

AIChE Process Development Division

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Fall 2011



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Message from the Chair

The AIChE Annual meeting is about a month away (yes, it is much earlier than normal), and the division has a great schedule of sessions planned. The focus is on increasing energy and process efficiency through process intensification, alternative feedstocks, optimization, as well as our namesake, process development. In addition, we have two sessions on product design, which fits in well with Minneapolis, home of 3M.

Besides programming, the division always has a lot of membership related events, and this is no exception. We are planning a reception with an open bar which is free for our members on Tuesday, October 18th. If you know someone who wants to join the division, they can simply pay the \$10 dues at the door. Following the reception is the division dinner, which will be held at the News Room Restaurant, just a short walk from the division dinner. In addition to the above events, we are having our division leadership meeting on Sunday, the 16th, and our division general meeting on Monday, the 17th. All members are invited to attend both.

Over the past few months, a few changes were made to make better use of our time. One of those was to solicit opinions on sessions earlier as well as have each area announce ahead of the meeting a list of sessions for the following year. This should allow for our membership to be more involved in session selection as well as give people time to consider if they wish to chair a session.

It seems time flies by so quickly. Just two years ago I took over from Cawas Cooper as division chair, and I will soon be handing over the reins to Michael Hill. In the past two years, we have had several changes, including last year's celebration of the 10 anniversary of the division, the growth and consolidation of several areas in the division, a PDD symposium in the Ozarks, and the addition of several new leaders.

There are several open positions that I would like to see filled this year (see sidebar on page 2). The PDD always welcomes new members and has a successful history of bringing new leaders into AIChE. You should see soon in your mailbox a ballot to select our next Chair-Elect as well as Treasurer. All other elected positions are decided at the Annual Meeting during the area meetings. If you wish to run, please let me know.

Raymond Rooks (raymond_rooks@praxair.com, 716-879-7447)
Process Development Division Chair

Register: <http://aiche.org/Conferences/AnnualMeeting/index.aspx>

DID YOU KNOW?

1. Minneapolis's name was derived from a combination of Sioux and Greek words meaning "city of waters." No name could suit the area better - 22 lakes exist within the city limits and afford Minneapolis the nickname "City of Lakes."
2. The Mall of America in Bloomington is the size of 78 football fields --- 9.5 million square feet.
3. Bloomington and Minneapolis are the two farthest north latitude cities to ever host a World Series game.
4. Minnesota Inventions: Masking and Scotch tape, Wheaties cereal, Bisquick, HMOs, the bundt pan, Aveda beauty products, and Green Giant vegetables
5. Minnesota's waters flow outward in three directions: north to Hudson Bay in Canada, east to the Atlantic Ocean, and south to the Gulf of Mexico.
6. The first official hit in the Metrodome in Minneapolis was made by Pete Rose playing for the Cincinnati Reds in a preseason game.
7. The climate-controlled Metrodome is the only facility in the country to host a Super Bowl, a World Series and a NCAA Final Four Basketball Championship.
8. A statue of Mary Tyler Moore stands at the corner of 7th Street and Nicollet Mall, where she was shown in the opening credits of "The Mary Tyler Moore Show," throwing her hat in the air.

Process Development Division Announcements



Spring 2012 – Houston – Call for Papers

The call for papers is open from now through October 14 for Spring 2012 Houston. The Process Development Division is proposing to sponsor or co-sponsor 17 sessions, including a focus session on Young Professionals in Process Development:

- [12000 Young Professionals in Process Development](#)

Links to other PDD12 programming is found via:

- <http://aiche.confex.com/aiche/s12/webprogrampreliminary/12.html>

General meeting information is available from:

- www.aiche.org/spring

A student poster session will be held as Group 18, which is listed at the top of the following rapid link under select topic, and has an extended call for papers through November 30:

- <http://aiche.confex.com/aiche/s12/cfp.cgi>

Highlights of the meeting will include:

- Keynote address (Monday, April 2) by Michael J. Dolan, Senior Vice President, Exxon Mobil Corporation;
- The 8th Global Congress on Process Safety featuring the 27th CCPS International Conference, the 46th Loss Prevention Symposium and the 14th Process Plant Safety Symposium
- 24th Ethylene Producers' Conference
- 12th Gas Utilization Topical Conference
- 15th Topical Conference on Refinery Processing
- Topical conferences on Advanced Fossil Energy Utilization, Sustainability, Distillation, and more.

Contact Joe.Powell@Shell.com for more details.

