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2010 ACS FELLOWS



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North Jersey Section

Alan B. Cooper Chi-Tang Ho Christopher J Welch David John Lohse Diane Krone George Ross Gross John Penna Martin L Gorbaty Nicholas E Geacintov Thomas J Pacansky Wendy D. Cornell See article on page 7.

National Chemistry Week

See pages 10, 12-14.

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



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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

In the previous column I surveyed the scientific career of the chemist Alfred W. Stewart 1880 – 1947) whose pen name was J. J. Connington. I now turn to the work of the novelist.

Connington wrote 27 novels, all quite popular in their day which was from 1923 until 1944. A number of his books were translated into Italian, Portuguese, and Spanish. His productivity may be attributed to his using the time from mid-morning to early afternoon for science and then returning home to write. I must add that he was frail, suffering from a heart condition; he was only 67 when he died. His first and by far his most popular novel, "Nordenholt's Million", first published in 1923, he called a "pseudo-scientific thriller". It is a story of the future (somewhat like some of H. G. Wells' books) and is replete with chemically-related themes including the importance of nitrogen in agriculture, and a vision of atomic energy. The book became of interest again after World War II and was republished in paperback in 1946 and 1948. "Almighty Gold", his next novel published in 1924, is about manipulation of high finance and might be worth another look in our current climate of concern about such matters. Connington then turned to mystery fiction; his remaining novels are in that genre.

The first of these, "The Dangerfield Talisman" appeared to good reviews in 1926. I haven't yet read this novel, but I have read five of Stewart's mystery output and several of them show the scientific background of the writer. In a collection of essays "Alias J. J. Connington" published in 1947 Stewart Writes: "My Publishers have asked me if there is any connection between my work as a scientific investigator on the one hand and my detective-story writing on the other. There is not the slightest parallelism between these two lines, except that in both a logical mind is required". I respectfully choose to disagree. I will present a number of examples from "The Four Defences" published in 1940, to underscore my point that Stewart's chemical background inevitably influenced his mystery writing.

Unlike R. Austin Freeman, whose Dr. Thorndyke is an exemplar of scientific detection, or Arthur Conan Doyle whose Sherlock Holmes frequently used scientific methods in solving mysteries, Connington did not have a single identifiable sleuth at the heart of his mysteries. Two characters do appear each in several novels: Sir Clinton Driffield, a Chief Constable (both active and later retired); and Mark Brand, a radio commentator known as The Counsellor. It is Brand who appears in "The Four Defences". Here he is at work in this novel. "Have you ever tried burning a box of Swan vestas? [matches]. ...match heads are mineral matter. They don't burn away to gas".

More chemistry is evident in an inquest report. "The doctor was followed by an analytical chemist....Analysis had revealed the traces of sulphur and phosphorus on the glass...Some white powder found in the remains of the car and near the body gave tests for calcium and chlorine."

The following is reminiscent of Sherlock Holmes and his monograph on varieties of cigarette and cigar ash. "He's a toothache collector, or something. Bitten [ouch!] with the notion of writing a large and learned work on teeth and what can go wrong with 'em. Fully illustrated, it's to be, with photos of every tooth he's drawn from the public."

Later in the book there are discussions of the white powder containing calcium and chlorine (bleaching powder); of the analysis of paint stains; of the different chemical compositions of motor oils; and of establishing the provenance of samples of mud. A plethora of analytical chemistry. Here's the comment on motor oils: " ... [the analyst] took the specific gravities, the Redwood viscosities at different temperatures, the closed flash points, the carbon residues, and the sediment insoluble in carbon disulphide."

So far I have read four Connington mystery stories and they all show evidence of the author's knowledge of chemistry. I look forward to reading more of this interesting author's productions.

OCTOBER HISTORICAL EVENTS IN CHEMISTRY

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

October 1, 1867

One hundred years ago in 1910, Wilder D. Bancroft served as President of the American Chemical Society. He made the first systematic study of oxidation cells, and did research on heterogeneous equilibria, emulsions, and theory of dyeing. In 1896, he founded the *Journal of Physical Chemistry* and served as Editor until 1932.

October 5, 1872

Emil Votocek, who was born on this date, was a researcher in sugars. He introduced the concept of epimerism and was a chemist-composer.

