep.**

DR. ANITA BRANDOLINI

TAS, Ramapo College, 505 Ramapo Valley Rd.,

Mahwah, NJ 07430 • 201-684-7753

abrandol@ramapo.edu**Web Masters**

NY Section - DR. BRIAN GIBNEY

postmaster@newyorkacs.org

NoJ Section - PAUL TUKEY

tukey@verizon.net**NEW YORK SECTION /**<http://newyorkacs.org>**Chair, MR. FRANK R. ROMANO**

2490 Sycamore Avenue, Wantagh, NY 11793

516-783-6281; Fax 516-783-7391

frank.romano@agilent.com**Chair-Elect, DR. HIROKO I. KARAN**

Department of Physical, Environmental and

Computer Sciences, Medgar Evers College,

The City University of New York,

1650 Bedford Avenue, Brooklyn, NY 11225

718-270-5168; Fax 718-270-6197

hiroko@mec.cuny.edu**Secretary, DR. MARGARET MANDZIUK**

16 East 8th Street, #4R, New York, NY 10003

212-979-6063

margaret.mandziuk@gmail.com**Section Office**

St. John's University, Chemistry Dept.

8000 Utopia Parkway, Jamaica, NY 11439

516-883-7510; Fax 516-883-4003

njesper1@optonline.net**NORTH JERSEY SECTION**<http://www.njacs.org>**Chair, DR. AMBARISH SINGH**

Bristol-Myers Squibb Company, P.O. Box 5400,

Mail Stop 19,302, Princeton, NJ 08543

609-818-6952

asingh.njacs@gmail.com**Chair-Elect, JIWEN CHEN**

Bristol-Myers Squibb Company, 3B 0,01, 311

Pennington-Rocky Hill Road, Pennington, NJ 08534

609-818-6319

jiwen.chen@yahoo.com**Secretary, BETTYANN HOWSON**

49 Hillside Avenue, Madison, NJ 07940-2612

973-822-2575

chemphun@optonline.net**Section Office**

4 Cameron Road, Piscataway, NJ 08854

732-463-7271; NJACSoffice@aol.com**THE Indicator** 

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CONTENTS

ACS News	19-21
ACS National Meeting, Boston	10-11
Advertisers Index	24
Call for Nominations	18-19
ChemTAG Corner	18
Graduation Statistics	9
New York Meetings	12-16
North Jersey Meetings	7-8
Others	21-22
Press Releases	22-23
Professional/Product Directory	24

EDITORIAL DEADLINES

December	October 15
January 2011	November 15, 2010
February	December 15
March	January 15, 2011
April	February 15
May	March 15
June	April 15
September	July 15
October	August 15
November	September 15

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November Calendar

NEW YORK SECTION

Thursday, November 4, 2010
Chemical Marketing & Economics Group
See pages 12-13.

Thursday, November 11, 2010
Long Island Subsection
See page 13.

Friday, November 12, 2010
High School Teachers Topical Group
See page 14.

Wednesday, November 17, 2010
Westchester Chemical Society
See page 14.

Friday, November 19, 2010
NY Board of Directors
See page 12.

Friday, November 19, 2010
Hudson-Bergen Chemical Society
See page 15.

Monday, November 29, 2010
Long Island Subsection
See page 16.

NORTH JERSEY SECTION

Thursday, November 4, 2010
Careers in Transition
See page 7.

Thursday, November 11, 2010
NoJ Teacher Affiliates Executive Meeting
See page 7.

Wednesday, November 17, 2010
NoJ Teacher Affiliates Executive Meeting
See page 8.

Monday, November 22, 2010
NoJ Executive Meeting
See page 7.

**Deadline for items to be
included in the
January 2011 issue of
The Indicator is
November 15, 2010.**



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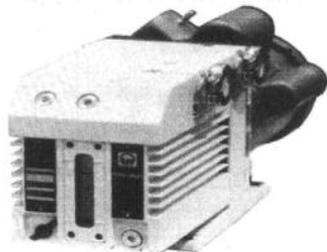
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THIS MONTH IN CHEMICAL HISTORY

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

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

We can learn a lot from old science textbooks; of course they tell us about the received truths of the science at the time the book was published – but that isn't the point I want to make in this sketch. We may in fact be induced to re-examine the way we teach science by the example of some of these old books.

These reflections are prompted by some of the contents of a colleague's bookshelves. He is retiring and urged me to look at some of the older books in his collection, and one that caught my eye, and is the subject of this sketch, is entitled "Prove it Yourself: Easy Experiments in Elementary Science" by Bertha F. Gordon, a teacher of elementary science and manual training at James Ward Public School, Chicago, and published by the F. A. Owen Publishing Company in 1928. Upon "Googling" Bertha F. Gordon I found that she is mentioned in the annual catalog of the Indiana Normal School of Pennsylvania for 1897 – possibly her graduation year. Her book is mentioned in a 1953 article on experimental science for K-12, and it was favorably reviewed in two education journals in 1930, including one aimed at high school science teachers.

The book's introduction is eminently practical, as perhaps befits a teacher not just of elementary science but also manual training. It asks some basic questions such as "What makes the cover of a kettle move up and down [when the water in it is boiling, I presume]? How is it that a lump of coal and a diamond are first cousins?" The author promises to answer questions like these! The cover shows a student carrying out a flame test; while the text includes a wide range of science areas covering heat, magnetism, electricity, sound, the earth's crust, weather, astronomy and the like, I will glance at the sections devoted to chemistry in its widest sense involving distillation, fermentation, chemistry of light, the candle (shades of Michael Faraday), forms and properties of matter, and soils – all within some 250 pages.

Let's look at the chapter on chemistry. No periodic table, but the elements, 92 in number at the time, are divided into metals and others, and the major metals are divided into "precious" and "commercial". The different forms of carbon are presented with the comment that microscopic diamonds have been made artificially – probably a reference to Moissan's experiments which are now generally discredited. The first chemical experiment in the book is the classic in which a candle is lit and a glass inverted over it. Students are asked some relevant questions such as "Why does a fireman wrap his coat around a person whose clothes have caught fire?" A lively experiment investigates the action of diluted nitric acid on copper. "The nitric acid can be bought from any drug store" (!) I haven't asked my local CVS but I have my doubts. A lot has changed during my career; when I was a teenager I was able to go to the local chemists shop (British usage) and buy all kinds of chemicals without question. And I had my own laboratory in my bedroom where I did chemical experiments. I wonder if there's a connection between our warranted concerns about safety and the dwindling interest in chemistry among young people.

