

# theCHEMICALbulletin

<http://chicagoacs.org>

JANUARY • 2008

## CHICAGO SECTION AMERICAN CHEMICAL SOCIETY

### Joint Meeting with the American Institute of Chemical Engineers

**THURSDAY, JANUARY 24, 2008**

**European Crystal Banquet & Conference Center**  
519 W. Algonquin Road  
Arlington Heights, IL 60005  
Parlor BC  
847-437-5590

#### DIRECTIONS TO THE MEETING

##### From Chicago:

Take I-90 West. Exit at Arlington Heights Road and turn right (north). Go to the first stoplight, which is Algonquin Road. Turn left onto Algonquin and go 1/2 mile to European Crystal.

##### From Northern Indiana:

Take I-294 North to I-90 West. Exit I-90 at Arlington Heights Road and turn right (north). Then follow the directions given above.

##### From Western Suburbs:

Northbound I-290 & I-355 merge with Route 53. Take these combined roads to Higgins Road exit. Merge onto East Frontage Road and turn right onto Golf Road. Go 2 miles and turn right onto Algonquin Road. Go 1/3 mile to European Crystal.

**PARKING:** Free

**JOB CLUB:** 5:00 - 6:00 P.M.

**PRE-DINNER TALK** 5:00 - 6:00 P.M.

"To Bond, or Not To Bond" presented by **Dr. Eric Brown**, Assistant Professor of Chemistry, Loyola University, Chicago, IL  
**See abstract on page 2**

**SOCIAL HOUR** 5:30- 6:30 P.M.  
Cash Bar

**THINKY DEMO** 5:30-6:30 P.M.  
Bring your samples.  
**See page 3 for details**

**DINNER** 6:30 P.M.

Dinner reservations are required and should be received in the Section Office

via **phone** (847-647-8405), **fax** (847-647-8364), **email** ([chicagoacs@ameritech.net](mailto:chicagoacs@ameritech.net)) or **website** (<http://chicagoacs.org>) by noon on Tuesday, January 22.

The cost is \$34 to Section members who have paid their local section dues, members' families, and visiting ACS members. The cost to members who have NOT paid their local section dues and to non-Section members is \$36. The cost to students and unemployed members is \$17. Seating will be available for those who wish to attend the meeting without dinner. **PLEASE HONOR YOUR RESERVATIONS.** The Section must pay for all din-

*(continued on page 2)*

#### IMPORTANT NOTICE

*The Chemical Bulletin* is changing! Starting September 2008, primary distribution of *The Chemical Bulletin* will be changing to a new electronic version that will bring many exciting new features. The electronic edition will bring to you enhanced content and better links to our advertisers' content. We will send to you the link to each Bulletin by email. We will, of course, provide the option to not receive the email notification, and you will still be able to reach each issue through the Section web page. You also will still have the option of receiving a paper copy of *The Chemical Bulletin* for a small additional fee. More details will be given in *The Chemical Bulletin* and also at the Chicago Section web page: [www.chicagoacs.org](http://www.chicagoacs.org). We would also like to hear about your thoughts and guidance as we make this change; please send comments and questions to: [change@mychemist.net](mailto:change@mychemist.net). Also, as part of the process, we need your email address. Please send it to the office at [chicagoacs@ameritech.net](mailto:chicagoacs@ameritech.net).

ner orders. **No-shows will be billed.**



**GENERAL MEETING** 7:45 P.M.  
**Dr. Jennifer Holmgren**, Director of the Renewable Energy and Chemicals Business, UOP LLC, Des Plaines, IL

**Topic: "Biofuels: Unlocking the Potential"**

**Abstract:** Government policy is driving substitution of petroleum feedstocks by biologically derived feedstocks. However, as biofuels become increasingly pervasive, the debate over the potential of biofuels to become a sustainable source of liquid transportation fuels continues. Much of this debate is accentuated by the low yield of biofuels from existing food stock, the poor energy balance of existing biofuels and the lack of produc-

*(continued on page 2)*

#### NOTICE TO ILLINOIS TEACHERS

The Chicago Section ACS is an ISBE provider of professional development units for Illinois teachers. Teachers who register for this month's meeting will have the opportunity to earn up to 4 CPDU's.

(continued from page 1)

tion and distribution networks.

This talk will examine the key drivers for the increased production of biofuels as well as the potential risks. In addition, it will outline the elements which could enable the creation of a sustainable biofuels infrastructure; factors which range from the selection of the feedstock (algae, cellulosic), to approaches to improve the energy balance and to create fungible fuels which can utilize existing distribution networks and be used in existing automotive fleets. The importance of alliances and relationships in enabling the development and implementation of new technology which can transition biofeedstocks from mandated to advantaged sources of fuels and chemicals will also be presented.

