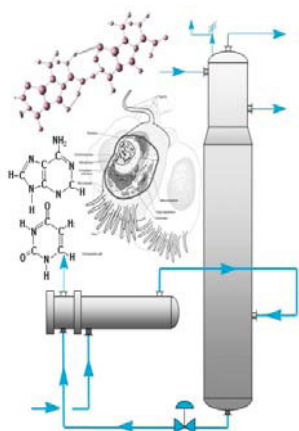


January Newsletter

Chicago Section

www.aiche-chicago.org

January 2011



Inside this issue:

Chair's Corner	2
YPAB Activity in January	2
January Meeting Information	3
AIChE Webinars	4
Thiele Award Notice	4
Upcoming Meetings	5
AIChE National News	6
Historical Engineering Events	7
AIChE Spring Meeting Chicago	9

AIChE Chicago

January 2011 Meeting Notice

Sustainable Mitigation of Global Arsenic Crisis: Challenges and Progress

Arup K. SenGupta

P.C. Rossin Professor, Lehigh University

Date: *Wednesday, January 19th, 2011*

Location: *European Crystal Banquet & Conference Center*

519 W Algonquin Rd, Arlington Heights, IL 60005
(847)437-5590

Cost: **Members: \$35** **Non-Members: \$37**

Students: \$5 **Unemployed Members: \$20**

To Register CLICK the Link:

<http://guest.cvent.com/d/ndqg29/4W>

Agenda

5:00 PM
5:30 PM
6:30 PM
7:30 PM

Job Club
Social Hour
Dinner
General Meeting



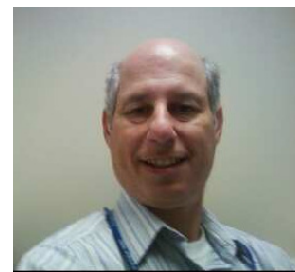
Chair's Corner

2011 is a very special year for the Chicago section. This is the year that a national meeting of AIChE comes to Chicago. The 2011 Spring National Meeting will be held from March 13-17 at the Hyatt Regency hotel in downtown Chicago. If you have never been to a national meeting, and I count myself among you, I have been told that it is an experience and an opportunity not to be missed. If you have already been to a national meeting, you can broaden your experience without the additional expense and hassle of travel.

Engineers, with similar interests, from all over the country and throughout the world, come to national meetings to find out the latest information on topics and technologies that are of interest to them. This gives the attendees a rare opportunity to expand their professional experience at the same time as they expand their professional network.

The 2011 Spring National Meeting will include the 7th Global Congress on Process Safety as well as nine topical conferences and programming by eight divisions and forums across over a hundred sessions each containing several papers and presentations. There will also be a number of keynote addresses given by distinguished members of our profession. For more detailed information click on the following link:

<http://www.aiche.org/Conferences/SpringMeeting/index.aspx>



It's been several years since the last time that a national meeting was held in Chicago and it may be several more till the next time. So I urge you to take advantage of this opportunity and I hope to see you at the meeting.

Steve Rosenblum

YPAB Activity in January 2011

Whirlyball

Date: Thursday, January 27th, 2011

Time: 6:00pm

Location: Whirlyball of Lombard, 800 E. Roosevelt Rd., Lombard, IL (behind the A&W/KFC).

Whirlyball of Lombard

offers food, arcade games, pool, and of course Whirlyball. More info can be found on the Lombard Whirlyball Website

RSVP to jessicaswary@msn.com by January 12th and state whether you would be interested in Whirlyball. Cost is \$12-15/person depending on the number of participants.

To see pictures from last year's tournament visit the YPAB-Chicago Website.

January Meeting Information

Arup K. SenGupta

“Sustainable Mitigation of Global Arsenic Crisis: Challenges and Progress”

Abstract:

In Bangladesh, Vietnam, eastern part of India, Cambodia, Thailand, Argentina and several other countries, drinking water drawn from underground sources has been responsible for widespread arsenic poisoning affecting millions of people. Although the genesis of arsenic contamination is yet to be fully understood, natural geochemical weathering of subsurface soil is the sole contributor of dissolved arsenic in groundwater. To this end, the collaborative work between Lehigh University in Pennsylvania, USA and Bengal Engineering and Science University (BESU) in West Bengal, India and Institute of Technology in Cambodia (ITC) has been directed toward providing arsenic-safe water in remote villages in affected areas. During the last fifteen years, two hundred low-cost, easy-to-operate arsenic removal units have been installed at the existing wells to insure a supply of safe drinking water. Currently, about two hundred thousand people (200,000) drink arsenic-safe water in this region.