There are many more experiments including tests of the action of hydrochloric acid on bone, eggshells, chalk, and marble ("buy five cent's worth of hydrochloric acid at a drug store"). Then there's potassium! "Druggists do not usually keep pure potassium. One must generally secure it from a wholesale chemist.... It is dangerous to handle and hard to keep, but you will have no trouble with it if you will keep it in a tightly corked bottle covered with kerosene". The experiment involves cutting off a very small piece of potassium and throwing it into a bowl of water. Iodine is gently warmed to give its purple vapor. Chemical combination is illustrated by the action of concentrated sulfuric acid (one ounce from your friendly local drug store again) on sugar. In visible ink is made from iron sulfate and potassium ferricyanide is the developing agent.

I'm not suggesting that elementary teachers of science should encourage their students to engage in such hazardous experiments as are described in Ms. Gordon's text. But the philosophy of having students actually do meaningful experiments as a way of learning about science is consistent with many modern approaches to teaching and learning in the sciences. Bertha F. Gordon was on to something valuable.

NOVEMBER HISTORICAL EVENTS IN CHEMISTRY

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

November 3, 1921

American Association of Textile Chemists and Colorists was founded on this date.

November 4, 1903

Boris A. Arbusov, who discovered formation of free radicals of triarylmethane derivatives, was born on this date. He investigated the properties of terpenes and phosphorous containing heterocyclics.

November 7, 1867

Marja S. Curie (later Marie), who was born on this date, discovered radium with her husband, Pierre Curie, 1898 and polonium in 1898. She shared the Nobel Prize in Physics in 1903 with Pierre Curie in recognition of the extraordinary services they have rendered by their joint researches on the radiation phenomena discovered by Professor Henri Becquerel shared with A. Henri Becquerel. In 1911, she was awarded the Nobel Prize in Chemistry in recognition of her services to the advancement of chemistry by the discovery of the elements radium and polonium, by the isolation of radium and the study of the nature and compounds of this remarkable element.

November 9, 1994

Three atoms of element 110 were created at GSI in Darmstadt, Germany on this day.

November 12, 1833

Alexandre P. Borodin, a chemist-composer, a composer of classical music, was born on this date. He was a researcher on organofluorine compounds and the Borodin-Hunsdieker reaction and. Some celebrate his birthday on November 24.

November 17, 1850

George T. Beilby, who was born on this date, invented the process for retorting shale and synthesized alkaline cyanides. He constructed the first factory for the synthesis of cyanides.

November 20, 1862

August F. Horstmann, who did research on dissociation, was born on this date. He also related heat and entropy in chemical reactions.

November 21, 1824

Hieronimus T. Richter who was born on this date, co-discovered indium with Ferdinand Reich in 1863. Because Reich was colorblind, he had Richter the school metallurgical chemist, do the spectroscopic examination. Richter placed some of the material on a loop of platinum wire and heated it with a Bunsen burner. Richter observed a brilliant indigo line, which did not correspond to any known element. Because of this characteristic indigo blue emission spectral line, the new element was called Indium.

November 23, 1837

One hundred years ago in 1910, Johannes D. van der Waals was awarded Nobel Prize in Physics for his work on the equation of state for gases and liquids. He formulated deviations from the ideal gas law (Van der Waals' Equation) and was a researcher on intermolecular attraction (Van der Waals' Forces), electrolytic dissociation, and capillarity. He was born on this date.

November 25, 1960

Fifty years ago on this date, the first atomic reactor for research and development began operation at Richland, Washington.

November 29, 1936

Yuan T. Lee, who used a specially designed mass spectrometer that could separate and identify reaction products, was born on this date. He shared the Nobel Prize in Chemistry in 1986 with Dudley R. Herschbach and John C. Polanyi for their contributions concerning the dynamics of chemical elementary processes

November 30, 1948

Chlorotetracycline, a broad-spectrum antibiotic, was isolated by B. M. Duggar, American Cyanamid Corporation, on this date.

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

North Jersey Meetings

<http://www.njacs.org>

NORTH JERSEY EXECUTIVE COMMITTEE MEETING

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

Date: Monday, November 22, 2010

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, November 17, 2010**.

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, November 4, 2010**, 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 billuits@earthlink.net, if you plan on attending this meeting.



NJACS TEACHER AFFILIATES

Executive Committee Meeting

Meeting dates are subject to change due to school closings or inclement weather.

Date: Thursday, November 11, 2010

Time: 4:30 PM - 6:30 PM

Place: College of St. Elizabeth
Faculty Lounge/Study
2nd Floor of Mahoney Library
Madison, NJ

Contact: Mita Chaki
mchaki@franklinboe.org



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ORGANIC TOPICAL GROUP

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2010 Award Recipient: Prof. David A. Evans (Harvard University)

Invited Speakers:

“Palladium- and Nickel-Catalyzed Cross-Couplings of Alkyl Electrophiles”

Speaker: Prof. Gregory Fu
Mass. Inst. of Technology

Title: TBA

Speaker: Prof. Scott Miller
Yale University

Title: TBA

Speaker: Prof. Jonathan Ellman
Yale University

Title: TBA

Speaker: Prof. Jim Leighton
Columbia University

Title: TBA

Speaker: Prof. Daniel Seidel
Rutgers University

Keynote Address

Speaker: Prof. David A. Evans
Harvard University

Organizing Committee:

Daniel Seidel (Chair, Rutgers)
Joe Kozlowski (Merck)
Dong Xiao (Merck)
Lawrence Williams (Rutgers)
Amjad Ali (Merck)
Kshitij Thakkar (Roche)
Eric Mertz (Roche)
Akin Davulcu (BMS)

Date: Wednesday, November 17, 2010

Times: Sign-in begins 12:00 noon
Symposium 1:00 PM
Dinner 6:30 PM

Place: The Palace at Somerset Park
333 Davidson Ave.
Somerset, NJ 08873

Cost: Registration fee: Symposium
(including banquet dinner)
\$125.00.