Open Positions

Balloted Positions

Division Chair Elect: Leads special projects, assists division chair, part of division leadership team
Treasurer: Tracks and reports division finances to division chair

Area Leaders – elected in Minneapolis

Area 12a, 12b, 12cd, 12e, 12f, 12g

Chair: Leads programming efforts for area, looks for new growth opportunities

Chair Elect: Assists area chair, works with programming chair to make sure programming runs smoothly

Area Coordinator : Works with planning area activities and session chairs to make sure sessions run smoothly

Appointed Positions

Communications Chair: Publishes newsletter and maintains mailing list

Membership Chair: Leads efforts to grow membership, works with YP liaison and provides advice on membership to division leaders



Minneapolis Convention Center



Interested in expanding your network in the field of Process Development? Join our LinkedIn group! Find us here:

<http://linkedin.com/groups?gid=4018623>

Announcements (continued)

Process Development Awards

The Process Development Division of the AIChE is proud to announce the winners of our awards.

Excellence in Process Development Research (Pfizer)

Awarded to Dr. Miguel Bagajewicz, Sam Wilson Professor of the Dept. of Chemical, Biological, and Materials Engineering at the University of Oklahoma. His work has pioneered process systems engineering. It encompasses areas of data reconciliation, design of sensor networks, process water, mass and heat exchanger networks, and financial risk management.

Student Paper Award (Lilly)

Awarded to Ms. Chuanyu Zhao, under the guidance of Dr. Qiang Xu, at Lamar University for her paper entitled, "Cyclic Scheduling for Ethylene Cracking Furnace System with Consideration of Secondary Ethane Cracking" (I&EC).

Congratulations to all the award winners. Remember, these awards are given on an annual basis and the application forms and links can be found on the Process Development web site at <http://www.pd-aiche.com/awards.html>. If you know someone, including yourself, that may have done award winning research or has reduced great process and/or product development ideas to practice, please submit an application. Students, if your paper is worthy of an award, please submit it at the same web site.

Division 12 Events in Minneapolis

Sunday, October 16 2011

Leadership Meeting

Check room assignments @ meeting
5:30 pm-6:30 pm

Monday, October 17 2011

General Meeting

Check room assignments @ meeting
11:05 am – 12:30 pm

Tuesday, October 18 2011

Member Reception

Check room assignments @ meeting
5:30 pm – 6:45 pm

Dinner with Awards Presentation

7:00 pm – 9:30 pm

News Room Restaurant

\$65 per person, cash bar (need ticket)

990 Nicollet Mall

Minneapolis Sessions at a Glance

Energy & Sustainability	13, 153, 229, 329, 403, 428, 521, 522, 641, 675
Labs and Pilot Plants	21, 71, 166, 490
Separations	84, 149, 544
Pharmaceuticals	56, 68, 548
Process Intensification	639, 709, 736, 763
Product Development	409, 767
Mgmt. and Education	34, 268, 458, 483, 512
Others	140 (Opt), 389 (mixing), 550 (polymers)

Minneapolis Plenary Sessions

The Year of International Chemistry (Monday, October 17, 11:15am - 12:15pm) - Dr. Thomas W. Peterson, Assistant Director for Engineering, National Science Foundation

The U.N. General Assembly declared 2011 the "International Year of Chemistry" to promote a worldwide celebration of the achievements of chemistry and its contributions to the well-being of people everywhere. With the unifying theme "Chemistry—our life, our future," the goals of the International Year of Chemistry 2011 are to increase public appreciation of chemistry in meeting world needs, to encourage interest in chemistry and chemical engineering among young people, to generate enthusiasm for the creative future of chemistry, and to celebrate the contributions of women to chemistry and chemical engineering. Dr. Thomas Peterson, Assistant Director for Engineering, National Science Foundation will speak.

Chem. Sci. Innovation: Future of the US Chemical Enterprise (Mon, Oct. 17, 12:30pm - 3:00pm & 3:15pm - 5:45pm)

- Monty Alger, CTO, Air Products
- Bill Banholzer, CTO & Executive VP, Dow
- Joe Miller, CTO & Executive VP, Corning
- Robert Brown, President, Boston University
- John Anderson, President, Illinois Institute of Technology
- Anthony Cugini, Director, National Energy Tech. Laboratory
- Sangtae Kim, Executive Director, Morgridge Institute
- Larry Wendling, VP Corporate Research, 3M



Process Development Division Program

Monday October 17, 2011

8:30 am – 11 am

(#13) - 23B10 Catalytic Conversion of Renewable Resources to Synthesis Gases and Pyrolysis Oils

Sponsored by: Sustainable Biorefineries

Co-Sponsored by: Multiple sponsors

(#21) - 12B02 Design, Construction and Operation of Unit Operations Labs and Pilot Plants