October 7, 1885

One hundred and twenty-five years ago, Niels Bohr was born. In 1913, he proposed the "solar system" model of atom based upon Planck's quantum law and received the Nobel Prize in Physics in 1922 for his services in the investigation of the structure of atoms and of the radiation emanating from them.

October 8, 1917

Rodney R. Porter, who was born on this date, researched the structure of antibodies. In 1972, he shared the Nobel Prize in Physiology or Medicine with Gerald M. Edelman for their discoveries concerning the chemical structure of antibodies.

October 12, 1865

Arthur Harden, a researcher on enzymes and fermentation, was born on this date. He also demonstrated the structure of zymase. In 1929, he shared the Nobel Prize in Chemistry with Hans Euler Chelpin for their investigations on the fermentation of sugar and fermentative enzymes.

October 14, 1840

Friederich W. G. Kohlrausch, was a researcher on electrical conductivity, dilution of strong electrolytes and conductivity (Kohlrausch's equation). He was born on this day.

October 18, 1799

Christian F. Schönbein was born on this date. He discovered ozone in 1840 and collodion in 1846 and did research on hydrogen peroxide and gun cotton or cellulose nitrate.

October 20, 1891

Seventy-five years ago in 1935, James Chadwick received the Nobel Prize (1935) for the discovery of the neutron, which he discovered in 1932.

October 21, 1660

Three hundred and fifty years ago on this date, Georg E. Stahl was born. He was a researcher on oxidation and reduction and prepared glacial acetic acid. Johann J. Becher and he were responsible for theory of phlogiston.

October 23, Any Year

Mole Day, 6.02 AM through 6.02 PM (Mole time); Mole Moment: 50.453 s after 6.42 PM.

October 27, 1894

John E. Lennard Jones, who was born on this date, was a researcher in surface chemistry, chemistry of carbon, liquid structure, and interatomic forces.

October 31, 1835

One hundred and seventy-five years ago, Adolf von Baeyer (Johann Friedrich Wilhelm Adolf Von Baeyer) was born. He was a researcher on indigo, evolved strain theory of carbon rings, prepared acetylene, and discovered barbituric acid in1863. In 1905, he was awarded the Nobel Prize in Chemistry in recognition of his services in the advancement of organic chemistry and the chemical industry, through his work on organic dyes and hydroaromatic compounds.

For more historical facts on chemistry, visit Dr. May's website at http://faculty.cua.edu/may/ChemistryCalendar.htm.

2010 ACS FELLOWS

Society Honors 192 Members in the Second Year of its Fellows Program

"Whether it's making new materials, finding cures for disease, or developing energy alternatives, these fellows are scientific leaders, improving our lives through the transforming power of chemistry," said ACS President Joseph S. Francisco in announcing the 2010 class of ACS Fellows. "They are also consummate volunteers who contribute tirelessly to the community and the profession."

The 192 new ACS Fellows will be honored at the society's fall national meeting in Boston later this month. The members of this class represent well the breadth of the discipline: 33 of ACS's 34 technical divisions are represented. And 79 of its 189 local sections are represented.

The fellows program began in 2009 to recognize and honor ACS members for their outstanding achievements in and contributions to the science, the profession, and service to the society. This year's group members, like the first 163 ACS Fellows named in 2009, represent academe, industry, and government. Additional information about the program is available at www.acs.org/fellows.



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.



METRO WOMEN CHEMISTS COMMITTEE

Speaker: Deborah L. Smith

The speaker will give a presentation on using social media as a platform for networking and as a tool for getting noticed by employers.

Date: Wednesday, September 29, 2010

Time: 6:00 PM

Place: Fairleigh Dickinson University Madison, NJ

For more information and for details please visit the NJACS MWCC website:

http://www.njacs.org/metrowomen.html.

HUDSON-BERGEN CHEMICAL SOCIETY — JOINT MEETING WITH THE DEPARTMENT OF CHEMISTRY OF NEW JERSEY CITY UNIVERSITY

Drug Metabolism/Pharmacokinetics (DMPK) and Pharmaceutical Research

Speaker: Wei Tang, Ph.D. DMPK Merck Research Laboratories

Following administration, drug disposition into and elimination from tissues affect the extent and duration of pharmacological efficacy. Drug molecules may also undergo metabolic reactions to form products (metabolites) that could cause harm to the patient. This presentation will briefly discuss DMPK as a scientific discipline in support of pharmaceutical research.