Note: Seating is limited. Please register by **October 17**. Registration will be on a first come first served basis and will not be complete until your payment has been received.

Registration contact: eric.mertz@roche.com

A stylized signature in black ink, likely belonging to Jeannette Brown.

HELP ME BECOME A CHAMPION FOR CURES

By Jeannette Brown

As you may know, I was diagnosed with Chronic Lymphocytic Leukemia in 2004 and underwent chemo treatment in 2007. I am currently a two-year survivor. Since then I have become a patient advocate for LLS I have lobbied on the Hill for support for research and patient support. Everyone knows someone who has been touched by blood cancer.

Light The Night is a nationwide evening walk that raises funds for cutting-edge cancer research and innovative programs for patients and their families. The LLS mission is: Cure leukemia, lymphoma, Hodgkin's disease and myeloma, and improve the quality of life of patients and their families.

It's a special night, celebrating and commemorating lives touched by cancer. Each Walker who raises \$100 or more becomes a Champion For Cures and gets to carry a special illuminated balloon – white for survivors, red for supporters and gold for those who have lost a loved one to blood cancer.

To donate online, visit

http://pages.lighththenight.org/nj/Colonial10/jbrown_LTN45

Date: Saturday, October 2, 2010

Time: 5:00 PM

Place: Forrestal Village, Princeton

You can also mail a check to: The Leukemia and Lymphoma Society, New Jersey Chapter, 14 Commerce Drive, Suite 301, Cranford, NJ 07016.

You have until **January 31, 2011** to donate. Don't forget to apply for your company's matching grant.

Make check payable to Leukemia & Lymphoma Society, Jeannette Brown's Friends and Family Team

GRADUATION STATISTICS 2008-09**New York and North Jersey**

Data reported to the Committee on Professional Training (CPT) from chemistry departments with ACS approved bachelor's programs was tabulated in *C&EN*, August 23, 2010, Vol. 68, 44-54. Certified bachelor's programs are those that conform to the CPT guidelines, and certified degrees are designated by the chairs/heads of the chemistry departments, not ACS. ACS does not approve master's or doctoral programs, nor certify their graduates.

New York Institution	Total	Chemistry			Chemical Engineering*		
		Bachelor's	Cert.	M.S.	Ph.D.	B.S.	M.S.
New York Totals	387	131	50	49	69	42	14
Barnard C	12	12					
City U. of N.Y.							
Graduate Center				9			
Brooklyn C.	32	1	3				
City C.	26	1	4		18	18	5
Lehman C.	10	10					
Hunter C.	42	4					
Queens C.	11	8					
C. of Staten Island	14	14					
Columbia U.	22	5	22	25	32	17	6
Cooper Union					n.s.		
Fordham U.	15	8					
Hofstra U.	17	16					
Long Island U.							
Brooklyn Campus	0	0	4				
CW Post Campus	4	2					
Manhattan C.	7	3					
Mount St. Vincent	5	5					
New York U.	80	0	4	11			
Pace U.							
New York	10	4	5				
Pleasantville	2	2					
Ramapo C. of N.J.	7	0					
St. John's U.	11	11	5				
St. Joseph C.	2	2					
State U. of N.Y.							
Purchase C.	2	0					
Stevens Inst. of Tech.	35	15	3	4	19	7	3
Wagner C.	21	8					
No. Jersey Institution	Total	Cert.	M.S.	Ph.D.	B.S.	M.S.	Ph.D.
North Jersey Totals	188	70	29	26	95	22	10
Drew University	12	5					
Monmouth C.	2	1					
Monmouth U.	13	0					
Montclair State U.	32	4	9				
NJ Inst. Technology					38	9	5
New Jersey, C. of	30	30					
Rider U.	7	3					
Rutgers U.							
Newark	9	3	4	8			
New Bruns.	32	4	8	10	38	6	2
Seton Hall U.	12	1	5	4			
Stevens Inst. of Tech.	35	15	3	4	19	7	3
William Paterson U.	4	4					

CPT notes that more than 90% of the bachelor's degrees conferred in chemistry in the U.S. come from colleges and universities with departments that offer ACS-approved programs. The total number of chemistry graduates with bachelor's degrees in 2008-09 was 14,577, representing a 4.7% increase over the previous year. Among the top 25 producers of Bachelor's chemists was N.Y.U., and of Master's chemists was Columbia.

*Note that it is not required to submit numbers of chemical engineering graduates to CPT, so these numbers may be incomplete. Please accept apologies if any institutions were inadvertently omitted.

ACS National Meeting, Boston

NORTH JERSEY SECTION



Bill Suits represented the NoJ Section at the Chemluminary Award Ceremony at the National Meeting in Boston. North Jersey earned two awards: Outstanding New Local Section Younger Chemists Committee and Outstanding Local Section Career Program Award (Large to Very Large Section).



Bettyann Hows (North Jersey), Professor Bassam Shakhshiri (UW_Madison), and Diane Krone (North Jersey) recently participated in Teacher Day at the ACS National Meeting in Boston.



John and Mary Ann Penna



2010 ACS Fellows attended the Celebration at the National Meeting in Boston on August 23rd. Front row: Chi-Tang Ho, Diane Krone, John Penna. Back row: Wendy Cornell, Christopher Welch, Alan Cooper, Tom Pacansky.



Alan and Linda Cooper with Maureen Chan (2009 ACS Fellow)



2010 ACS Fellows Wendy Cornell, Christopher Welch, and Alan Cooper are from Merck Research Laboratories in NJ.



NoJ members present at the 2010 Fellows Celebration — (l-r) George Heinze (2009 Fellow), Bill Suits, Maureen Chan (2009 Fellow), Wendy Cornell (2010 Fellow), Christopher Welch (2010 Fellow), John Penna (2010 Fellow), Alan Cooper (2010 Fellow), Diane Krone (2010 Fellow), Bettyann Howson, and Jeannette Brown (2009 Fellow).

(NoJ Photos courtesy of Diane Krone)

NEW YORK SECTION



Dr. Mary Carroll, Chair of SOCED; Joan Laredo-Liddell; Dr. Nancy Jackson, ACS President Elect. The New York Section received this Chemluminary award for Outstanding On-Going NCW Event.