The two most significant scientific advancements that have emerged from this ongoing project are the development of: the first reusable polymer based arsenic-selective adsorbent; and the inexpensive methodology for safe containment of arsenic-laden sludge in rural environment.

The lecture will emphasize the underlying role of chemical science and chemical engineering principles in providing sustainable solutions to a global water-related crisis.

Biography:

Dr. Arup K. SenGupta

received his bachelor's degree in chemical engineering from Jadavpur University in 1973, served as a process development engineer from 1973-1980 for the Kuljian Corporation in Philadelphia, earned a master's degree in environmental engineering in 1982 from the University of Houston and in 1984 obtained a Ph.D. in Environmental Engineering from the University of Houston. In 1985, he joined the Department of Civil and Environmental Engineering at Lehigh University; from 1998-2005 he served as its Chair. Currently, he serves as the P.C. Rossin Professor at the University.

Dr. SenGupta has received a variety of awards for his work, including, in part: the 2009 Lawrence K. Cecil Award from the American Institute of Chemical Engineers (AIChE) for outstanding contribution in the field of environmental engineering; the 2009 Astellas Foundation Award from the ACS for scientific research that improves public health; the 2008 Dhirubhai Ambani Award from the Institution of Chemical Engineers (IChemE) in the United Kingdom for engineering innovation to provide potable water for resource-poor arsenic-affected people and, in 2007, the Grainger Silver Prize Award from the National Academy of Engineering (NAE) for providing a sustainable engineering solution for arsenic-contaminated drinking water in the Indian subcontinent. These efforts have led to 175,000 villagers in remote areas of West Bengal being able to drink arsenic-safe water; further work in installing sustainable arsenic removal units in schools and villages in Cambodia is occurring due to Gupta's insistence on sharing his discoveries.

Dr. Gupta is a frequent contributor to *Environmental Science and Technology*, *Reactive and Functional Polymers*, the *AIChE Journal*, *Water Research* and other peer-reviewed journals and has authored/co-authored nearly 70 articles as well as holding patents on seven inventions.



AIChE National's Live Webinars in January

AIChE's Leadership Webinars: Chemical Engineering Essentials from Academic Authors Session Three: Process Dynamics and Control

Dr. Thomas F. Edgar

Wednesday, January 12, 2011, 2:00 – 3:00 p.m. ET

An Introduction to Solids-Gas Separation: Fundamentals and Applications

Dr. Karl V. Jacob

Wednesday, January 19, 2011, 2:00 – 3:00 p.m. ET

Deflagration Venting for Combustible Dusts — What You Need to Know

Molly Myers and Michelle Murphy

Wednesday, January 26, 2011, 2:00 – 3:00 p.m. ET

All webinars meet at the date and time indicated above and last one hour. With AIChE's ChemE on Demand, AIChE members get 6 credits with their annual membership. Credits can be used to obtain individual items listed at ChemE on Demand including the above webinars and all archived content. Each time you use a credit you gain permanent access to the content you've selected. When you use all your credits you can still access content at the low member's price. Undergraduate student members get free access to archived webinars. To register visit <http://apps.aiche.org/chemeondemand/home.aspx>.

NOMINATIONS REQUESTED FOR THE ERNEST W. THIELE AWARD

The Ernest W. Thiele award is sponsored by BP and recognizes the outstanding contributions to our profession by a Midwest region chemical engineer. This award was established by the AIChE Chicago Section and is presented annually to a Midwest region AIChE member. This internationally recognized award consists of an engraved plaque and \$1000 honorarium presented at our sectional meeting.

Nomination forms and additional information can be obtained from the Thiele Committee Chair. Completed nominations are due to the committee chair no later than March 1, 2011.

One of the highest honors a distinguished chemical engineer can receive is our Chicago Section Thiele award. Please consider nominating a deserving engineer for this prestigious award.