Wei Tang obtained his PhD from the University of British Columbia under the supervision of Dr. Frank Abbott. He is currently a Distinguished Sr. Investigator at the department of DMPK, Merck, NJ. His research interest is in the area of DMPK, toxicology and LC-MS/MS based bioanalysis.

Pizza and beverages will be provided.

Date: Friday, October 1, 2010

- Time: 6:00 PM
- Place: Grossnickle Hall 144 New Jersey City University 2039 Kennedy Blvd. Jersey City, NJ

Directions to NJCU: map and directions can be found at

www.njcu.edu/i2e/visit/directions.asp#



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CHEMICAL MARKETING & ECONOMICS GROUP

Anatomy of the Deal in the Chemical Industry (Panel Discussion)

Panelists: Chris Cerimele Director, Head of Chemicals Practice, Houlihan Lokey

> Randy Dearth CEO, Lanxess Corp.

Jeff Kolke Senior Vice President Corporate Finance GE Capital

Bill Rowland Partner, Jones Day

Drew Shea Managing Partner GenNx360 Capital Partners

(Chris Cerimele will also act as Moderator)

Host: Neil A. Burns Managing Partner Neil A. Burns, LLC

Date: Thursday, October 7, 2010

- Times: 11:00 AM 2:15 PM Networking: 11 AM - 12 noon Luncheon: 12 noon - 12:30 PM Presentation: 12:30 - 2:00 PM
- Place: Club Quarters 40 West 45th Street (between Fifth and Sixth Avenues) New York, NY
- Fees: \$55 for Members; \$65 for Guests. EARLY-BIRD RATES: \$45 for Members (and \$55 for Guests) who reserve by Monday, October 4 (4:00 PM) Webcast Option: \$30 for Members and Non-Members. \$10 discount, if you reserve by Monday, October 4, 4:00 PM. This event will be available as a live Webcast (12:30 - 2:00 PM EDT on Thursday, October 7). To Reserve: http://tinyurl.com/CME-Oct10

To Reserve: Please reserve early to be eligible for the discount price. We now accept all major credit cards via PayPal ("Reserve Now" link on **www.nyacs-cme.org**), or call Vista Marketing at (917) 684-1659, or via E-mail to **cmegroup@mac.com**

Future Meetings

All future meetings will take place at Club Quarters (see above), except for the 12/9 Energy & Resources Conference (Con Edison Building).

"Outlook for Nutraceuticals"

Speaker: Lynda M. Doyle Marketing Director DSM Nutritional Products

Date: Thursday, November 4, 2010

Reserve by Friday, October 29 for the Early-Bird rate for the Conference.

* * * * * *

Fifth Annual Energy & Resources Conference — "Emerging Sources of Energy - Challenges and Opportunities"

Jointly Planned and Organized with AIChE, Metro New York Section

A full-day conference. Details at http://www.nyacs-cme.org/ER10/Conf.html

Date: Thursday, December 9th, 2010

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

* * * * * *

Outlook for Chemicals and the Economy

Speaker: T. Kevin Swift Chief Economist American Chemistry Council

Date: Thursday, January 6, 2011

* * * * * *

Opportunities in Asia Pacific

Speaker: Bob Levis Principal Asia & Brazil Connections, LLC

Date: Thursday, February 3, 2011

Please reserve early to be eligible for any discount price (only for pre-paid reservations). In general, you must reserve by the Monday (11:00 AM) before the monthly meeting.

We now accept payment (only in advance) by all major credit cards via PayPal, or call Vista Marketing at (917) 684-1659, or via Email to **cmegroup@mac.com**.

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

Robust Polymeric Nanotubes for Controlled Drug Delivery in Cancer Treatment

Speaker: Dr. Guofang Chen St. John's University

Cancer is one of the leading causes of death worldwide, especially in older age groups. Advanced drug delivery systems based on nanocarriers hold significant promise for improving cancer therapy outcomes. An important prerequisite for such systems is the ability to transport drug molecules with "zero release" to the targeted site and release them in a controlled manner at the targeted site. To that end a novel stimuliresponsive nanotube-based drug delivery system was designed to enhance drug loading capacity, site-specifically transport to the targeted cells, and sustain drug release in response to physiological changes.