The 2nd Award is for: Outstanding High School Student Program. Lyn Hague, Chair Joan Laredo-Liddell. Dr. Thomas Lane, ACS Past President.



Left to right: Vijaya Korlipara, Neil Jespersion-District 1 Director, Richard Goodman, Yorke Rhodes, Don Clark, Anne O'Brian, Ron D'Amelia, Frank Romano, Joan Laredo-Liddell. Councilors from the NY section attending the District 1 Caucus.

(NY Photos courtesy of Joan Laredo-Liddell)

New York Meetings

www.newyorkacs.org

ACS NEW YORK SECTION MEETINGS FOR 2010

The Board of Directors Meetings for 2010 are:

Friday, November 19

The regular Board Meetings will be held at St. John's University, 8000 Utopia Parkway, Jamaica, NY, in the Library's Writing Center. They are open meetings and all are welcome.

For more information, please visit the New York Section website at <http://www.NewYorkACS.org>.

CHEMICAL MARKETING & ECONOMICS GROUP

Dietary Supplements: Changing Landscape and Opportunities for Innovation

Speaker: Lynda M. Doyle
Marketing Director
New Nutritional Ingredients and Dietary Supplements
DSM Nutritional Products, Inc.

Hosts: James M. Weatherall
Principal, Weatherall Group
and

Luke J. Verdet
Specialty & Fine Chemicals

Demand for nutraceuticals and nutritional supplements has been on the rise, and will continue to offer opportunities for innovation, in both developed and emerging economies. Some of the emerging issues and developments that are shaping those growth trends and which will be addressed in this presentation include:

- The dietary supplement market: sales, retail and consumer trends
- The changing regulatory landscape of dietary supplements
- Growth opportunities in the dietary supplement segment
- Where is this market heading?

Lynda M. Doyle is Marketing Director New Nutritional Ingredients and Dietary Supplements at DSM Nutritional Products, Inc. She joined Roche Vitamins (now DSM Nutritional Products) in June 1996 as Coloration Project Manager for the Food Business, concentrating on carotenoids as food colorants and has worked in DSM's Human Nutrition Division since, serving as Senior Marketing Manager Dietary Supplements, Director of Marketing and New Business Development and Director of Functional Foods Marketing. Prior to joining DSM, she worked in sales for BASF's Human Health and Nutrition Group, and for EM Industries' Fine Chemicals Division. Ms. Doyle received an M.S. in Human Nutrition from the University of Bridgeport, CT and an M.B.A. in Marketing and International Business from Pace University, NY. Lynda Doyle served as President for both the Drug, Chemical and Allied Trades Association (DCAT) and the Sales Association of the Chemical Industry (SACI).



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Date: Thursday, November 4, 2010
Times: 11:00 AM - 2:15 PM
 Registration/Networking: 11:15 AM
 Luncheon: 12 noon
 Presentation/Webcast: 1:00 PM
Place: Midtown Executive Club at
 Club Quarters
 40 West 45th Street
 New York, NY
Fees: \$55 for paid-up Members of CM&E
 and NYSCC; \$65 for Guests.
 Webcast-only Fee: \$30 for all.
 Student Fees: Same luncheon fees
 as Paid-Members of CM&E.
 For presentation onl in NY, the fee
 is \$10 for registrants who pay by
Monday, November 1.
NEW 2010 POLICY - Early-Bird
 Discount: \$10 discount for
 luncheon/webcast for those who
 pay by credit card prior to **Nov. 2.**

To register for November meeting, go to:
<http://tinyurl.com/CME-Nov10>

Future Meetings

Fifth Annual Energy & Resources Conference

“Emerging Sources of Energy - Challenges and Opportunities”

*Jointly Planned and Organized with AIChE,
 Metro New York Section*

Date: Thursday, December 9, 2010

Place: Con Edison Building
 4 Irving Place
 New York, NY

Details at [http://www.nyacs-cme.org/
 ER10/Conf.html](http://www.nyacs-cme.org/ER10/Conf.html)

Early-Bird Rates (ends on Friday, October
 29th)

- \$75 for AIChE, Metro NY or Tappan Zee
 Sections or CM&E Members;
- \$100 for Non-Members;

• \$50 for Students (limited to first 25 stu-
 dents who register before Friday, Nov. 5).
 To pay now, go to: [http://www.nyacs-
 cme.org/ER10/Reserve/ER10.html](http://www.nyacs-cme.org/ER10/Reserve/ER10.html)

Download the Registration Form at:
[http://www.nyacs-cme.org/2010/Energy
 Conf/regs form.pdf](http://www.nyacs-cme.org/2010/EnergyConf/regsform.pdf)

For 2011 Program, go to:
<http://tinyurl.com/CME-Upcoming>



LONG ISLAND SUBSECTION

Catalytic Conversion of Biomass to Biofuel: Surface Phenomena on the Metal-oxide Catalysts

Speaker: Dr. Alex Tsung-Liang Chen
 Brookhaven National Laboratory

An important step in biomass conversion is
 the catalytic removal of oxygen from biologi-
 cally derived organic compounds to yield
 combustible hydrocarbons. The nature of
 catalyst used affects greatly the yield and
 product mix of the resulting biofuel. Metal
 oxides are often used to as support for the
 metal catalysts. The results of studying ceri-
 um oxide supported metal catalysts using
 ethylene glycol as a biomass model will be
 presented. Heterogeneous processes on
 the surface of such catalysts and the role of
 ceria will be discussed.

Date: Thursday, November 11, 2010

Time: Social 5:45 PM
 Seminar 6:15 PM

Place: Hofstra University, Student Center
 Plaza West, Room 0127W

Please note that this is a different
 room than for recent seminars

Cost: Seminar is free and open to all.

Time: Dinner 7:30 PM

Place: at a nearby restaurant



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HIGH SCHOOL TEACHERS TOPICAL GROUP

Great Mysteries in Astrophysics

Speaker: Dr. Roy R. Gould
Director, NASA-Smithsonian
Universe Education Forum
Harvard-Smithsonian Center
for Astrophysics
Cambridge, MA

Some of the universe's deepest mysteries, such as the origin of the universe and the nature of black holes, are remarkably simple to describe. We'll look at the latest discoveries about these astrophysical frontiers, and with the help of some spectacular new visualizations, we'll probe the concepts needed to make sense of the current research. Along the way, we'll dispel some misconceptions common even within the scientific community. Finally, we'll look at recent images of the universe in all their glory, and discuss why and how the universe seems to be so hospitable to life.

