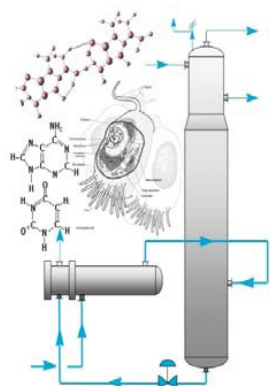


# September Newsletter

Chicago Section

[www.aiche-chicago.org](http://www.aiche-chicago.org)

September 2012



## *Inside this issue:*

Chair's Corner	2
September Meeting Info	3
AIChE Live Webinars	4
Congratulations	4
Upcoming Meetings	5
AIChE Midwest Regional Conference	6
Young Professionals	7
What is New	8
Thiele Award	8

## AIChE National Election

All ballots must be received by **September 12**.

On **August 8**, the electronic proxy website will go live. **At that time**, you can cast your electronic proxy at <http://www.societyelection.com/SocietyElection/AICHE/index.asp>

## AIChE Chicago September 2012 Meeting Notice

### Using a Combination of Modeling and Testing to Minimize Uncertainty in Crystallizer Design

by- **Dr. Patrick Murray**

*Vice President of Research and Development at Nanophase Technologies Corporation*

**Date:** **Wednesday, September 12th, 2012**

**Location:** **Suparossa Ristorante**

6310 S. Route 53 in Woodridge, IL

**Cost:** **Members: \$30** **Non-Members: \$35**

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

*To Register Click the Link;*

<http://www.cvent.com/d/5cgsdz/4W>

## Agenda

Meeting registration	5:00 pm
Appetizers	5:30 pm
Dinner	6:30 - 7:30 pm
Section business	7:30 - 7:45 pm
Speaker	7:45 - 8:45 pm
Meeting close	8:45 pm

## Chair's Corner

Now that school is back in session for both younger and older kids, this is a good time to make a couple of exciting announcements. AIChE Chicago recognizes the need to foster the next generation of engineers and has for many years committed time and treasure to support that goal. One example is our AIChE Young Professionals (YP) board, a group of younger (typically sub 35) engineers who organize social and professional development activities aimed specifically at their peer group. YP board is run by, and for, YP folks (though naturally, anybody interested is welcome to attend their events – see <http://www.aiche-chicago.org/YPC> for more info).

YP has been successful beyond imagination. Not only has it increased AIChE membership conversion across the crucial “college-to-professional” bridge, but it has allowed younger folks an easier entry point to leadership roles on the main AIChE Chicago executive board. After seeing the benefits YP has provided, the exec board was happy to increase YP funding for their events. If you or someone you know is interested, please go to the website above to find out how you can join their e-mail list!

Another goal this year is to strengthen relationships between our local AIChE Chicago section and the AIChE student sections at regional universities. Our local section is offering a “Challenge grant” of \$750 to the student sec-

tion that submits a plan for the best use of those funds in encouraging ties between the two sections. This could be, for example, a social event or technical workshop at one of the upcoming monthly Chicago section meetings or the Midwest Regional Conference in January 2013. Student AIChE sections in Illinois, Indiana, Wisconsin and Iowa may apply for the grant. To find out more details on the submittal process send an email to [aichechicago@gmail.com](mailto:aichechicago@gmail.com) for more information.



Peter Hereña

## Call for Volunteers

Volunteers are needed to help plan and support the Midwest Regional Conference.

For those interested in volunteering on the [General Arrangements Committee](http://www.aiche.org/conferences/2013midwest/GAC.aspx) (<http://www.aiche.org/conferences/2013midwest/GAC.aspx>), please contact the conference chair: Donald Chmielewski, [chmielewski@iit.edu](mailto:chmielewski@iit.edu)

## September Meeting Information

### Abstract

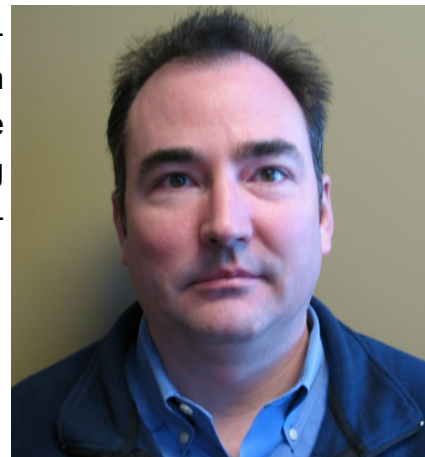
#### ***Thinking Small: Building a Business Out of Nanotechnology***

This presentation will focus broadly on the challenges associated with developing and commercializing high value nanotechnology solutions for a diverse group of industries, with selected examples from Nanophase's markets and applications serving to illustrate both the hurdles as well as the tremendous opportunities that can be created in taking a nascent science from the laboratory bench through full-scale manufacturing and finally to customers.