Date:	Thursday, October 14, 2010
Times:	Social 5:45 PM
	Seminar 6:15 PM
Place:	Hofstra University
	Student Center Plaza West
	Room 0127W
	Please note that this is a room
	change from last year
Cost:	The 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

The Physics of Microplasmas and Their Applications

Speakers: Daniel A. O'Brien SJ Director of Educational Outreach

and

Dr. Jenny M. Mahoney, Ph.D. Senior Research Scientist Center for Microplasma Science and Technology Saint Peter's College Jersey City, NJ

The exciting field of microplasma has been evolving over the last several decades. This talk will address what defines a microplasma, and the various ways in which they are produced. The talk will also include some practical applications of microplasmas, as well as some of the educational outreach activities of the Center for Microplasma Science and Technology at Saint Peter's College.

Date: Friday, October 22, 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.



NATIONAL CHEMISTRY WEEK

"Behind the Scenes with Chemistry"

Come and join us in the fun as the New York Section of the American Chemical Society celebrates National Chemistry Week on **Saturday, October 23, 2010** at the newly refurbished New York Hall of Science! This day-long event will showcase chemistry principles using demonstrations performed by local college students and volunteers from local industries for children of all ages. This year's theme is "Behind the Scenes with Chemistry". All are welcome!

For more details and photos from last year's event: http://www.newyorkacs.org/ meetings/ NCW/ncw.php

LONG ISLAND SUBSECTION LIACS Chemistry Café Series — "The Search for the Fountain of Youth: The How, Why, and Must We of Human Aging"

Speaker: Warren Rosenberg, Ph.D. Iona College

Humans have long sought a "fountain of youth," some way to slow, stop, or reverse the aging process. In this inaugural Chemistry Café discussion we will explore the current scientific understanding of the human aging process, discuss current research areas for extending lifespan, and learn what we can do to modify the process right now. The event is geared towards the general public.

Date: Monday, October 25, 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.



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

Neuroscience and Immunology: Intersection Yields Clues for the Etiology of Psychiatric and Neurodegenerative Diseases

Organizers: Seongeun (Julia) Cho Food and Drug Administration

> Ken Jones Lundbeck Research USA

Lars Pedersen Lundbeck

Jennifer Henry The New York Academy of Sciences

Speakers: Katerina Akassoglou Gladstone Institute & UCSF

> Andrew Miller Emory University School of Medicine

Malú Tansey Emory University Shi Du Yan Columbia University Raz Yirmiya Hebrew University

Breakthroughs spanning neuroscience and immunology are rare, as they do not share a common language or purpose. This symposium highlights recent discoveries in clinical depression, the stress response, Alzheimer's and multiple sclerosis.

Date: Tuesday, October 26, 2010

- Time: 1:00 5:00 PM
- Place: The New York Academy of Sciences 7 World Trade Center 250 Greenwich Street – 40th Floor New York, NY 10007
- Cost: NYAS Members, BPDG Affiliates, and NY-ACS Members may attend BPDG meetings free of charge. Non-members may attend for a fee of \$30 per event; Student Nonmembers for \$15.

Reserve a seat on-line at: www.nyas.org/events

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



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.

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, October 25, 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, October 20, 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**, **October 7, 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 **billsuits@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, October 7, 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

* * * * * *

2010 New Jersey Science Convention

Attendees, please look for chemistry workshops offered by ACS - TA.

- Date: Tuesday and Wednesday October 12 and 13, 2010
- Times: 7:00 AM Tuesday to 4:00 PM Wednesday
- Place: Garden State Exhibit Center 50 Atrium Drive Somerset, NJ
- Cost: To view event fees, go to http://guest.cvent.com/d/iVg0_ k60MkGO9ZSLyukJzw/kns3/P1/2A?
- To register, go to http://guest.cvent.com/d/iVg0_ k60MkG09ZSLyukJzw/kns3/P1/4W?