Date: Friday, November 12, 2010

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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WESTCHESTER CHEMICAL SOCIETY

Improved Performance of Polyaryl Ether Amide Matrix Resins

Speaker: Borys Schafran
Evonik Degussa Corporation
Parsippany, NJ

A new generation of single-component, room-temperature-stable polyaryl ether amide thermoset matrix resins was introduced to the aerospace and electronics industries within the past year. Promising mechanical properties were obtained with this technology. Recent developments led to the discovery of enhanced long-term stability, particularly for hot/wet conditions, while maintaining critical characteristics including glass transition (T_g) and flame-smoke-toxicity (FST) performance. In addition, ease of processing was addressed to lower curing temperatures. An update will be presented with relevance toward fiber-reinforced composite materials.

Borys Schafran presently serves as Director, Marketing & Business Development, Industrial Chemicals for Evonik Degussa Corporation, Parsippany, NJ. Schafran leads a team focused on value-added fine chemical intermediates and custom-manufacturing services for the agrochemical and industrial market spaces. He has over 25 years of chemical industry experience with Evonik and Akzo Nobel. Schafran holds a BS in Chemical Engineering and an MS in Polymer Science & Engineering, both from Polytechnic University, Brooklyn, NY.

Date: Wednesday, November 17, 2010

Times: Refreshments – 5:30 to 6:00 PM

Presentation – 6:00 to 7:00 PM

Dinner – after presentation at
close by restaurant

Place: Westchester Community College

75 Grasslands Road

Valhalla, NY

Gateway Building Room 110

This is the new building on campus
with the big glass windows

Cost: Free and Open to the Public
dinner on your own

Parking lot #1: Visitor Parking if there is space. Space is limited, please car pool and come early

DIRECTIONS: http://www.sunybcc.edu/aboutwcc/maps_directions/maps_directions.htm

For more information, contact Paul Dillon: E-Mail paul.dillon@siemens.com or phone 1-914-524-3313

HUDSON-BERGEN CHEMICAL SOCIETY — JOINT MEETING WITH THE SCHOOL OF NATURAL SCIENCES OF FAIRLEIGH DICKINSON UNIVERSITY

Synthesis of Heterocycles via Palladium-Catalyzed One-pot Multi-component Annulations

Speaker: Yu Chen, Ph.D.
Queens College – CUNY

Professor Yu Chen started his independent career at Queens College — CUNY in August 2009 after finishing his PhD work at University of Toronto with Professor Andrei Yudin and postdoctoral research work at Iowa State University with Professor Richard Larock. Dr. Chen's research interest includes the topics of late-transition-metal catalysis, asymmetric synthesis and catalysis, and heterocyclic chemistry. The late-transition-metal catalysis topic plays a significant role in Chen research group. His group is particularly interested in group 9 to 11 transition metals, especially Pd and Au. Developing new efficient chemical transformations using these late-transition-metal

catalysts is currently one of the group's major objectives. The late-transition-metal catalyzed asymmetric synthesis is another important research topic in Chen group. The group focuses on designing and preparing new ligands with axial or facial chirality for efficient and highly stereoselective chemical reactions catalyzed by late-transition-metals. The synthetic methodologies developed in Chen group will be employed as the key steps in the synthesis of biologically interesting and pharmaceutically important molecules.

Date: Friday, November 19, 2010

Times: Social 5:30 PM

Dinner 6:00 PM

Lecture 7:00 PM

Place: Dickinson Hall Café
Fairleigh Dickinson University
Teaneck, NJ

Cost: \$20.00 for dinner (dinner cost for students is \$ 10).

Reservations: Dr. Ish Kumar (201) 692-2340, e-mail: ikumar@fdi.edu by Nov. 5, 2010.

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LONG ISLAND SUBSECTION

LIACS Chemistry Café Series – “Poisons in the News”

Speaker: Maria Mercurio-Zappala
NYC Poison Control Center

Poisonous substances featured in recent events will be presented and analyzed in an informal discussion suitable for the general public. In addition, commonly used household items that contain harmful or poisonous substances will be highlighted, followed by an overview of the resources and services provided by the New York poison control center. Coffee and cake will be served.

Date: Monday, November 29, 2010

Time: 7:00 PM

Place: The Cafeteria,
South Side High School
140 Shepherd Street
Rockville Centre, NY

Cost: The event is free and open to all.
Coffee and cake will be served.



PROFESSOR JULIUS REBEK, JR., 2011 WILLIAM H. NICHOLS MEDALIST

The ACS New York Section is proud to announce that the William H. Nichols Medalist for 2011 is **Professor Julius Rebek, Jr.**, Director of Skaggs Institute and Professor of Chemistry, The Scripps Research Institute, La Jolla, CA. Professor Rebek is being honored for “Advancements in Molecular Recognition and Encapsulation Chemistry.” The Nichols Medal will be awarded on **Friday, March 18, 2011** at the Crowne Plaza Hotel in White Plains, New York. An award dinner will follow a distinguished symposium that is related to Professor Rebek’s area of research. The names of the four presenters and the abstracts of their presentations will appear in the December - March *Indicators* and on the New York Section’s website: <http://www.NewYorkACS.org>.

NOMINATING COMMITTEE MEETS IN DECEMBER

The New York Section’s Nominating Committee will meet in December to nominate candidates for the 2011 elections.

Positions available are:

Chair-elect for 2012

Treasurer for 2012 - 2013

Directors-at-Large for 2012

Councilors and Alternate Councilors for
2012 – 2014

If a member of the New York Section wishes to run for office or to suggest a member for consideration by the Nominating Committee, please write to the American Chemical Society, New York Section, Inc., Department of Chemistry, St. John’s University, 8000 Utopia Parkway, Jamaica, NY 11439 or send an e-mail to the New York Section office at njesper1@optonline.net by **November 25, 2010**.



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.