Nanophase Technologies in Romeoville, IL is engaged in the large scale manufacture of metal oxide nanoparticles for a variety of end uses, from topical human sunscreens to semiconductor wafer polishing to medical diagnostics. The nanoparticles may be delivered as powders, coated powders or, most commonly, as dispersions in a variety of fluids including water, solvents, monomers and resins – often with ancillary ingredients that enable or enhance functionality in specific applications. This seminar will focus broadly on the challenges associated with developing and commercializing high value nanotechnology solutions for a diverse group of industries, with selected examples from Nanophase's markets and applications serving to illustrate both the hurdles as well as the tremendous opportunities that can be created in taking a nascent science

from the laboratory bench through full-scale manufacturing and finally to customers.

### Speaker's Bio



Patrick Murray holds a Bachelor's of Science degree in Biochemistry from Illinois Benedictine College (now Benedictine University) and a Ph. D. in Organic Chemistry from the University of Illinois at Urbana-Champaign. Dr. Murray has over 20 years of experience in the areas of polymer synthesis, particle dispersion, chemical process development/scale-up and technical management. Dr. Murray moved to Nanophase Technologies Corporation in 2001 after holding various research and management positions at Nalco Chemical Company. He is currently the Vice President of Research and Development at Nanophase Technologies. He is an inventor on twelve US patents, has authored over 35 technical publications, and has contributed a chapter in the ACS monograph "Specialty Monomers and Polymers."

*To Register Click the Link;*

<http://www.cvent.com/d/5cqsdz/4W>

## ***AIChE National's Live Webinars in September***

### **EPA Greenhouse Gas Reporting Rule: Lessons Learned**

AIChE and the Air & Waste Management Association

***Wednesday, September 12, 2012 - 2:00pm-3:30pm***

***Presenter(s):*** Mary Ellen Ternes, Dr. Miriam Lev-On, Victoria Evans, Dr. Richard Siegel

A lot has changed since the EPA Greenhouse Gas Reporting Rule was issued in 2010. Under the rule, thousands of facilities were required to collect and report emissions data – or face potential criminal penalties.

### **Failure Mechanisms in Lithium Ion Batteries: Opportunities for Materials Development**

***Wednesday, September 19, 2012 - 2:00pm-3:00pm***

***Presenter(s):*** Dee Strand

This presentation will focus on the primary failure mechanisms for lithium ion batteries, how those mechanisms are affected by material selection, and vehicle applications for batteries and their future development.

### **From Biochemical Engineering to Synthetic Biology: A Short History of Engineering Impacts on Biotechnology**

***Thursday, September 27, 2012 - 2:00pm-3:00pm***

***Presenter(s):*** Harvey Blanch

This webinar will focus on how biochemical engineering developed in response to the need for large-scale production of antibiotics in the 1940s and 50s, even though fermentation provided a route to many industrial organic chemicals prior to their production from petroleum.

## ***Announcement Congratulations***

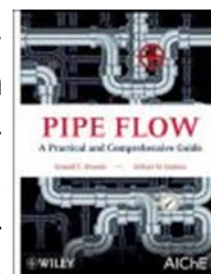
***Dr. Santi Kulprathipanja***, a fellow at Honeywell's UOP, has been selected to receive the 2012 American Institute of Chemical Engineers' (AIChE) Gerhold Award, which recognizes an individual's outstanding contribution in research, development, or in the application of chemical separations technology.

[http://www.uop.com/honeywell-uop-technologist-receives-american-institute-chemical-engineers-gerhold-award/?et\\_cid=29414912&et rid=1418426606&linkid=news+release](http://www.uop.com/honeywell-uop-technologist-receives-american-institute-chemical-engineers-gerhold-award/?et_cid=29414912&et rid=1418426606&linkid=news+release)

## ***New Book***

### **Pipe Flow: A Practical and Comprehensive Guide**

Pipe Flow provides the information required to design and analyze the piping systems needed to support a broad range of industrial operations, distribution systems, and power plants.



## *Upcoming Meetings*

### 2012 Annual Safety in Ammonia Plants and Related Facilities

Hyatt Regency

Chicago, IL

**September 9-13, 2012**

### Chicago Section Monthly Meeting

Location TBD

**September 12, 2012**

### 2012 AIChE Regional Process Technology Conference

South Shore Harbour Resort and Conference Center

League City, TX

**October 4-5, 2012**

### 2012 Annual Meeting

Pittsburgh Convention Center

Pittsburgh, PA

**October 28—November 2, 2012**

### Sustainability in (Bio) Pharmaceuticals

Sheraton Old San Juan, San Juan Puerto Rico

**November 11-14, 2012**

## **AICHE National Election – Your Vote Does Matter!**

Historically, AIChE National elections have been won by very small margins because few people vote. The National AIChE election is underway. Hard copy ballots began arriving in our mailboxes last week. On-line voting begins August 8<sup>th</sup>.