Sponsored by: Pilot Plants

Co-Sponsored by: Undergraduate Education (04A)

(#34) - 05002 Law, Risk, and Ethics of Technology and Project Management

Sponsored by: Management Division

Co-Sponsored by: Process Development Division (12), Young Professionals (YPAB) (18c)

(#56) - 12G00 Solvent Design for Pharmaceutical Processing

Sponsored by: Product Design

12:30 pm – 3:00 pm

(#68) - T1012 Application of Quality by Design In Drug Product Process Development I

Sponsored by: Topical I: Comprehensive QbD in Pharmaceutical Development and Manufacture

Co-Sponsored by: Pharmaceuticals (15b), Process Research and Innovation (12a)

(#71) - 12B00 Best Practices In Pilot Plant Separation

Sponsored by: Pilot Plants

Co-Sponsored by: Separations Division (02), Energetics (03E)

(#84) - 12A00 Crystallization Process Development I - Techniques and Tools

Sponsored by: Process Research and Innovation

Co-Sponsored by: Crystallization and Evaporation (02B)

Are you hungry?

Here's a few places you could try while in Minneapolis

- ✓ **Hell's Kitchen**
80 9th St S
(612) 332-4700
Music and Food
- ✓ **Gluek's Restaurant & Bar**
16 North 6th Street
(612) 338-6621
Music and Food
- ✓ **HFogo De Chao**
Brazilian Steakhouse
645 Hennepin Ave
(612) 338-1344
- ✓ **Zelo**
Italian Restaurant
831 Nicollet Mall
(612) 333-7000
Music and Food
- ✓ **The Oceanaire**
Seafood
Hyatt Regency – 1300 Nicolett Mall
(612) 333-2277

From the Editor

We need a new communications chair to run the newsletter and to maintain the division mailing list. If you are interested, please contact me.

Raymond Rooks
Raymond_rooks@praxair.com



Process Developing Co-Sponsored Energy Programming Co-Located Conference to the AIChE Annual Meeting

- (#329) - 12A02 Process and Product Development for Sustainability I
- (#403) - 12A07 Process and Product Development for Sustainability II
- (#428) - 12A03 Alternative Feedstocks for Energy and Chemicals

Process Development Division Program Continued (1)

Monday October 17, 2011

3:15 pm – 5:45 pm

(#140) - 12A01 Applications of Optimization In Industrial Practice

Sponsored by: Process Research and Innovation

Co-Sponsored by: Computers in Operations and Information Processing (10C)

(#149) - 12A06 Crystallization Process Development II - Case Studies

Sponsored by: Process Research and Innovation

Co-Sponsored by: Crystallization and Evaporation (02B)

(#153) - 23C01 Energy Sustainability, Challenges and Solutions

Sponsored by: Sustainable Energy

Co-Sponsored by: Various

(#166) - 04005 Labs and Experiments In the ChE Curriculum

Sponsored by: Education

Co-Sponsored by: Product Design (12g)

Tuesday October 18, 2011

8:30 am – 11:00 am

(#229) - T4D08 Innovations for Energy Intensive Industrial Processes and Building Technologies

Sponsored by: Int. Congress on Energy: Innovations of Green Process Engineering for Sustainable Energy and Environment

Co-Sponsored by: Catalysis and Reaction Eng. Division (20), Process Development Division (12), Separations Division (02)

(#255) - 12F00 Process Intensification Plenary Session

Sponsored by: Process Intensification

(#268) - 05001 Tools and Techniques for Managing Innovation From Beginning to End

Sponsored by: Management Division

Co-Sponsored by: Process Research and Innovation (12a), Young Professionals (YPAB) (18c)

12:30 pm – 3:00 pm

(#329) - 12A02 Process and Product Development for Sustainability I

Sponsored by: Process Research and Innovation

Co-Sponsored by: Process Development Division (12),

Int. Congress on Energy: Innovations of Green Process Eng. Sustainable Energy and Environment (T4D)

3:15 pm – 5:45 pm

(#389) - 06006 Mixing In the Process Industries - How to Develop a Successful Process

Sponsored by: North American Mixing Forum

Co-Sponsored by: Process Development Division (12)

(#403) - 12A07 Process and Product Development for Sustainability II

Sponsored by: Process Research and Innovation

Co-Sponsored by: Int. Congress on Energy: Innovations of Green Process Eng for Sustainable Energy and Env. (T4D)

Process Development Division Program Continued (2)

Tuesday October 18, 2011

3:15 pm – 5:45 pm

(#409) - 12G02 Simulation Tools for Chemical Product Design
Sponsored by: Product Design

