

# The Packed Column

American Institute of Chemical Engineers - Upper Midwest Section

January 2005

## **CHAIR'S CORNER**

by Ryan P. O'Connor

As 2004 ends and we look ahead to 2005, I would like to reflect on some of our recent local and national meetings and give a preview of your upcoming meetings for the AIChE Upper Midwest Section.

### **Fall 2004**

We started the fall with a joint meeting with the local ACS (Minnesota Chapter), kicking off our new initiative for stronger collaboration with ACS. Andy Ouderkirk from 3M talked about advances in high-performance polymeric interference mirrors and polarizers. Andy gave a good technical talk and discussed applications ranging from energy-efficient windshields to enhanced-brightness LCD displays.

In October, we had an outstanding plant tour at Boston Scientific in Maple Grove. Boston Scientific produces stents, balloon catheters, guide wires, and other products for less-invasive medical treatments. At the meeting we toured several critical manufacturing areas, and Boston Scientific gets special recognition for bringing us through *live* production!

FSI International in Chaska was the site of our November meeting, another excellent tour. FSI is a global supplier of semiconductor processing equipment, technology, and support services for microelectronics manufacturers. Both Boston Scientific and FSI deserve our thanks for showing us their manufacturing processes, discussing their technologies and markets, and generally conveying the promise of both the local economy and the role of chemical engineers in that economy for the long term.

At the December meeting, we heard a lecture from Larry Corless, founder of Food Systems Design (FSD), basically on his success story in starting up his business. FSD was founded in 1990 and employs about 50 people with food-processing backgrounds. Larry had a lot of insight into the mechanics of starting a business, what is important and where time should be spent, the factors that should play into decisions about your business, the rewards involved, and exit strategies. It was an extremely interesting evening, especially for those that are considering some type of self-employment or starting up a company.

## **Annual AIChE Conference**

In November I had the opportunity to attend the main event of AIChE, the annual meeting, held this year in Austin, Texas. I mostly attended the topical conference on biorefining (chemicals and materials from renewable resources). Check out [www.aiche.org/conferences/techprogram/browse.asp?DSN=annual04](http://www.aiche.org/conferences/techprogram/browse.asp?DSN=annual04) for a list of sessions and presentations, and let me know if you'd like more information. A set of meeting notes can be e-mailed to anyone interested; just send an e-mail to me at [ryan\\_oconnor@cargilldow.com](mailto:ryan_oconnor@cargilldow.com) requesting a copy. I also attended a workshop called *The Science of Sustainability*. Starting with a working definition that sustainability is "Meeting Society's Needs for Products and Services with Progressively Less Negative Impact on the Earth," we had an engaging lecture and discussion. Information can be downloaded free from [www.aiche.org/sustainability](http://www.aiche.org/sustainability).

At a business meeting, the state of the Institute was reviewed. Overall, National seems to be managing their financial challenges well and is outsourcing what they can—as well as counting on local sections to provide more value to members. There are currently about 45,000 AIChE members nationally. Of 100 chemical engineers out of school, within five years only 20 retain membership. Furthermore, there is a significant defection rate of mid-career members, not just retirees and young engineers.

### **Winter 2005**

This month (January 25, 2005) we have a meeting on the University of Minnesota campus with the student chapter. We will hear from Prof. Marc Hillmyer (Dept. of Chemistry) and his research on novel biodegradable polymers. Please see p. 5 of this newsletter for more information and instructions to sign up for dinner.

On February 15, we will again gather at Sebesta Blomberg (p. 6) and listen to Cecil Massie talk about the Minnesota biorefining industry and some examples from his own consulting work. The evening will begin with a free catered dinner to the first 50 who sign up.

On St. Patrick's Day, March 17, there will be an excellent networking opportunity and interesting presentations at MinnTS'05 (MinnTS = Minnesota Technical Symposium), an annual collaborative event that AIChE Upper Midwest is now helping to sponsor. This year's meeting features Art

Courtesy from Genzyme and Vincent Chow from Optobionics. We will hear about advanced biomaterials and work to develop an artificial retina. Note that the organizations sponsoring MinnTS'05 are AIChE, ASM, AVS, MMS, SAS, SEMI-MN, SID, and ACS! Watch for the March 2005 newsletter for more information about this exciting meeting.

### Spring 2005

#### Annual Symposium

The main event of our local section, the Annual Symposium, is scheduled for Wednesday, April 13, 2005 in Bloomington, MN at the Thunderbird Hotel. The theme for this year's full-day gathering is "Practical Tools for Engineering Research." Please turn to p. 4 for much more information and a Call for Speakers.