Jim Simnick

BP Amoco Complex, J-8
150 W. Warrenville Road, Naperville, IL 60566
Ph 630-420-5936, fax 630-420-4832
email: james.simnick@bp.com

Upcoming Meetings

International Conference on Biomolecular Engineering

Grand Hyatt San Francisco

San Francisco, CA

January 16-19, 2011

Chicago Section Monthly meeting, joint meeting with ACs & ChemPharma

European Crystal Banquet Center

January 19th, 2011

[Spring Meeting](#)

Hyatt Regency Chicago

Chicago, IL

March 13-17, 2011

[Offshore Technology Conference \(OTC\) 2011](#)

Reliant Park

Houston, TX

May 2-5, 2011

[AIChE-DECHEMA Global Conference on Energy Sustainability in the Process Industries \(ESPI\)](#)

Hong Kong University of Science and Technology (HKUST)

Hong Kong SAR, China

June 5-8, 2011

[56th Annual Safety in Ammonia Plants and Related Facilities Symposium](#)

Sheraton Montreal Hotel

Montreal, QC

September 11-15, 2011

Annual Meeting

Minneapolis Convention Center

Minneapolis, MN

October 16-21, 2011

Help us spread
the word by
printing this
page of the
newsletter and
post it on your
institution bul-
letin **board**.

AIChE National News

President

Maria K. Burka (as 2010 president-elect, succeeds to the presidency in 2011)

President-Elect

David A. Rosenthal (2011)

Treasurer (three-year term, beginning 2011)

Andre R. Da Costa

Directors (three-year term, beginning 2011)

T. Bond Calloway, Karl V. Jacob, Freeman E. Self, and Katherine S. Ziemer

Institute and Board of Directors Awards Deadline is February 15, 2011

AIChE's Board of Directors is accepting nominations for the Founders Award for Outstanding Contributions to the Field of Chemical Engineering and for the F. J. & Dorothy Van Antwerpen Award for Service to the Institute. Nominations for these awards must be postmarked by **February 15, 2011**. Additionally, nominations for the Institute's awards recognizing achievements across the chemical engineering profession are also due **February 15**.

For award details and information on the nomination process, please visit: <http://www.aiche.org/About/Awards/InstituteandBoard.aspx>.

Division Awards Deadlines Approaching

The deadline for several Division Awards is approaching.

<i>Committee or Division</i>	<i>Award</i>	<i>Deadline</i>
Fuels & Petrochemicals Division (F&P)	The Harry West Student Paper Award	January 27, 2011
	Fuels and Petrochemicals Division Scholarship	January 31, 2011
Food, Pharmaceutical & Bioengineering Division (FP&BE)	Food, Pharmaceutical and Bioengineering Division Distinguished Service Award in Chemical Engineering	February 15, 2011
	Food, Pharmaceutical and Bioengineering Division Award in Chemical Engineering	February 15, 2011

Historical Engineering Events in January

January 1, 1853 – The world's first practical steam-powered fire engine made its debut.

In the spring of 1852, Abel Shawk, Alexander Bonner Latta, and Miles Greenwood began construction on the first practical steam-powered fire engine. While other fire engines had existed, theirs was significantly faster, being able to pump water in a mere ten minutes. Once finished they presented their engine to Cincinnati Fire Department on January 1st, 1853 (their own city). This engine was nicknamed 'Uncle Joe Ross' and with the success of this and other steam powered fire engines, the City of Cincinnati went on to create the first professional fire department in the United States.

January 2, 1959 – the first lunar space ship shot to escape the Earth's gravitational pull.

The unmanned Luna I was launched by the Soviet Union less than two years after their launch of Sputnik, the Earth's first artificial satellite. Luna 1 passed to within 4,600 miles of the moon before moving on to a solar orbit.

January 3, 1957 – The world's first electric wristwatch is released. The Hamilton watch company began research on an electric watch in 1946. Ten years later they released their watch with great success. Prior to this watch most watches kept time using a balance wheel that was kept in motion using a spring. This spring had to be wound by the wearer every day. The Hamilton watch, while using the same balance wheel, used electromagnets to keep it in motion. One of the biggest challenges was finding a battery that was powerful enough to power the watch for a year, but also be small enough to fit inside the watch case.

January 5, 1892 – Construction began on the Golden Gate Bridge. After years of gathering support and funding for the bridge, Joseph Strauss oversaw its construction. The project was so massive that a Golden Gate District was formed to build the bridge. All in all the

bridge ended up costing about 27 million dollars.

January 6, 1851 – Foucault physically demonstrates the rotation of the Earth.