**Biography:** Jennifer Holmgren is Director of the Renewable Energy and Chemicals Business at UOP LLC. This group will commercialize UOP technologies based on renewable resources to the market. Prior to this assignment, Jennifer was Director of Exploratory and Fundamental Research at UOP LLC. This group was accountable for UOP's strategic R&D portfolio and delivering new tools and methods.

Jennifer received a B.Sc. in Chemistry from Harvey Mudd College in Claremont California, a Ph.D. in Inorganic Materials Synthesis from the University of Illinois at Urbana-Champaign and an MBA from the University of Chicago.

Jennifer was a member of the R&D Reengineering Design Team, which redefined UOP's technology commercialization methodology. She was the first Chair of R&D's Technical Community Organization. She currently serves on multiple external advisory boards. She is the author or co-author of 50 US patents, 20 scientific publications and is the 2003 recipient of the Council for Chemical Research's (CCR) Malcolm E. Pruitt Award.

#### PRE-DINNER TALK ABSTRACT

##### "To Bond, or Not To Bond. How "Aromatic" are "Homoaromatic" Molecules?"

Despite the many opinions on what "Aromaticity" is, virtually all agree that "Aromatic" molecules are energetically stabilized by a particularly efficient type of bonding, and that Huckel's Rule is satisfied.

In "Homoaromatic" molecules, the atoms are arranged in forms reminiscent of simple aromatic annulenes.

However, here it is found that many molecules that have been termed "Homoaromatic" do not possess the appropriate electron density topologies which indicate that there are, in fact, bonding arrays between the atoms. We make predictions as to how the molecules must be engineered in order to synthesize a truly homoaromatic system, and support these predictions with the results of high-level electronic structure theory simulations.

(continued from page 1)

**Dinner Menu:** Entrée choice of Brochette of Beef on Bed of Rice with Peppercorn Sauce, Orange Roughy with lemon butter sauce and Anna Potato, or Penne Pasta with roasted vegetables; dinner includes vegetable medley of broccoli, baby carrots & rutabaga, rolls and butter, choice of beverage, and Apple Crumb Cake for dessert.

#### EDITORIAL

Welcome to the January 2008 issue of *The Chemical Bulletin*. We hope you had a good holiday season and are looking forward to a new year of information related to chemistry and chemists in the Chicagoland area.

As you have probably read the notice on the cover page of this issue, there will be a change this year how the *Chemical Bulletin* will be distributed to our membership. Starting in September, the *Chemical Bulletin* will primarily be electronically distributed. This will be a substantial cost-savings in operating expenses to the section since the *Chemical Bulletin* is the section's biggest expense. Transition to electronic format will make the publication available to a larger audience as well as making it timelier. We also plan to make provision to accommodate members who strongly desire to continue to get a paper copy. More details will follow as the year progresses.

Be sure to check out the listing of upcoming events in the Calendar on the back page of this and every issue. If you know of a meeting, a course, or other scientific activity that would be of interest to your Section members, send the information to me for inclusion in the Calendar.

With each issue, we keep in mind our commitment to ACS, the Chicago Section's mission, and the goal of being one of your connections to chemistry-related information in the Chicagoland area and from ACS National.

CHERLYN BRADLEY, EDITOR  
(cbrad1027@aol.com)

## Process Technology Engineering

www.processtechnologyengineering.com

We are manufacturer's sales reps whose line card includes:

### THINKY

Planetary mixers for fast mixing and deaerating

### Nabertherm

Furnaces and ovens

### BTU International

IR conveyor furnaces & dryers; convection processing

### Contact:

Michael Pfeifer 847-714-9214  
mpfeifer@imetllc.com

Bill Kidder 763-568-2992  
bkidder@processtechnologyengineering.com

#### IN THIS ISSUE

- 1 — Important Notice
- 1 — Dinner Meeting
- 2 — Editorial
- 3 — ChemShorts for Kids: Glow-in-the-Dark Slime
- 3 — Thinky Mixer Demo
- 4 — Internships in Israel
- 4 — Chemistry in Sports and Health
- 5 — Death Notice: Margaret Huston
- 5 — Send in Your Email Address!
- 5 — Stoddard, Kilpatrick Lecturer
- 5 — Death of a Grad Student
- 6 — Job Club
- 6 — January Historical Events in Chemistry
- 6 — Volunteers Needed!!
- 6 — National Historic Chemical Landmark
- 7 — Chicago Chemistry Day 2007
- 7 — Ad Index
- 8 — Calendar

## "CHEM SHORTS" For Kids

The Elementary Education Committee of the Chicago Section ACS presents this column. They hope that it will reach young children and help increase their science literacy. Please cut it out and pass it on to your children, grandchildren, or elementary school teachers. It is hoped that teachers will incorporate some of the projects in this column into their lesson plans.