In May, the local section plans to bring in a national speaker from the Speakers Bureau on a topic to be determined. It has been a number of years since we have

accessed this network of nationally recognized speakers ([www.aiche.org/mag/speaker](http://www.aiche.org/mag/speaker)). Another new initiative coming in May is an AIChE technical workshop in the Minneapolis area. These classes are normally held at national meetings or outside of Minnesota, and many members are unable to travel to them. By bringing a workshop to you, we minimize travel and hassle to give you another learning and networking opportunity. *If you have suggestions on topics of interest to the local chemical engineering community, please contact us.*

Sometime in the spring, we also plan to organize a meeting dedicated to career development, most likely in conjunction with SWE (Society of Women Engineers) and ACS. Details for this meeting are still being put together; watch for a future newsletter and/or a separate mailing for this event.

**Thanks for reading! Please let us know your concerns or questions.**

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**MAKE SURE TO CHECK OUT OUR WEB SITE AT:**

**<http://www.aichelocal.org/tc>**

## Introducing: Young Professionals Advisory Board (YPAB)

Join us at Great Waters Brewery

Hosted by:

American Chemical Society Young Chemists and AIChE Upper Midwest YPAB

### When:

Saturday, February 5th at 5 p.m.

RSVP by Monday, January 31<sup>st</sup> to Matt Atkins at 952-226-4538 or [mpatkins@msn.com](mailto:mpatkins@msn.com)

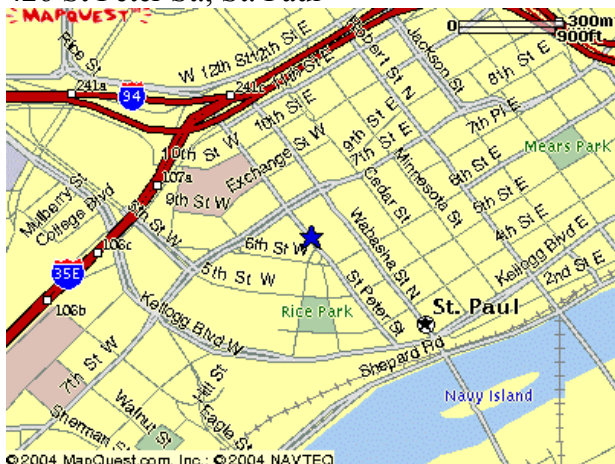
Tours will begin promptly at 5 p.m. in groups of 10.

Note: Discount pitchers will be available for our group!

### Where:

Great Waters Brewery, (651) 224-BREW

426 St Peter St., St. Paul



### What is YPAB?

The Young Professionals Advisory Board (YPAB) is an AIChE National initiative that "...assists the integration of chemical engineers within 5–10 years of receiving their undergraduate degree into the profession and into AIChE, and helps define programs and services tailored for young chemical engineers."

### What can we do for you?

The Upper Midwest Section already does a phenomenal job of providing opportunities for learning through speakers and company tours. YPAB will have a more social focus and be tailored toward younger engineers while also providing additional opportunities for networking with other professionals in the Upper Midwest area.

### How will you hear about events?

Event notices will be forwarded through the AIChE Upper Midwest Section e-mail list and will appear in our bimonthly newsletters.

Please contact Matt Atkins, YPAB Chair, to share ideas for and interest in helping with upcoming events.

# 2005 AIChE Annual Symposium

## Call for Posters Call for Papers

Wednesday, April 13<sup>th</sup>, 2005

Time: 8:00 a.m. – 4:30 p.m.

At the Thunderbird Hotel

2300 East American Boulevard

Bloomington, Minnesota 55425-1228

## Theme: Practical Tools for Engineering Research

The Annual Symposium is again approaching. Mark your calendars to attend this interesting event.

More importantly, this early time is when people need to start thinking about talks to present. All timely topics related to chemical engineering are welcome. Talk about the field you know most about and share your knowledge with fellow engineers. Others will find the knowledge you take for granted fascinating.

This symposium attracts speakers with many interesting topics. Usually there are speakers in two different rooms allowing the attendees to choose the topics that are most relevant to the attendee. Lunch is also included.