Learn more about the New York Section
at www.NewYorkACS.org

WESTCHESTER CHEMICAL SOCIETY

Westchester Votes for New Officers and Confirms Old Ones

The new Chair of the Westchester Chemical Society is Rolande Hodel, former treasurer of the Section for 13 years. Peter Corfield is the new treasurer, and Richard Goodman is secretary. Paul Dillon was reconfirmed as program officer. Also on the board are Jean Delfiner, Joan Laredo-Liddell and new to the office is Jody Reifenberg who negotiated our new meeting place at Westchester

Community College. Ellen Weisser is in charge of hosting our Scientist and Student Awards Program at Pace University.

A three-hour board meeting resulted in agreements on major topics such as programming, spending of the sections allotment, Scientist and Student Award Program in May 2011 at Pace University, Pleasantville Campus, IYC (International Year of CCCChemistry) nanogrant to print and distribute the poster exhibition on Technology Milestones in Chemistry in Westchester, and present and future Chem Luminary awards.



From left Dr. Jody Reifenberg, Dr. Paul Dillon, Dr. Rolande Hodel, Dr. Peter Corfield, and Richard Goodman.

Contribute to *The Indicator*

The Indicator is interested in adding new features to the publication. Your input would be appreciated. Please let us know which type of feature you would like to see in future issues; i.e., book reviews, member news, short articles about your research, puzzles (crossword or other), meeting reviews (with pictures of attendees or highlights), or any other ideas you may have.

Would you be willing to assist in gathering or writing such material?

Contact the Editor at:

linatkins@tampabay.rr.com or Fax: (352) 503-7613

Chem TAG Corner

FRUSTRATION BOTTLES

Submitted by: John Penna, retired
Governor Livingston H.S.

Edited by: George R. Gross, retired
Union H.S.

Objective: Students observe three bottles with layered colored water, two similar, one reversed.

Applications: solubility, immiscibility, density, surface tension

Theory: Like dissolves like. Polar solvents will dissolve polar solvents and non-polar will dissolve non-polar. Oil is non-polar while water is polar. They are immiscible. Water is more dense than baby oil, 1.0 g/mL and 0.85 g/mL. Most food colors are polar and dissolve in water. Liquid candle dye, Yaley Enterprise 7664 Avianca Drive, Redding, CA 96002, available in many art design stores, is non-polar. With patience you can match colors with water and oil solutions.

Materials: 3 half-liter water bottles with labels removed
Baby oil
Water, distilled if available
Food colors
Liquid was colors, see above

Safety: Do not take internally. Store safely. Wear goggles and gloves when preparing solutions. Suggestion: Put tape around the necks of the bottles to prevent caps from being loosened or removed.

Preparation: Remove labels from bottles. Glue may be removed using baby oil and rubbing until dissolved. Half fill two bottles with water and one with baby oil. Add coloring until colors match. Blue works well and is visible. Fill the bottle to the top with the opposite liquid. If desired color these layers with a contrasting color as well.

Demonstration: Leave the bottles on the desk. Some will observe the anomaly. Do not discourage shaking or handling. Challenge them to explain or to reproduce them and report back to class with theirs.

Disposal: None. Save for use in other classes or next year.

Call for Nominations

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

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

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

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

Any questions or help needed contact George Gross, njmoxie1@verizon.net.



2011 BAEKELAND AWARD

<http://www.njacs.org/baekeland.html>

The North Jersey Section of the American Chemical Society is soliciting nominations for the 2011 Leo Hendrik Baekeland Award. The Award consists of a gold medal and a \$5,000 honorarium. The Section presents the Award biannually to commemorate the technical and industrial achievements of Leo Hendrik Baekeland and to encourage younger chemists to emulate his example. The Award is given in recognition of accomplishments in pure or applied chemistry to an American chemist as characterized by the initiative, creativeness, leadership, and perseverance of the individual (indicated by published or unpublished evidence) and who will be under the age of 40 as of January 1, 2011.

Nominations for the Award should include a letter describing the nominee's achievements, a brief biography, and a list of the nominee's more important publications. Successful nomination packets include two to three recommendation letters supporting the candidate. Re-nominations are encouraged, provided the age requirement is still met.

Please submit materials **by December 31, 2010, to:**

Dr. Michael M. Miller
Baekeland Award Committee
Bristol-Myers Squibb Company
311 Pennington-Rocky Hill Road
Pennington, NJ 08534

ACS News

Partner with a Science Teacher in Your Community

Who inspired you to be a scientist? Be the inspiration for the next generation by partnering with a middle or high school science teacher this school year. Assist a teacher in simple ways like answering questions from students, cleaning out the chemical cabinet, or assisting students as they conduct a lab. ACS will reimburse you up to \$500 for science materials and equipment purchased for your work with the teacher and students. Find out more and enroll in the program by contacting ACS staff at ScienceCoaches@acs.org.



Committee on Chemical Abstracts Service (CCAS) Seeks Feedback

By Michael Filosa

CCAS Associate Member-2010

The Committee on Chemical Abstracts Service (CCAS) met at the Spring meeting in San Francisco under the leadership of the new Chair, Spiro Alexandratos of Hunter College. CCAS meets twice annually in conjunction with the Spring and Fall National ACS Meetings. The CCAS meetings are attended by committee members, associates, liaisons and key CAS staff led by CAS President, Bob Massie. The mission of the committee is to act as an information conduit between ACS members and CAS man-

agement and vice-versa. We wish to solicit the opinions of ACS members on Chemical Abstracts Service so that we can evaluate those opinions and concerns and present them to CAS management. Similarly, CCAS will also help CAS communicate with ACS members.

CAS is the largest operating division within the ACS. It plays an important role both in fulfilling one of the Society's key objectives – the dissemination of chemical information – as well as providing a financial surplus to fund Society programs. CAS employs more than 600 chemists in Ohio, and others around the globe. Despite a difficult economy in 2009, CAS met its financial targets for the ACS. This reflects continued investment in technologies and content acquisition, as well as the exceptional value that CAS services bring to academic, patent office, and private sector research. CAS wishes to continue to improve its services, and your feedback is highly valued. Please contact any CCAS representative. We want to hear from you.