### Glow-in-the-Dark Slime

Kids, this recipe is for a clear slime that glows in the dark after you expose it to light. The main ingredients are: Elmer's glue gel, saturated borax solution and glowing paint. You'll also need measuring cups/spoons, a bowl or Ziploc baggie and a spoon.

First, prepare a glue gel solution by mixing 1 part of glue gel (either clear or pale blue) with 3 parts of warm water. Stir the glow agent into the glue gel, about 1/8 teaspoon (tsp) per 30 ml (2 tablespoons, Tbsp) of solution. You can find glowing paint at some paint stores or glowing paint powder (which is zinc sulfide, ZnS) at craft or hobby stores. The paint powder will not dissolve so you just want it mixed in really well.

The other solution you need is a saturated borax solution made by stirring borax into warm water until it stops dissolving, leaving borax at the bottom of the container. Mix together 30 ml (2 Tbsp) glue gel solution with 10 ml (2 tsp) of borax solution. You can use a spoon and a cup or you can just squish it together inside a sealed baggie. The phosphorescent glow is activated by shining a light on the slime. Then you turn out the lights and it will glow!

### Tips:

Store your slime in a baggie or other sealed container to keep it from evaporating. You can refrigerate if desired. The slime cleans up well with soap and water.

Do not eat or drink any solutions or the slime, and wash your hands after playing with this slime. Do not inhale or ingest the glow-in-the-dark ingredient, whichever you choose to use.

A glowing paint called 'Glow Away' at Michael's craft store is reportedly good for many batches of glowing slime. It's safe, washes away with water, and is easy to mix into the slime gel. It may be located with the tempera paints. Other products may work equally well, just be sure to check the label for safety information (especially paint powder).

Elmer's non-toxic blue glue gel has been used; it's sold with school supplies. There is a clear glue gel made by another manufacturer, plus there are red or blue glue gels with stars and glitter that you could use. Borax is sold in stores near laundry detergent or household cleaners.

References: Dr. Anne Marie Helmenstine at <http://chemistry.about.com/od/chemistryhowtguide/ht/glowin-darkslime.htm>

Edited by K. A. CARRADO, Argonne National Laboratory

All past "ChemShorts": <http://member.ship.acs.org/C/Chicago/ChmShort/kidindex.html>.

### Thinky Mixer Demonstration

Michael Pfeifer from Process Technology Engineering will demonstrate a Thinky mixer at the Jan 24, 2008 Chicago section meeting. Thinky mixers use a non-contact mixing method to enable simultaneous mixing and de-aerating. The material container rotates and revolves at 400G acceleration, enabling fast mixing of materials to form a uniform material with no air bubbles. Even difficult to mix materials can be uniformly mixed with a Thinky mixer.

**Attendees at the meeting can bring samples of materials for mixing trials.** Samples must meet the following criteria: 1) no outgassing of toxic or noxious fumes before or after mixing, 2) be less than 150 ml total volume, and 3) be less than 250 grams total mass. Contact Michael at [mpfeifer@imetllc.com](mailto:mpfeifer@imetllc.com) with any questions about your samples. The materials to be mixed are simply added to a mixing cup and the cup is placed in the mixer.

January, 2008 Vol. 95, No. 1. Published by the Chicago Section of The American Chemical Society, Editorial Staff: Cherlyn Bradley, Editor; Fran Kravitz, Associate Editor; Fadwa Al-Taher and Richard Trep-tow, Proofreaders; Frank Jarzembowski, Publications Business Manager. Address: 7173 North Austin, Niles, Illinois 60714; 847/647-8405. Subscription rates: \$15 per year. Frequency: monthly-September through June.

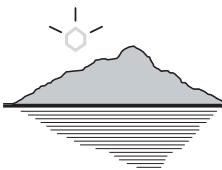
Now, if the mixer only revolved during processing, the mixture would get pressed outwards, air bubbles would be eliminated, and the mixture itself would begin to separate. To counter this, Thinky mixers also rotate the cup about the center of its axis during the mixing process. This brings the contents back into the center. This method of mixing enables

- Dispersion at primary particle level.
- De-aeration down to sub-micron size.
- Mixing in seconds to minutes.
- Uniform mixtures of many types of materials.
- Reduction of the amount of solvent or emulsifier required for dispersion.