January 7, 1913 – William Merriam Burton is awarded the patent for thermal cracking. Cracking is a process where organic molecules are broken down into simpler molecules by breaking carbon-carbon bonds. This process is used to breakdown crude oil into one of its many products.

January 8, 1889 – Hollerith patents tabulating machine. Herman Hollerith is widely regarded as the father of modern automatic computation. He chose the punched card as the basis for storing and processing information and he built the first punched-card tabulating and sorting machines as well as the first key punch, and he founded the company that was to become IBM.

January 09, 1839 – Louis Daguerre announces his photographic process.

The first permanent photograph was made in 1826 by Joseph Niepce. Together with Louis Daguerre they further refined the process. The process involved silver-coated copper plates mixed with iodine to create a layer of silver iodine. After being exposed to light for several minutes the plate was exposed to mercury vapor and heated to 75 degrees Celsius.

January 11, 1954 – Although radio weather broadcasts have been around since 1922, it was not until 1953 that BBC executives, gathered for a luncheon, introduced the idea of presenting a weather forecast on television. These BBC executives searched the Met Office and chose the 32-year-old George Cowling, a former Royal Air Force meteorologist, to take on this new idea. Cowling delivered the first televised weather forecast on January 11th, 1954 at 7:55 PM from BBC's Lime Grove Studios.

January 12, 2010 – 7.0 Magnitude Earthquake in Haiti. The earthquake struck a highly populated region of this impoverished Caribbean island approximately 17 km from the capital city of Port-au-Prince. Hundreds of thousands died, many more injured, many buildings were destroyed or seriously damaged, infrastructures collapsed and millions became homeless and without food.

January 13, 1942 – Henry Ford patents a plastic automobile.

The plastic car Ford patented used soy-based plastics and was 25% to 33% lighter than conventional cars of his day. Ford's dream was to use agricultural-based plastics to provide another market for farmers to sell their crops.

January 14, 2005 – Huygens Probe Lands on Titan.

After spending seven years in space, the Huygens probe separated from the main Cassini spacecraft on December 24, 2004, and spent the next three weeks traveling to the moon Titan. After beginning its descent, it transmitted scientific data for nearly five hours before running out of power. The Huygens probe was named after the Dutch astronomer Christiaan Huygens. He is credited with the discovery of Titan and thus it was deemed fitting to name the probe after him.

January 15, 1955 – first solar-heated and radiation-cooled house in the United States. Respect for the powers of the sun has been a critical part of building design since humans first built shelters for protection from the environment.

January 17, 1871 - U.S. patent issued for an "endless wire rope way" cable car (No.110,971). The inventor of the cable car was Andrew S. Hallidie (center image above) and contracted by the Clay Street Hill Railroad Company in San Francisco.

January 20, 1986 – First federal holiday honoring Martin Luther King. Through fifteen years of the persistent efforts of Congress Members John Conyers (Michigan), Shirley Chisholm (New York) and an army of other supports, Martin Luther King Day legislation was passed in 1983. A number of changes were required for it to be acceptable as a federal holiday. The date was changed to the third Monday in January, rather than his birthday of January 15, so as to distance it from Christmas and New Years. Several states resisted celebrating the holiday for various reasons. Several southern states included celebrations for various Confederate generals on that day. Arizona voters didn't approve the holiday until 1992 after pressure from a tourist boycott. Only recently in 2000 was it first officially observed in all 50 states.

January 23, 1996 – The first version of the Java programming language is released. Java was developed independently of the Web, starting in 1991 with a small group of Sun engineers called the "Green Team". Their vision was that the next wave in computing was the union of digital consumer devices and computers. James Gosling led the team and worked around the clock to release this first version originally called *Oak*.

January 24, 1984 – Apple Computer unveils the Macintosh personal computer. Apple introduced "the Mac" through its famous "1984" television commercial that was played at the 1984 Super Bowl.

January 26, 1697- Isaac Newton solves Bernoulli's brachistochrone problem, inventing the "calculus of variations". The story goes that Jean Bernoulli gave Isaac Newton a challenge solve the following problem in six months:

We are given two fixed points in a vertical plane. A particle starts from rest at one of the points and travels to the other under its own weight. Find the path that the particle must follow in order to reach its destination in the briefest time.

Rather than take 6 months, Newton is reported to have solved the problem the next day.