Since the Spring Meeting, CCAS has established a group on the ACS Network thanks to the efforts of CCAS member, Grace Baysinger of Stanford University. You can read about current activities of the CCAS as well as questions presented by ACS members and answered by CAS staff led by marketing Vice-President, Chris McCue. The CCAS Group is open to guest access at <https://communities.acs.org/groups/chemical-abstracts-service-committee>

Feel free to contact me or any other CCAS members with your questions or concerns.

michael.filosa@zink.com (Michael Filosa)

alexsd@hunter.cuny.edu (CCAS Chair, Dr. Alexandratos)

clarke@fordham.edu (Don Clarke)

obrienatm@verizon.net (Anne O'Brien).

A complete listing of current CCAS members is available at the CCAS Group on the ACS Network. To quote Professor Alexandratos from his most recent report from the Fall CCAS meeting, "I can assure you that CAS president Bob Massie and his entire staff are committed to being responsive to the issues you raise. Each query will be addressed. CAS operates for the benefit of the scientific community and CCAS can be your first point of contact if there is an issue that concerns you."

(continued on page 20)

(continued from page 19)

ACS Leadership Development Course

Developing Communication Strategies

Sponsored by the North Jersey Section

Developing Communication Strategies is an interactive course that introduces you to executive level communications. Specifically, it helps you address five main issues related to communicating outside the Society:

- Identifying strategic external stakeholder groups and understanding their main interests.
- Communication strategies for handling key situations, including announcing good news, handling bad news, and influencing key stakeholders or other interest groups.
- Communicating with interest groups outside the U.S.
- Communication strategies when working with the media
- Legal issues, concerns and guidelines for communications, especially written and email communications.

As a participant, you will work on real communication situations and gain guidance to ensure highly critical and visible communications are conducted effectively.

As a result of the course you will be able to:

- Provide others with a clear sense of direction and purpose
- Skillfully communicate new insights and unique understanding of issues or problems.
- Keep others informed about important information, thereby helping them to keep projects on track or report on new endeavors accurately.
- Communicate in an interesting and compelling manner.

Developing Communication Strategies is vital not only to your success but the success of ACS. As a senior leader you are a key representative, which requires you have the skills to communicate effectively outside the Society, under pressure, in high visible situations and do it at the level of the professional standards of ACS.

Who Should Attend This Course?

This course is designed for advanced leaders in the Society. The Developing Communication Strategies course is for those members in leadership roles who are expected to represent ACS in outside activities. We encourage those who are currently leading or who are planning to lead a new committee or project to attend this course. This course will also be useful for those who use these high level communication skills in their profession. The skills will prove invaluable to you and ACS.

Date: Saturday, November 6, 2010

Time: 9:00 AM -1:00 PM

Place: Fairleigh Dickinson University
College at Florham
Hartman Lounge (in Hennessy Hall/ The Mansion)
285 Madison Ave.
Madison NJ

Cost: Free to ACS Members;
\$15 for non-ACS members

Enrollment is limited. For more information on registration, and links to directions please visit contact

jacqueline.a.erickson@gsk.com or visit <http://www.njacs.org> and look for the link to the course information



ACS Wants You!

Calling all experienced chemists to service. The U.S. economy is experiencing the biggest setback since the Great Depression, and many of your colleagues in the chemical sciences are out of work or are in transition. They could sincerely use your assistance as someone who has been there and done that to help them with advice and guidance.

The ACS Career Consultant program has been providing support to new graduates and displaced workers for over 30 years. It is staffed by qualified volunteers who give freely of their time. Although there is no compensation, ACS provides annual training for Career Consultants. Applicants to the program are vetted through the Council Committee on Economic and Professional Affairs (CEPA). The following is a list of criteria used by CEPA to assess applications for the Career Consultant program:

Employment Background

- work experience in chemistry or related field
- respect by colleagues – reputation for excellent work

- mentoring or advising experience
- career counseling or personnel (hiring and firing) experience
- may not be principals in, or employed by enterprises which derive income by collecting fees from individuals for providing career counseling or job placement services
- must have degree in chemistry or related field.
- must be an ACS Member in good standing.

Personal Characteristics

- personal experience with making job or career changes
- good writing and speaking skills
- good listening skills
- good telephone communication skills
- dependable, outgoing, empathetic, tactful

Other

- employed and/or retired member of the ACS
- have a broad view of the business and professional dimensions of chemistry
- letters of recommendation from two current ACS members
- willingness to attend a CCP training program (possibly 2 days)

The ACS seeks to have a diverse group of chemists as consultants. Therefore, consultants are recruited from industry, academia, government, large and small organizations, all chemical specialty areas, and different work levels and positions. The ACS also seeks diversity in gender, race, and ethnic backgrounds.

If you are interested in serving your fellow members as an ACS Career Consultant, please email Malahat Layazali (m_layazali@acs.org) or Liane Gould (l_gould@acs.org).

**Learn more
about the
American Chemical
Society at
www.chemistry.org**

Others

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MASSACHUSETTS SEES JUMP IN BIOTECH JOBS

By Liz Jones Hollis

Massachusetts biotechnology and pharmaceutical industry employment reached an all-time high of 46,553 in 2009, industry trade group MassBio reveals in a new report. The group also reports that employment in the biopharma industry grew 19.7 percent between 2005 and 2009, while overall state employment grew by five percent.

“Despite the difficult economy, we continue to be the top choice for biotech and pharmaceutical companies looking to discover the latest cures and therapies, and the top choice for the people who invest in those companies,” says Robert Coughlin, president & CEO of MassBio, in a statement.

Of the top 11 biopharma manufacturing states, only Massachusetts, California, Maryland and North Carolina added manufacturing jobs, according to the report. In addition, growth in employment in biotech R&D was the greatest among the states analyzed, hitting 27,000 in 2009--up from 24,565 in 2007, according to MassBio. Massachusetts also had five of the top eight NIH-funded hospitals in the U.S.

The report also finds that venture capital investments in Massachusetts biotech com-

(continued on page 22)

OTHERS

(continued from page 21)

panies attained a historic high in the first two quarters of 2010. And companies headquartered in Massachusetts have commercialized 141 products that treat 90 different medical conditions. Together, these conditions have U.S. patient populations totaling over 160 million people, according to MassBio.

Massachusetts has been doing much to attract and keep biotech. For example, earlier this summer, officials green-lighted a \$1 billion, five-building biotech center near Kendall Square in Cambridge. Binney Street Project, as it is known, will boast about 1.72 million square feet of office/laboratory space and other mixed uses.