For materials that foam excessively during mixing Thinky offers mixers with vacuum de-aerating capabilities. Thinky mixers come in six different sizes based on the maximum volume and mass of the materials that can be mixed. For more information and some examples of mixed materials go to [www.thinkyusa.com](http://www.thinkyusa.com)


**Be sure to stop by to see a Thinky mixer demonstration at the January section meeting!**

**Professional Micro-Elemental Services Since 1980**



**DESERT ANALYTICS**

A Columbia Analytical Services, Inc. Company



- CHN • O • S
- Halogens • Bomb Oxidation
- Metals • ICP • ICP/MS • AAS
- Anions • Ion Chromatography
- Dry Box • Air Sensitive Samples
- Fuel Testing • BTU • Prox • Ultimate • Sulfur • Ash Analysis
- Inquire about other capabilities

**Desert Analytics**

3860 S. Palo Verde, Ste. 303  
Tucson, AZ 85714

520.623.3381  
[thelab@desertanalytics.com](mailto:thelab@desertanalytics.com)  
We accept VISA, MC & AMEX

CLIENT FOCUSED - QUALITY DRIVEN

**WWW.DESERTANALYTICS.COM**



## LEGACY HERITAGE INTERNSHIPS FOR YOUNG SCIENTISTS

The Legacy Heritage Internship for Young Scientists (LHIYS) is a year-long experience which commences with a rigorous six-week summer program designed to introduce brilliant high school juniors with demonstrated scientific aptitude and community achievement to hands-on experience with Israeli scientists in the research laboratories of the Hebrew University of Jerusalem, combined with extensive educational touring of the State of Israel and dynamic and engaging learning.

This comprehensive program brings students to the Belmonte Laboratories of Hebrew University for guided research and laboratory experience under the tutelage of doctoral candidates and eminent professors at Hebrew University and the Youth Center for Advanced Studies. Participants will discover the processes of scientific research through hands-on investigation, weekly scientific lectures and seminars, and visits to scientific venues at Hebrew University throughout Israel.

Upon returning from Israel during the school year, interns will be expected to participate in a variety of educational and informational activities focusing primarily on science as well as Israel during the school year. Participants will also be expected to submit the research work conducted in Israel to various local, national and international science competitions. Ongoing contact with program staff including research mentors will be an important part of this process.

For more information and to request a copy of the brochure, please contact Marci Karoll at 212-578-8190 x126; email [MKaroll@lhfi.net](mailto:MKaroll@lhfi.net) or go to [www.LegacyHeritage.org](http://www.LegacyHeritage.org).

## "CHEMISTRY IN SPORTS AND HEALTH - IMPACTING YOU EVERYDAY!"

The undergraduate program at the 235th ACS Spring National Meeting in New Orleans, LA includes symposia on "Polymers in Sports" and "Chemistry in Medicine," as well as a presentation by eminent scientist Richard Silverman on the drug discovery process. The undergraduate poster sessions will highlight students' research in a variety of disciplines in chemistry. Career development will also be highlighted with workshops on improving communication and advice on preparing for and attending graduate school.

# Meet the Protectors of Vacuum Pumps, Systems and the Environment!



*Oil Mist Eliminators*



*Vacuum Inlet Traps*



*Oil Filtration Systems*

MV Products offer you a full line of oil mist eliminators, vacuum inlet traps, oil filtration systems and other quality vacuum products designed to assure your vacuum pumps a long life and you a clean and healthy environment.

- ☐ MV oil mist eliminators remove oily haze from vacuum pump exhaust, protect the surrounding areas and the room air you breath.
- ☐ MV vacuum inlet traps protect your vacuum pump from corrosive and abrasive elements and can be tailored to your specific application requirements.
- ☐ Oil filtration systems remove acids, corrosives, and contaminants from pump fluids thus reducing maintenance costs and prolonging pump life.