Please contact Nathan A. Busch (phone: 952-542.3858, e-mail: busch034@tc.umn.edu) or Brian Jensen (phone: 952-926-2141, e-mail: brianejensen@prodigy.net) to indicate your interest in presenting a paper or poster at the symposium, to be a sponsor for this event, to sponsor the student poster contest, or to volunteer for the symposium. **Deadline for papers is Monday, February 28, 2005.**

## Corporate Sponsorships Invited

AIChE wishes to offer its sincere thanks to all the companies that have generously offered their sponsorship in years past to help make our annual symposium possible. We truly appreciate your efforts! Now, we once again invite corporate sponsors to help underwrite the cost of the symposium. If you have found our symposium enjoyable and beneficial in the past, please consider making your company one of the AIChE 2005 Annual Symposium Corporate Sponsors. To make your donation or for more information, please contact Nathan A. Busch (phone: 952-542.3858, e-mail: busch034@tc.umn.edu) or Brian Jensen (phone: 952-926-2141, e-mail: brianejensen@prodigy.net) as soon as possible.

## Undergraduate Poster Contest

Undergraduates in chemical engineering are encouraged to submit posters for our Annual Symposium Poster Contest. Use your creativity and results from your chemical engineering research to create a poster that will be interesting and informative to your fellow chemical engineers. Posters will be judged by professional chemical engineers, and **CASH PRIZES** will be awarded to the top two winners. To submit your entry, contact Thomas Kempf (phone: 763-674-2873, e-mail: thomas.kempf@genmills.com) as soon as possible.

AIChE PDH credits are being offered to any engineers who are interested in keeping up their professional development hours. Please ask at the registration table for the required form.

## JANUARY MEETING

### Joint Meeting with University of Minnesota AIChE Student Chapter

**Guest Speaker: Marc Hillmyer,  
“Green Chemistry: New Materials and Applications for a Cleaner Environment”**

**Tuesday January 25th, 2005**

**Meeting Location:**

Mississippi Room  
Coffman Memorial Union  
300 Washington Ave. S.E.  
Minneapolis, MN 55455-0110

**Agenda**

6:30 p.m. Registration & Social  
7:00 p.m. Dinner  
7:30 p.m. Presentation and Questions

**Topic**

This is our annual joint meeting with the UMN student chapter. Mark Hillmyer will speak on the topic of environmentally friendly polymers.

**Abstract**

Dr. Marc Hillmyer is a leading researcher in polymer synthesis, characterization, and applications. He has received many awards including the National Science Foundation CAREER Award and a McKnight Land-Grant Professorship. A major topic of research for his group is environmentally friendly polymers. The leading naturally sourced, biodegradable polymer is poly-lactic acid (PLA). PLA can be made from corn starch and degrades in composts. This makes it an attractive alternative to petroleum-based materials. In the past, cost and limited physical properties of biodegradable polymers have restricted their uses. Using organic, inorganic, and materials-chemistry approaches, Dr. Hillmyer is working to improve PLA properties. The goal is to make PLA as versatile as polyethylene and other common plastics.

**Reservations.**

Reserve your seat by sending e-mail to [mark.Arlinghaus@genmills.com](mailto:mark.Arlinghaus@genmills.com).

**Please respond by January 20th.**

**Cost**

The dinner is free for students and \$10 for professional members.

**Directions**

Directions to the union are available at:

<http://www.coffman.umn.edu/directions.php>

**Place an ad here and get results! Reach over 600 chemical engineers!**

**Nathan Johnson, [doc\\_curtis@rocketmail.com](mailto:doc_curtis@rocketmail.com)  
651-733-2184**

**FEBRUARY MEETING**  
**ANNUAL SEBESTA NIGHT**  
**Energy Independence for Minnesota**  
**Is it Possible? What will it take?**

**Tuesday, February 15<sup>th</sup>, 2004**

**LOCATION:**  
**Sebesta Blomberg & Associates, Inc.**  
**2381 Rosegate**  
**Roseville, MN 55113**  
**Phone: (651) 634-0775 • <http://www.sebesta.com>**

**Agenda:** 5:30–7:00 p.m.: Social Hour and **Free Dinner** provided by Sebesta Blomberg  
 7:00–8:00 p.m.: “Energy Independence for Minnesota”