ChemTAG

Behind the Scenes with Chemistry – National Chemistry Week

Date: Saturday, October 23, 2010

Time: 10:00 AM - 2:00 PM

Place: Liberty Science Center Liberty State Park 222 Jersey City Boulevard Jersey City, NJ

Hostess: Bobbi Gorman rosellerams@yahoo.com Directions:

http://www.lsc.org/visit/directions

ChemExpo 2010 AT LIBERTY SCIENCE CENTER

"Behind the Scenes with Chemistry" — Hands-on Science Activities

A family affair presented by area chemists, college and high school chemistry teachers and students.

Visit Liberty Science Center and enjoy this additional event included with general admission to the center

Coordinated by North Jersey Section of the American Chemical Society.

Date: Saturday, October 23, 2010 Times: 10:00 AM – 2:00 PM

For further information go to www.njacs.org or email rosellerams@yahoo.com

National Chemistry Week

COME JOIN US AT THE LIBERTY SCIENCE CENTER

Last year The North Jersey Section celebrated National Chemistry Week at the Liberty Science Center. We had a great time and the attendees really appreciated all of our efforts. Why don't you join us this year? On **Saturday, October 23**, the North Jersey Section will be holding its annual ChemExpo in celebration of National Chemistry Week. As usual we will have many tables offering all kinds of hands-on activities for budding scientists. You can set up your own table or help out at another table. We need you to help us make a difference!

The theme for this year is "Behind the Scenes with Chemistry" using chemical knowledge to diminish the "magic" associated with "unexplainable" events. Check out the National Chemistry Week web page at http://portal.acs.org/ to get some ideas for hands-on activities that you might want to present.

Your activities should be geared for 8 to 12 year olds. As usual our first priority is safety. Preferably presenters should use household materials to demonstrate a scientific principle. We would like the students to be able to redo these experiments at home and at school so it would be very helpful if you had handout instructions to distribute.

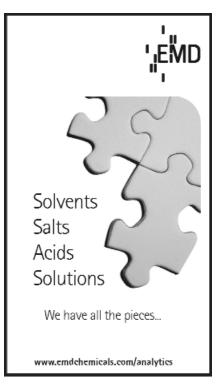
To minimize duplication of the presentations, we will need to know by October 1 the activity you would like to conduct at your table. Individuals contacting us first with

their idea(s) will be given priority, so please let us hear from you as soon as possible. Contact Bobbi Gorman at rosellerams@yahoo.com. to let her know what activities you will be doing at your table or if you want to volunteer at the Expo.

We also value and look forward to receiving financial support to help cover many of the expenses associated with the Section's NCW activities. If you would contact the appropriate individuals at your company, the Section would be most grateful. A donation of \$500.00 indicates Gold Sponsorship, a \$250.00 gift indicates Silver Sponsorship and a \$100.00 gift indicates a Bronze Sponsorship. Checks should be made out to the North Jersey ACS Section and sent to Valerie Kuck, 45 Warfield St., Montclair, NJ 07043.

Please fill out the following forms and return them to Bobbi Gorman at **rosellerams@yahoo.com**.

(continued on page 14)



Form 1. Count me in.	Form 2. My company would like to support these	
My name is:	efforts.	
I am volunteering to work on: Saturday, Oct. 23 , 10:00 AM – 11:30 AM, 11:30 AM – 2:00 PM, or 10:00 AM – 2:00 PM (Underline times).	The following company/individuals are willing to help defray the costs of these events:	
I can be reached at: (work phone number)		
My complete address is:		
I am an employee at:		
The activities at my table will be:	An acknowledgement letter for this contri- bution should be sent to (name and full	
In addition to a table, I also need:	address):	
I will be bringing handouts on activities that the students can do at home. Yes No		
I will need more than one table. Yes No How many additional tables will you need?		

Form 3.

I will be joined at my table by the following volunteers.

Complete Name:	Institution:	Address (snail mail):
Activity	Time Volunteering	****
Complete Name:	Institution:	Address (snail mail):
Activity	Time Volunteering	****
Complete Name:	Institution:	Address (snail mail):

Acknowledge letters shoul	d be sent to:	

Thanks very much for all of your help. The Section is most appreciative of your efforts. Bobbi Gorman and Valerie Kuck

Others

ASSOCIATION OF CONSULTING CHEMISTS & CHEMICAL ENGINEERS

82nd Anniversary Annual Membership Meeting

Speaker: Dr. Richard M. Goodman ACC&CE President

Incorporated in 1928, ACC&CE is planning its 82nd Anniversary Annual Membership Meeting. The Association of Consulting Chemists & Chemical Engineers, Inc., is a network of senior-level consultants with a broad range of functional expertise and many years of experience in chemical and allied industries.