## Other Quality Vacuum Products



*Vacuum Degassing  
Chambers*



*Central Source  
Vacuum System*



*Filters*

**For more information on these and  
other fine vacuum products contact**



**PRODUCTS**

*A Division of Mass-Vac, Inc.*

247 Rangeway Road • PO Box 359 • North Billerica, MA 01862-0359

TEL 978-667-2393 FAX 978-671-0014 E-MAIL [sales@massvac.com](mailto:sales@massvac.com) WEB [www.massvac.com](http://www.massvac.com)

## DEATH NOTICE



**Mary Margaret Huston**

We are sad to report that Margaret Huston passed away November 30, 2007 at the age of 86. Margaret was the second woman Chair of the Chicago Section (in 1980) and served the Section in many other capacities. She was the wife of the late Dr. John L. Huston, Professor, Dept. of Chemistry, Loyola University, Chicago. A graduate of Rosary College, where she earned a B.S. in Chemistry, she received her M.S. in Chemistry from Loyola University in 1956. She was Chief Chemist for the Egg & Poultry Products Association. She was active for many years at her church, St. Peter Parish in Skokie, as Co-Coordinator for the Ministry of Care. She was a vital and active member of the community. She is survived by a cousin, Mary Louise Leahy.

Margaret was featured in the Section's Women Chemist Committee column of *The Chemical Bulletin*, September 2005 issue.

Memorial contributions may be made to Dominican University, Office of Institutional Advancement, 7900 W. Division, River Forest, IL 60305.

## AMADOU CISSE': 1978 - 2007

I have visited the University of Chicago many times, usually for a lecture or meeting; occasionally and rarely, for a section dinner meeting. And of course, because the Section and the University of Chicago Chemistry Department have shared the responsibility for planning and organizing the Stieglitz lecture in alternate years, serving as chair of the Stieglitz Lecture Committee has given me the opportunity to know very well the staff in the Chemistry Department. I am sure it was partly because of this long-term relationship with the department that I was struck with such a shocking sense of sadness when I read about the brutal slaying, resulting in the death of Amadou Cisse', 1978 - 2007, of Senegal. He had just finished his thesis defense and I am sure was looking forward with satisfaction and excitement to getting his doctorate in chemistry on December 7.

## YOUR SECTION NEEDS YOUR EMAIL ADDRESS!!

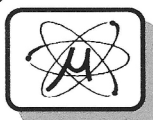
**We need your e-mail address** in order for the Chicago Section to better communicate with you. The Chicago Section is investigating ways to reduce the Section budget so more money can be used in member's programs such as education, community outreach, and other program areas. **One area the Section is planning to change is the *Chemical Bulletin* to an electronic version this year.** This does not mean there will not be a paper version of the *Chemical Bulletin* if you request one. The idea is to reduce our printing and mailing costs.

Please send your e-mail address with your name and phone number to the Section office at **chicagoacs@ameritech.net**. Remember we do not share this information with other organizations.

## FRASER STODDARD TO GIVE KILPATRICK LECTURE AT IIT

The February 22 meeting of the Chicago Section ACS is scheduled to happen at IIT's McCormick Tribune Campus Center (MTCC). The Kilpatrick Lecture will be given by Professor Fraser Stoddard, new faculty member at Northwestern University, at 8:00 PM in the MTCC Auditorium and it is open to the public. The entire program for the evening takes place in or adjacent to the MTCC ballroom and will begin with the predinner lecture at 6 PM by Dr. William Dichtel, also of Northwestern and a Stoddard associate. The social hour will take place between 5:30 and 7 PM and the banquet will begin at 7 PM in the MTCC Ballroom.

**The Chicago Section's  
e-mail address  
is  
chicagoacs@ameritech.net**



### Micron Analytical Services

COMPLETE MATERIALS CHARACTERIZATION

MORPHOLOGY CHEMISTRY STRUCTURE

SEM/EDXA, TEM/SAED, EPA/WDXA, XRD,  
XRF, ESCA, AUGER, FTIR, DSC/TGA

3815 Lancaster Pike Wilmington DE. 19805

Voice 302-998-1184, Fax 302-998-1836

E-Mail [micronanalytical@compuserve.com](mailto:micronanalytical@compuserve.com)

Web Page: [www.micronanalytical.com](http://www.micronanalytical.com)

It was just today, Friday, November 30, that I attended the Memorial Service for Amadou in the Kerstens Physics Teaching Center on the UC Campus. There were remarks by students, faculty and his thesis, adviser, Dr. Steven Sibener, Eisendrath Professor of Chemistry at UC. Dr. Sibener made very warm and laudatory remarks about his deceased graduate student. Investigation continues into the tragic circumstances of his death with two arrests announced this week.

As I reflected on the death of Amadou, I remembered that it was just a couple of weeks ago that I was reading the story of the Third Annual Conference of the African Science Academy Development Initiative (ASADI) conference in the weekly newsletter of our own National Academy of Sciences. What made the story especially interesting is that the conference was held in Dakar, Senegal. The main reason for its substantial and significant coverage by the NAS newslet-

ter is that our own National Academy is a major supporter of efforts to improve the science initiatives and educational efforts throughout the African continent.