Profiles of the candidates, as they appear on the National AIChE web site, appear elsewhere in this newsletter. Read the profiles and [vote](#). Your vote does matter!

**All ballots must be received by September 12**

On **August 8**, the electronic proxy website will go live. **At that time**, you can cast your electronic proxy at <http://www.societyelection.com/SocietyElection/AIChE/index.asp>.

# CALL FOR TECHNICAL CONTRIBUTIONS

**2013 AIChE Midwest Regional Conference**

**January 31—February 1, 2012**

**Organized by the Chicago Local Section of AIChE**

**Hosted by the Illinois Institute of Technology, Chicago, IL**

The “Call for Technical Contributions” for the [2013 AIChE Midwest Regional Conference](http://www.aiche.org/conferences/2013midwest/Contributions.aspx) is now open:

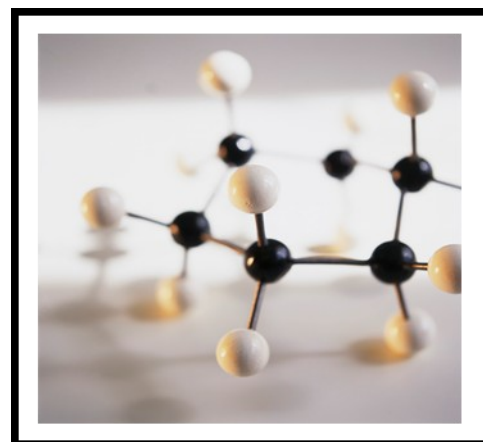
<http://www.aiche.org/conferences/2013midwest/Contributions.aspx>

**Contributions are sought in all areas of chemical engineering.**

**Professional Development contributions are also encouraged.**

**Contributions may be in the form of:**

- **Invited Sessions**
- **Contributed Presentations**
- **Poster Presentations**



For those interested in organizing an Invited Session please see the “Intent to Submit an Invited Session” form.

For questions, please feel free to contact a member of the [Meeting Program Committee](http://www.aiche.org/conferences/2013midwest/ProgramCommittee.aspx).

(<http://www.aiche.org/conferences/2013midwest/ProgramCommittee.aspx>).



## YP Spotlight—Check it out!

2011-2012 AIChE Chicago YP Chair Aaron Matthews recently co-authored an article entitled, "The Physics of Monster Trucks" in the August 2012 issue of Car And Driver Magazine. Check it out here!

<http://www.caranddriver.com/features/the-physics-of-monster-trucks-feature>

## *Young Professionals News*

# YPC



**Date:** Wednesday, September 26, 2012

**Time:** 6:00pm

**Where:** Schnitzel Platz;  
729 North Avenue,  
Glendale Height, IL  
60139

**Cost:** Whatever you  
want to eat and drink.

**Please remember to  
bring cash, they will  
not split a check.**

RSVP to Julie



([gruhnja@middough.com](mailto:gruhnja@middough.com)) by Friday, September 21

Come enjoy great German food and drink with your fellow YPs!

## ***What is New?***

### ***Nanoparticle systems target tumors, have fewer side effects***

Nanoparticle drug-delivery systems allow stronger drugs to target tumors directly and sidestep the negative effects of drug cocktails used to treat cancer, says Cerulean Pharma, which has developed targeted nanoparticles that slowly release a drug in the presence of tumors. The chemical bond between the drug and the nanoparticle can be adjusted for different drug release rates. Separately, BIND Biosciences has developed targeting molecules for its nanoparticles to better identify

cancerous cells. [MIT Technology Review online](#)

### ***Obama administration increases energy efficiency targets***

President Barack Obama last week issued an executive order to set higher energy-efficiency targets for U.S. manufacturers. Such goals will spur about \$40 billion to \$80 billion in private investment and boost combined heat and power capacity to 40 gigawatts by 2020 while reducing energy expenditures by \$10 billion a year, according to the administration. [The Hill/E2 Wire blog](#) (8/30)

## **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, 2013.**

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](mailto:james.simnick@bp.com)



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We are on the web  
[www.aiche-chicago.org](http://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](mailto:aichechicago@gmail.com)

[http://www.aiche-chicago.org/Section\\_Info/Volunteer.html](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](mailto:aichechicago@gmail.com) with "newsletter article" as a subject line.

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