The findings were from MassBio's annual *Industry Snapshot*, a report compiled using information from the U.S. Bureau of Labor Statistics and other government and industry sources.

- check out [MassBio's release](#)
- see the [MassBio presentation](#) (.pdf)
- get [more](#) from the *Worcester Telegram*

Press Releases

The Amazing People Club® — Books and Audio Series By Dr. Charles Margerison

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Imagine what it would have been like to be there when William Shakespeare courted Anne Hathaway; what did the master wordsmith say to win her heart? What kind of advice would Abraham Lincoln have for today's politicians? What should modern-day entrepreneurs learn from the struggles and successes of Thomas Edison and Coco Chanel? These questions were ones that led Dr. Charles Margerison, a celebrated psychologist, literary scholar and business consultant, on the groundbreaking journey that inspired the new series, *The Amazing People Club*, distributed by Hachette Book Group.

Dr. Margerison traveled the globe and walked the same streets of the world's amazing characters to bring their personal

stories to life. The stories are revealed through BioViews®, a newly-developed concept in storytelling that combines a biography with interview to offer a completely new way of engaging with the past. They bring the listener/reader 'face to face' with people who changed our world, such as Mozart, Marie Curie, Leonardo, Henry Ford.

The series includes books, eBooks and digital audio books featuring a first-person perspective on some of the world's most amazing events, inventions and locations – discover Edison talking about the first electric light or Pasteur outlining how he discovered bacteria.

To see the full series please go to www.amazingpeopleclub.com



RTS Life Science Forms Pharmaceutical Testing Group

RTS Life Science, a worldwide supplier of automated sample management and pharmaceutical testing systems, is pleased to announce the formation of a new Pharmaceutical Testing Group.

Following the acquisition of a Massachusetts based life science company earlier this year, the new Pharmaceutical Testing group integrates UK developed products for inhaler and tablet testing with new US developed products for dissolution and content uniformity testing. The newly formed 'Pharmaceutical Testing Group,' comprises both UK and US teams working together on the now extensive range of analytical development, quality control, dose content uniformity and dissolution testing systems. With an impressive installed base of over 30 systems, extensive experience and expertise exists on both sides of the Atlantic in the fields of tablet and inhaler testing automation.

For further information regarding automation solutions for pharmaceutical testing, contact us at E: Lifescience.info@rts-group.com



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UPES® resin, enabled by QINNEX® technology, is a next generation additive solution that is made possible by NOVA Chemicals'

innovation and environmental stewardship. UPES resin broadens the processing window of most polyolefins; enabling higher throughput and creating source reduction and carbon savings opportunities to deliver a sustainable balance of performance and cost.

QINNEX technology is a polymerization process that combines unlike resins to form new enhanced polymers, creating a range of design possibilities. Based on a long-standing commitment to product and environmental stewardship, QINNEX technology delivers multiple sustainable solutions to our customers.

Tray-Pak Corporation, a leading source for customized thermoformed packaging, needed to develop a product that could withstand the weight of stacking multiple trays, had consistent wall thickness and better throughput.

UPES resin team helped Tray-Pak develop a cost-effective, sustainable packaging solution that reduced warpage, increased processing rates and provided greater crush strength through improved material distribution.

To learn more about the benefits of UPES resins, read our case study.

NOVA Chemicals UPES@novachem.com
724.770.6610 www.upesresin.com



Grand Opening of Air Force Space & Missile History Center

Cape Canaveral Air Force Station, Fla. – The U.S. Air Force Space & Missile Museum Foundation celebrated the grand opening of the Air Force Space & Missile History Center near Cape Canaveral Air Force Station recently.

The new 3,200 foot history center, located at 100 Space Port Way, is free to the public and includes a variety of exhibits from the 1950s through today.

Featuring information on every launch complex on Cape Canaveral, the center features incredible artifacts, displays, and presentations, including nosecones, rocket engines, static displays, launch consoles, and launch vehicles; all of which provide a glimpse in to the history of American space lift and space launch operations.

At the direction of Ms. Emily Perry, more

than 50 rocket and missile models and over 70 photo enlargements are featured here at the center. Also, the Air Force Space & Missile History Center now includes Space hardware, historical artifacts, and space memorabilia. Lastly, there is a gift shop, which is operated by the Space & Missile Museum Foundation that features hundreds of aerospace-related items; many of which are unique to the air station and are not available anywhere else.

For more information, contact 1st Lt. Karl Wiest at (321) 494-5947/5933, or karl.wiest@patrick.af.mil



Inspiron Ventures Licenses Rotek Plastic's Dumpster Technology

Inspiron Ventures Inc., a wholly owned subsidiary of NOVA Chemicals Inc. and Rotek Management Ltd., have entered into an agreement for Inspiron to exclusively license Rotek's polyethylene dumpster technology to manufacture, market and sell in the United States.

Rotek's patented dumpster technology offers superior strength and durability and long life for use in a variety of waste applications. Rotek has manufactured and sold a broad product line of dumpsters, accessories and options for eight years primarily in Quebec and Ontario Canada with excellent performance.

Marketed under the COSMO® Container Solution brand as "COSMO Environmental Waste Containers", Inspiron is leveraging this same technology in multiple applications and markets across the country. Manufacturing will ultimately be done through a network of exclusive manufacturing partners throughout the United States. Both Inspiron and Rotek are using NOVA Chemicals' SURPASS® high performance rotational molding resins to manufacture the dumpster product line.

For more information about COSMO Environmental Waste Containers and the entire COSMO Container Solutions product line visit www.cosmocontainers.com.

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- Hospitals for technical and research personnel

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

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

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Ad Index

ANALYTICAL

EMD Chemicals	2
Huffman Laboratories, Inc.	24
Micron Inc.	13
Nacalai USA Inc.	12
New Jersey Institute of Technology	24
NuMega Resonance Labs.	24
Robertson Microlit Labs	7
Vacubrand, Inc.	15

EQUIPMENT

Eastern Scientific Co.	4
Mass Vac, Inc.	2

GENERAL

ACS-NY/NoJ Sections	14
ACS-NY/NoJ Sections	24
ACS-NY/NoJ Sections	24