Please note that this was just the "Third Annual Conference----". There is no doubt, Amadou's knowledge and presence in Senegal was wanted and needed in his home country. He will be sorely missed. His doctorate will be presented posthumously at the commencement ceremonies of the University on Friday, December 7.

JIM SHOFFNER

## FREE T-SHIRTS

The Hospitality Committee raffles one T-shirt at each monthly dinner meeting. The shirt has **CHICAgO** spelled out using the periodic table. So come to a monthly meeting and maybe you'll win one!

## JOB CLUB

The next meeting of the **Chicago Section ACS Job Club** will be held on **Thursday, January 24 at 5:00 p.m. at European Crystal Banquet & Conference Center**. The meeting will include a review and discussion of some of the tools that a chemist can use to conduct a job search.

The Job Club provides a continuing opportunity for unemployed members of the Section to meet with one another, share their experiences and develop a network that may help in identifying employment opportunities. Bring plenty of resumes and business cards to distribute to your colleagues. Be prepared to talk about the kind of job you are seeking.

Several participants have received outsource help with resume preparation and marketing strategies to present their best attributes to prospective employers. The group has critiqued some individual resumes and made suggestions for improvements in a positive way!

The Job Club is also for employers seeking chemists. Employers need to be prepared to describe the positions to be filled and requirements for these positions.

**Should you wish to attend the Section's dinner meeting following the Job Club, the cost is \$17 and you can continue your networking activities.** Please call the Section office for reservations and indicate that you are eligible for a discount.

Also, the Chicago Section's website has a link to the Job Club's yahoo job forum group. If you can't attend the Job Club, you can still find out about job openings and other information.

## NATIONAL HISTORIC CHEMICAL LANDMARK

The Office of Communications awarded a second National Historic Chemical Landmark plaque to INEOS, the owner of the Sohio acrylonitrile process. Acrylonitrile is an important component in acrylic fiber and in a durable thermoplastic used in automobile parts and in the casings for telephones and computers, as well as a host of other products. The original plaque was given to British Petroleum, then the owner of the Sohio acrylonitrile process, in 1996. Sohio developed the process in the 1950s.

## JANUARY HISTORICAL EVENTS IN CHEMISTRY

**January 2, 1765** Charles Hatchett, who discovered niobium in 1801, was born. Niobium was known formerly as columbium.

**January 3, 1916** Keith James Laidler, a researcher in chemical kinetics and the history of physical chemistry, was born.

**January 10, 1877** Frederick Cottrell, who did research in nitrogen fixation, was born. He did research on the liquefaction of gases and the recovery of helium. He invented the electrostatic (Cottrell) precipitator for precipitation of particles from gases.

**January 12, 1716** Antonio de Ulloa, who discovered platinum with Jorge Juan in 1748, was born. He established the first museum of natural history, the first metallurgical laboratory in Spain, and the observatory of Cadiz.

**January 15, 1785** William Prout who suggested that all atomic weights were multiples of weight of hydrogen (Prout's Hypothesis), was born. He also identified hydrochloric acid in the stomach.

**January 16, 1875** Leonor Michaelis, a researcher in physical chemistry — in particular, its use in biology and medicine, was born. She developed an equation (Michaelis-Menten) with Maude Leonora Menten that relates the velocity of enzyme catalyzed reactions to the concentration of reactants, discovered that keratin was soluble in thio-glycolic acid, and was a pioneer of the permanent wave.

**January 16, 1881** Joel H. Hildebrand, a researcher in solubility who introduced helium into deep-sea diving, was born. He lived to the age of 101.

**January 18, 1825** Edward Frankland, who reported the first synthesis of an organometallic compound, was born. He did research on the theory of valency. In 1868, he and Norman Lockyer discovered helium in the sun. He was an authority on sanitation and river pollution.

**January 20, 1758** Two hundred and fifty years ago, Marie Anne Paulze was born. She was a research assistant, collaborator, illustrator, editor, publisher, and spouse of Antoine Lavoisier. After he was guillotined, she married but was not a collaborator of Benjamin Thompson, Count Rumford.