January 26, 1926 – Scottish Engineer John Baird gives first public demonstration of television in London. According to BBC News, his first prototype in 1924 was crudely made of a washstand, a tea chest and a project lamp in a biscuit tin, scanning disks made from cardboard and lenses, all held together with scrap wood, darning needles, strings and sealing wax.

January 28, 1986 – Space Shuttle Challenger explodes after launch, killing the entire crew. American's stared in shock at their televisions

watching the Challenger accident in full motion video.

January 31, 1958 – Explorer 1 became the United States of America's first satellite to orbit the Earth after it was launched on January 31, 1958. After the Soviet Union's successful launch of Sputnik I on October 4, 1957, the United States of America embarked upon a program to launch its own artificial satellite. The first American attempt to launch a satellite using a Vanguard 1 rocket occurred in December 1957 and failed miserably.

AIChE Spring Meeting Chicago

**March 13-17, 2011
Hyatt Regency Chicago
Chicago, IL**



The AIChE Spring Meeting is the year's key technical conference for practicing chemical engineers. A wide range of subjects relevant to the current needs of industry is covered. Plus, the Global Congress on Process Safety covers the critical needs of process safety practitioners more broadly and deeply than any other conference.

Highlights of the 2011 meeting include:

• *Spring Meeting Keynote Address (Monday, March 14, 11:00am-12:00pm)*

"The Energy Challenge: Providing Sustainable Supplies to Meet Growing Demand," Dr. F. Emil Jacobs, Vice President Research and Development, ExxonMobil Research and Engineering Company.

- **The 7th Global Congress on Process Safety**
- **23rd Ethylene Producers' Conference**
- **11th Natural Gas Utilization Conference**
- **14th Topical Conference on Refinery Processing**
- **Young Professional programming on management, process controls, separations and environmental topics**
- **Young Professional Speed Networking Social**

Plus, topical conferences on Advanced Fossil Energy Utilization, Distillation, Waste & Biomass Valorization, University Research for Industry, and more.

Officers and Contact Information

Chair	Steve Rosenblum Steve.Rosenblum@uop.com
Chair Elect	Steve Schade ssschade@juno.com
Chair Programming	Peter Herena peter.herena@kenexis.com
Secretary	Tom King stephen.king@uop.com
Treasurer	Mike Buettner Mike.Buettner@alfalaval.com
Newsletter Editor	Azita Ahmadzadeh azita.ad@gmail.com

Directors at Large

Annette Johnston Annette.Johnston@abbott.com	Dennis O'Brien Dennis.O'Brien@jacobs.com
	Bill Glogowski glogowwk@middough.com

AICHE CHICAGO SECTION

American Institute of Chemical Engineers

Chicago Section
13964 Doral Lane
Homer Glen, IL 60491
aichechicago@gmail.com

We are on the web
www.aiche-chicago.org

We want you for AIChE-Chicago!

We need your help!

How many opportunities can you find to learn project management, delegation and leadership skills for free? Becoming an officer in the Chicago Section of AIChE is such an opportunity. While you're learning new skills, your local network grows. Just about all of us are either undergoing a career change, contemplating a career change, or are wondering if our career will be changed for us. Volunteering with AIChE is a way to add skills and accomplishments to your resume.

aichechicago@gmail.com

http://www.aiche-chicago.org/Section_Info/Volunteer.html

Submitting Articles to AIChE Columns

We welcome email submissions for our monthly newsletter. Commercial announcements are subject to the fee schedule below. News stories, editorials, technical or career related non-commercial contributions are always welcome with no charge. We consider job postings, announcements of for-fee training courses, expositions, conferences as commercial. Categorization of announcements is at the sole discretion of the Chicago AIChE Board of Directors. Chicago AIChE may publicize activities of interest to our members by cooperating professional societies and other non-profits without charge.

Please submit your material to aichechicago@gmail.com with "newsletter article" as a subject line.

AICHE Publicity Committee Fees	Academic (non-AICHE)		Company		Recruiters	
	Per Month	Per Year	Per Month	Per Year	Per Month	Per Year
Advertisements (3X3)	100	450	150	675	N/A	N/A
Half-Page (~7"x 4.5")	280	1260	420	1890	N/A	N/A
Job Posting (Size?)	50	225	100	450	250	N/A
Special Sizing	Contact Publicity Committee aichechicago@gmail.com					

For the purchase of a year ad, customers have the option of changing ads/jobs month to month.

Student and AIChE Member Related Postings are Free.