Please join us!

Date: Tuesday, October 26, 2010

- Times: Networking/Cash Bar 6:00 PM Dinner 6:30 PM followed by the presentation
- Place: Ben's Deli 209 West 38th Street New York, NY
- Cost: \$35 ACC&CE Members, \$45 Non-members Advanced Registration required.

To Reserve: Call 1-973-729-6671 or email: accce@chemconsult.org

Along with your article, why not submit photos (remember to include captions and photo credits) for use in *The Indicator* by e-mailing Photos@TheIndicator.org

BROOKLYN COLLEGE of CUNY Surfactants and Chemistry

A Symposium honoring the 90th Birthday of Professor Milton J. Rosen.

Date: Friday, October 29, 2010

- Times: Registration and Refreshments will begin at 9:00 AM Symposium 10:00 AM – 4:30 PM
- Place: The Woody Tanger Auditorium in the Library Building at Brooklyn College of CUNY 2900 Bedford Avenue Brooklyn, NY
- Cost: Registration fee: Symposium and Luncheon, \$10.00 Students: \$5.00

Due to limited seating, registration and payment are required **by October 15**, **2010**.

Directions: For directions, speaker information and registration information, please visit our website: http://chemscript.brooklyn.cuny.edu/web/index.php

Questions: Contact rosensymposium2010@gmail.com or call (718) 951-5458.



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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.

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Chem TAG Corner

QUICK AND EASY THERMOCHEMISTRY

Demonstrate Your Vocabulary

Applications: thermochemistry endothermic exothermic heat enthalpy

Theory: An endothermic reaction is one that absorbs energy. An exothermic reaction is one where energy is released. In the first, the reaction container becomes cooler and in the second it becomes warmer. The most often noted form of energy in chemical reactions is a temperature change or change in the heat content of the system.

Materials: Sodium hydroxide pellets Ammonium nitrate or chloride Large test tubes Water

Safety Precautions: Sodium hydroxide is very caustic and causes severe burns. Avoid contact with skin, eyes and clothing. Large amounts of heat are released upon solution. Ammonium nitrate is a strong oxidizing agent. Avoid contact with organic materials. Wear goggles and apron. Gloves are recommended when handling the sodium hydroxide.

Preparation: Pre-measure about 10 mL of water into three large test tubes in a test tube rack. Mass out 5 g samples of the solids.

Demonstration: Add 5 g of the ammonium nitrate or chloride to one of the test tubes. Note the drop in temperature and have several students touch the outside of the tube, while you are in control of it, and report their observations.

Repeat with the sodium hydroxide. The third tube is for comparison and remains at room temperature.

Outcomes: The first tube becomes very cold. Condensation may appear on the outside of it. The second becomes very hot. Condensation may appear inside the tube above the liquid. The third tube does not change.

Disposal: Rinse the solutions down the drain with large amounts of water.

Reference: See *A Demo A Day*, Volumes I and II, for additional ideas. Available from Flinn Scientific, Batavia II.

PERCENT BY MASS

A Tasty Lab to Determine Percent of Sugar by Mass.

Submitted by: Eileen Girten,

Edited by: George R. Gross, Retired, Union High School

Applications: calculations percent composition

Theory: Many chewing gums contain sugar, some do not. Upon chewing, the sweetener dissolves leaving the non-soluble components behind. By massing a sample of gum before chewing and after, the percent of sugar or soluble sweetener can be determined with some degree of accuracy.

Materials: chewing gums including some sugarless varieties digital balance, preferably 0.001 g wax paper or plastic wrap for massing "paper"

Safety: Once foods enter the classroom/lab they are considered reagents. This lab is best performed in the foods lab, cafeteria or a regular classroom.

Preparation: Obtain the above materials. Have students develop a plan to determine the mass of sugar in chewing gum. Let them hassle with the problems such as length of time, excess saliva or water and massing methods. Perhaps they will come up with some pretty creative and scientifically sound plans.