## Toxicology Consulting

**Medical Devices  
Pharmaceuticals  
Biologicals  
Risk Assessments**

**Product Development  
FDA Registration  
Quality Assurance  
Regulatory Compliance**

### Northup RTS

Sharon J. Northup, PhD, DABT  
783 Ridge Road  
Highland Park, IL 60035

Ph: 847-579-0049 Fax: 847-579-0052

Northuprts@aol.com  
www.toxconsultants.com

**January 25, 1627** Robert Boyle, who defined an element, was born. He discovered Boyle's Law of gases, stated that matter was composed of corpuscles which themselves are built up of different configurations of primary particles, and suggested alcohol as a biological preservative.

LEOPOLD MAY  
The Catholic University of America  
Washington, DC

Additional historical events can be found at Dr. May's website, [www.faculty.cua.edu/may/history.htm](http://www.faculty.cua.edu/may/history.htm).

## VOLUNTEERS NEEDED!!

The organization **Recording For the Blind and Dyslexic** is in need of people with backgrounds in chemistry or biochemistry who would be willing to spend two or three hours a weeks recording texts for use by, as the name implies, blind or dyslexic students. If you are interested, call Nat Meyer at the Chicago office 312-236-8715, ext 213 or e-mail him at [nmeyer@rdbd.org](mailto:nmeyer@rdbd.org). It is not necessary to be rich or good-looking, and the work itself is very rewarding.



# HITACHI WILL BLOW YOU AWAY....

Hitachi is committed to providing advanced analytical instrumentation with the highest degree of quality and reliability at astounding prices. Our superior technical support and comprehensive service coverages allow you to focus on the scientific solutions. Let Hitachi provide and service your laboratory equipment so you can tackle today's challenging analytical requirements with greater success and confidence.

## HITACHI WILL BLOW YOU AWAY...

*with our performance  
with our reliability  
with our service  
**WITH OUR PRICE!***

## Hitachi – A Proud Sponsor of the ACS Chicago Chapter.

Contact your local representative, **Matt Aven** for more information.  
email: [matt.aven@hitachi-hta.com](mailto:matt.aven@hitachi-hta.com)



Contact Hitachi to learn more about our products:  
HPLC Systems  
Amino Acid Analyzers  
UV and FL Spectroscopy Systems  
LC/MS Systems  
Software and Services

**This Complete HPLC System at \$29,100\***

\*Price Includes service installation, PC & monitor, autosampler, UV detector, quaternary low-pressure gradient pump w/ built-in degasser, column oven, bottle organizer/power supply, and EZChrom Elite™ chromatography data system. Price subject to change without prior notice. EZChrom Elite™ is a registered trademark of Agilent Technologies, Inc.

Hitachi High Technologies America, Inc.  
Toll free: (800) 548-9001  
[www.hitachi-hta.com/LSHome](http://www.hitachi-hta.com/LSHome)

**HITACHI**  
Inspire the Next

© 2006 Hitachi High Technologies America, Inc. All rights reserved.

## CHICAGO CHEMISTRY DAY 2007: THE YEAR OF THE IDOL

Move over American Idol! There's a new hot show in town; it's Chemistry Idol. It was the grand finale of Chemistry Day, which took place at the IIT Campus on October 20, 2007. The theme was "The Many Faces of Chemistry." Many faces of chemistry were present -- local students, teachers and companies, to promote chemistry.

Polymers were a big part of the demos. The most populated booth was Cosmetic Chemistry. Attendees got a chance to make their own designer creams and glitter gels. Volunteers at the Nalco display showed one process used to purify iron from water with polymers. Kraft Foods had a poster on flavors and scent, and another poster showed magnified images of Velveeta cheese, an example of how chemistry and technology is used to investigate defects in manufacturing process.

A number of local high schools had student and teacher demos. One theme of the day was older students teaching younger students. Another theme was density. Niles West High School students demonstrated density with a Petri dish and drops of hydrochloric acid

(HCl) and ammonia (NH<sub>3</sub>). The more dense HCl drops down from the top lid and form NH<sub>4</sub>Cl powder. A demo on density also showed up at the Fremd High School table, the density of sugar solutions. More sugar is required to sweeten drinks than artificial sweetener; a more dense pop with sugar sinks. Solutions of color-coded sugar water were added to a clear straw with eye droppers. By observation you could tell which solutions were more dense. Proviso East High School brought a hovercraft, and several eager boy scouts volunteered to take a ride on the craft designed by Mr. Lid. West Leyden High School provided a demo that involved tying a string around a polyacrylamide 'crystal' polymer and dunking it in water, where it disappears (a 'Ghost Crystal').