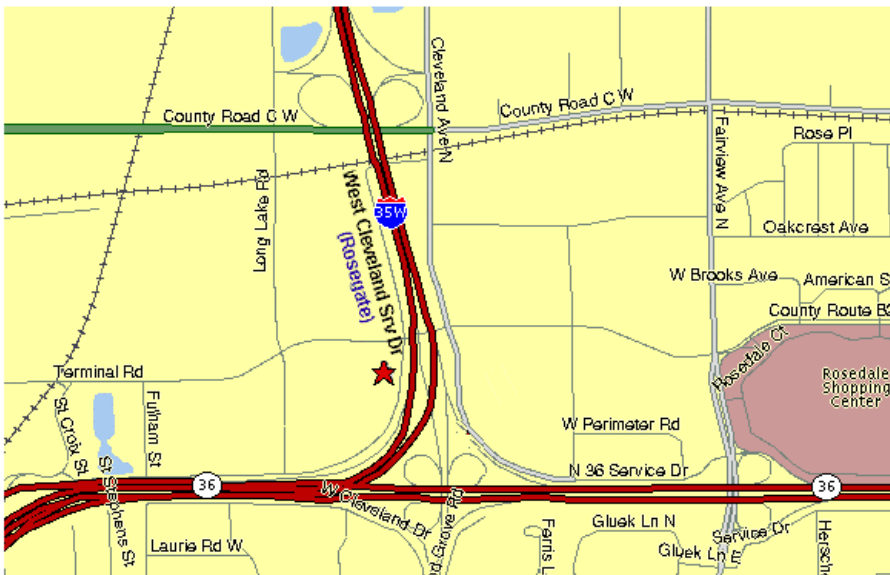
Minnesota Energy Alley, in cooperation with local experts in various forms of renewable energy, university staff and state officials has recently completed a study of research priorities for renewable energy. The study framed research priorities within the objective that: “By 2030, Minnesota will be a premier center of energy technology research and deployment and a net exporter of energy.”

Is such an objective feasible within the limits of Minnesota resources and what obstacles will need to be overcome to achieve this goal? Join us as we write the material and energy balance for the Minnesota economy and put the goal to the test of science.

Our speaker will be Cecil Massie, who served on the committee. Mr. Massie is a registered professional engineer in the state of Minnesota and is the senior engineer in charge of the renewable fuels and rural economic development initiative of Sebesta Blomberg.

With over 30 years experience in process development and scale up, Mr. Massie has directed the development of new processes and products in a number of ag. related fields including wheat gluten, modified starches, edible oils and most recently renewable fuels. Mr. Massie holds multiple process patents and has commercialized multiple new process technologies. Projects executed by Sebesta Blomberg have included studies of the economics and engineering of renewable fuel based projects for the Department of Energy, the Minnesota Renewable Fuels Fund and the Department of Agriculture.

In addition to listening to this educational talk, you will get a **free dinner** provided courtesy of Sebesta Blomberg and Associates, Inc. Don't miss this exciting opportunity of hearing this dynamic speaker and getting a **free dinner**. Space is limited to the first 50 people that sign up, so register now! Deadline for signing up is **Friday, February 11, 2005** with Mark Arlinghaus: [Mark\\_Arlinghaus@genmills.com](mailto:Mark_Arlinghaus@genmills.com), phone: 763-764-5808.



Please note that “Rosegate” is the new name for “West Cleveland Service Drive North.”

## YOUR NEW YEAR'S CAREER RESOLUTION

(from Lee Hecht Harrison in partnership with AIChE)

Can you believe it is already 2005? January is the month people make resolutions—to lose weight, get more organized, or quit smoking. How about making a New Year's Resolution to find a great new job? Here are some promises you might make to yourself:

1. **I resolve to spend 85% of my time networking.**

It sure is easier to just answer ads and search the Internet, isn't it? But statistics show that approximately 85% of jobs are filled through referrals and personal contacts—aka: Networking. And even if you already have a job, networking is the key to career advancement AND to finding a new job when you need one.

2. **I resolve to clarify what job I really want.**

What kind of job best suits you and what would you love to do? A surprising number of people don't like their jobs. Resolve to find out what work you are best suited for and aim for the job you really want. You can do this by taking career assessments and by working with a career coach.

3. **I resolve to write and practice my 30 second "elevator speech"**

Whether called "career goal," "professional objective" or "elevator speech," you should be able to talk about your accomplishments and what kind of job you want in 30 seconds or less. This pithy statement helps you in networking. Writing it helps you clarify your goals.

4. **I resolve to get training or continuing education**

Is technology leaving you behind? Do you need more credentials or a different degree to get the job of your dreams? Just do it! Resolve to make yourself a more attractive job candidate by getting the education and skills you need in today's job marketplace.

5. **I resolve to keep a positive attitude**

If you've been searching for a job for awhile, it is easy to get discouraged. But this negative attitude can quickly be communicated to potential employers and networking contacts. Resolve to do whatever it takes to remain upbeat. Volunteer to help others who are less fortunate; make exercise a regular part of your week; read a daily inspirational quote to lift your spirits; and make an action list every day to keep working on your job search.

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*Source:* CareerTools is a career-management site provided to you by AIChE, in partnership with Lee Hecht Harrison, the world's leading career consulting organization. AIChE members should use [www.execuplanet.com](http://www.execuplanet.com) to utilize the resources available to members. If you have any problems accessing online content, please call Lee Hecht Harrison at 1-800-820-8730.



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