Lab Activity: After review of individual plans, provide the equipment listed. Some

plans may have to be revised. Perhaps presenting the equipment before hand will eliminate this confusion and speed up the planning.

Data: Students will need to plan to gather the following data in order to be successful:

Mass of gum before chewing

Mass of gum after chewing

Several plans may require successive chewings.

Calculations:

Mass of unchewed – mass of chewed / mass of unchewed x 100% = % sugar

Postlab: Pool class data by gum type and brand. Find average values for percent of sugar. Discuss observed trends such as sugarless vs. sugared and variations among brands.

Encourage students to show all work including units. If computers are available there are a number of web sites that students can refer to and do follow-up reports and research.

A Google of : 'chewing gum sugar' will yield great results.

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

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

Press Releases

NSR's Revolutionary Technology Converts Waste Plastic into an Alternative Hydrocarbon Liquid Fuel

Natural State Research Inc. (NSR) recycles plastic waste, and converts it into highoctane liquid fuel that can be used in any combustion engine. NSR Fuel provides the promise of achieving balance between energy, economics, and environmental efficiencies, by addressing three of the most difficult problems facing society today: energy dependence on fossil fuels; environmental pollution; and the creation of sustainable jobs.

NSR's Executive Vice President and COO, Dr. Moinuddin Sarker, PH.D. MCIC has received the 2010 Renewable Energy Innovator-of-the-Year award, by the Association of Energy Engineers.

The AEE's prestigious awards are given to individuals and organizations that achieve National and International prominence in promoting the practices and principles of energy engineering and energy management. For more information, please visit: http://www.naturalstateresearch.com/ index.html



EPA and Other Federal Agencies Collaborate to Improve Chemical Screening

Washington-The U.S. Environmental Protection Agency (EPA), the National Institute of Environmental Health Sciences National Toxicology Program (NTP) and the National Institute of Health Chemical Genomics Center (NCGC) welcome the U.S. Food and Drug Administration (FDA) to the Tox21 collaboration. The Tox21 collaboration merges federal agency resources (research, funding and testing tools) to develop ways to more effectively predict how chemicals will affect human health and the environment. The collaboration was established in 2008 to develop models that will be able to better predict how chemicals will affect humans. FDA will provide additional expertise and chemical safety information to improve current chemical testing methods.

More information on the Tox21 collaboration: http://epa.gov/ncct/Tox21/



Plastic Drum Institute

REDUCE, REUSE, RECYCLE :: A sustainable story for plastic drums

Valley Cottage, NY, (May 16, 2010) – The Plastic Drum Institute (PDI) today announced the release of a life cycle management report detailing the sustainable processes the industry uses to support the recovery and reuse of plastic drums.

A collaborative effort between the PDI and the Reusable Industrial Packaging Association (RIPA), this report, which is available at www.plasticdrum.org, utilizes all three parts of the Waste Hierarchy (reduce, reuse, recycle) to illustrate how the plastic drum industry has effectively managed its carbon footprint.



Overestimating DNA amounts by UV spectrophotometry? Consider the plastic.

Microfuge tubes are one of the most commonly used pieces of labware in molecular biology labs around the globe. While great for holding and storing small samples, the chemicals used in the manufacturing of the plastic could be leading to measurement errors for researchers. Reporting in the current issue of *BioTechniques*, Kevin Lewis and his colleagues from Texas State University in San Marcos, TX describe their findings that indicate that UV light–absorbing chemicals are capable of leaching from polypropylene microtubes into samples, leading to erroneous measurements of nucleic acid concentration.

Although Lewis and his co-author Gary Beall do not have a solution for the problem, they are encouraged by recent trends in microtube manufacturing. "Some manufacturers have recently begun offering tubes that contain a reduced number of additives," notes Lewis.

Ref: Interference with spectrophotometric analysis of nucleic acids and proteins by leaching of chemicals from plastic tubes. L. Kevin Lewis, Michael H. Robson, Yelena Vecherkina, Chang Ji, and Gary W. Beall *BioTechniques*, Vol. 48, No. 4, April 2010, pp. 297–302 www.biotechniques.com/ article/113387

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Linda R. Atkins, Editor

I certify that the statements made by me above are correct and complete.

PS Form 3526, September 2007

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