The show to end all shows was Chem-

istry Idol, a showoff between high schools. The themes evoked the Halloween season. One demo was a quiz show, "Who wants to be a Chemist" with a demo of pumpkin-faced flasks of orange and brown chemistry clock reactions. The carbon dioxide (CO<sub>2</sub>) team performed a dry ice smoky cauldron, a CO<sub>2</sub> bubble popping and 'leaky faucet' demo using the principle that CO<sub>2</sub> is denser than air. The last demo of the day was a true fusion of American Idol and Chemistry Idol complete with rapping tunes. Electrical conductivity was explained, and the students got the entire audience involved, holding hands to make a human salt bridge. It was a great way to end a fun Chemistry Day.

WANDA HARTMANN  
Freelance Science Writer  
<http://www.wkhchemconsult.com/>

## Advertising Index

Company	Page	Telephone	URL
Pro Tech Engineering	2	847-714-9214	<a href="http://www.processtechnologyengineering.com">www.processtechnologyengineering.com</a>
Desert Analytics	3	520-623-3381	<a href="http://www.desertanalytics.com">www.desertanalytics.com</a>
Mass-Vac, Inc.	4	978-667-2393	<a href="http://www.massvac.com">www.massvac.com</a>
Micron Inc.	5	302-998-1184	<a href="http://www.micronanalytical.com">www.micronanalytical.com</a>
Northup RTS	6	847-579-0049	<a href="http://www.toxconsultants.com">www.toxconsultants.com</a>
Hitachi HTA, Inc.	7	800-548-9001	<a href="http://www.hitachi-hta.com/LSHome">www.hitachi-hta.com/LSHome</a>

**DO NOT DELAY  
DATED MATERIAL**

**CHICAGO SECTION, AMERICAN CHEMICAL SOCIETY  
THE CHEMICAL BULLETIN  
7173 NORTH AUSTIN  
NILES, ILLINOIS 60714**

## CALENDAR

**January 16:** Government Affairs in Water Pollution Control Conference hosted by the Illinois Water Environment Association and the Illinois Section Central States Water Environment Association, 8 am - 3 pm at the Holiday Inn, 7800 Kingery Highway (Route 83), Willowbrook, (630) 325-6400. Cost is \$75; \$85 after Jan. 7 or at the door. For more information, go to [www.cswea.org/illinois/events/](http://www.cswea.org/illinois/events/)

**January 24:** Chicago Section's joint dinner meeting with AIChE. This is a Thursday meeting. **See details in this issue.**

**January 26-30:** LabAutomation2008, a conference focused exclusively on the rapidly growing field of laboratory automation, will be at the Palm Springs Convention Center, Palm Springs, CA. For information, go to [labautomation.org/LA08](http://labautomation.org/LA08).

**February 22:** Chicago Section's joint dinner meeting with IIT.

**February 23:** IL Sections of the ACS Cooperative State Fair Project Planning Committee Conference Call, 2pm-4pm. Contact the Section office at 847-647-8405 or [chicagoacs@ameritech.net](mailto:chicagoacs@ameritech.net) for more information.

**March 2-9:** PittCon Conference and Expo, New Orleans, LA.

**March 27:** Chicago Section's Public Affairs Meeting. Bob Massie, CAS president, is the after-dinner speaker. This is a Thursday meeting.

**April 6-10:** The 235th ACS National Meeting & Exposition, New Orleans, LA.

**April 17:** Chicago Section's joint dinner meeting with the Joliet Section. This is a Thursday meeting.

**May 16:** Chicago Section's Gibbs Award Banquet.

**June 18 - July 2:** 2008 Science History Tour to France. Contact Lee Marek at [Lmarek@aol.com](mailto:Lmarek@aol.com) or Yvonne Twomey at [ytwomey@mindspring.com](mailto:ytwomey@mindspring.com).

**June 20:** Chicago Section's luncheon meeting.

**August 8-17:** ACS Illinois Sections' cooperative tent project at the Illinois State Fair. For further information on this activity, contact the section office at (847) 647-8405.

**September 19:** Chicago Section's Education Night jointly with Loyola University.

**October 24:** Basolo Medalist Lecture at Northwestern University and dinner at Zhivago's.

**November 19:** Stieglitz Lecture and Chicago Section Dinner Meeting jointly with University of Chicago.

**December 5:** Chicago Section's Holiday Party jointly with the Chemists' Club and Iota Sigma Pi.

**NEXT ISSUE IS  
FOR FEBRUARY 22  
JOINT MEETING WITH IIT**

Nonprofit Organization  
U. S. POSTAGE  
**PAID**  
Chicago, IL  
Permit No. 171