Wednesday October 19, 2011

8:30 am – 11:00 am

(#428) - 12A03 Alternative Feedstocks for Energy and Chemicals
Sponsored by: Process Research and Innovation
Co-Sponsored by: Int. Congress on Energy: Innovations of Green Process Engineering for Sustainable Energy and Env. (T4D)

(#458) - 05005 Innovation In Consumer Product Management and Design
Sponsored by: Management Division
Co-Sponsored by: Product Design (12g)

(#483) - 12C00 Technology Transfer and R&D Portfolio Management
Sponsored by: Technology Transfer
Co-Sponsored by: Pilot Plants (12b), Product Design (12g)

12:30 pm – 3:00 pm

(#490) - 03E04 Advanced On-Line Analytical and Optimization Tools In Pilot Plants
Sponsored by: Energetics
Co-Sponsored by: Pilot Plants (12b)

(#512) - 05006 Challenges In Open Innovation and Growth
Sponsored by: Management Division
Co-Sponsored by: Chemical Engineering & the Law Forum (24), RANTC (18j), Product Design (12g)

(#521) - 10A05 Design of Sustainable Processes
Sponsored by: Systems and Process Design
Co-Sponsored by: Process Development Division (12), Sustainable Engineering Forum (23), Environmental Division (09)

(#522) - 23B03 Developments In Biobased Alternative Fuels I
Sponsored by: Sustainable Biorefineries
Co-Sponsored by: Various

(#544) - T4D03 Novel Catalytic and Separation Process Based on Ionic Liquids
Sponsored by: Int. Congress on Energy: Innovations of Green Process Engineering for Sustainable Energy and Environment
Co-Sponsored by: Catalysis and Reaction Engineering Division (20), Engineering Sciences and Fundamentals (01), Process Development Division (12), Separations Division (02)

(#548) - 02B07 PAT for Crystallization Development and Manufacturing
Sponsored by: Crystallization and Evaporation

Process Development Division Program Continued (3)

Wednesday October 19, 2011

12:30 pm – 3:00 pm

Co-Sponsored by: Process Development Division (12)

(#550) - 12A04 Process and Properties In Polymers

Sponsored by: Process Research and Innovation

Co-Sponsored by: Polymers (08A)

Thursday October 20, 2011

8:30 am – 11:00 am

(#637) - 12F01 Advances In Process Intensification

Sponsored by: Process Intensification

(#641) - 23B17 Chemical and Catalytic Conversions and Processes for Renewable Feedstocks

Sponsored by: Sustainable Biorefineries

Co-Sponsored by: Various

(#675) - T4B08 Sustainable Forest Product and Process Innovation

Sponsored by: Int. Congress on Energy: Biorefinery Technologies for Forest Based Lignocellulosic Biomass

Co-Sponsored by: Various

12:30 pm – 3:00 PM

(#709) - 12F02 Process Intensification by Process Integration

Sponsored by: Process Intensification

3:15 pm – 5:45 pm

(#736) - 12F03 Energy Efficiency by Process Intensification

Sponsored by: Process Intensification

Friday October 21, 2011

8:30 am – 11 am

(#763) - 12F04 Advances in Process Intensification and Integration

Sponsored by: Process Intensification

(#767) - 10A01 Methodologies for Product Design

Sponsored by: Systems and Process Design

Co-Sponsored by: Process Development Division (12)

Process Development – Planned Sessions for Fall 2012 - Pittsburgh

Below are the proposed sessions for the Annual Meeting next year in Pittsburgh. The deadline for session entry is December 12th, 2011. We will be selecting chairs for these sessions in Minneapolis next month (October) at the area meetings. If you would like to chair a sessions, please attend the area meeting, which will be on Monday evening.

12A

Applications of Process Synthesis
Solar Energy & Chemicals R&D
Managing Creativity for Internal and Open Innovation
Process and Properties in Polymers

12B

Piloting Innovations in Sustainability
Global Team Interactions
Best Practices in Pilot Plants
Advanced On-line Analytical Tools in Pilot Plants (with 3E)
Pharmaceutical Process Development & Pilot Plants (With 15B and 2B)

12C/D

Process Robustness in Pharmaceutical Manufacturing
Technology Transfer - Successful University/Industry Ecosystems
Challenges and Best Practices in Technology Commercialization (Jubin Chheda, Suresh Babu)

12E

Microreactors and Chemical Engineering Education

12F

Advances in Process Intensification
Process Intensification by Process Integration
Energy Efficiency by Process Intensification
Process Intensification for Water Purification

12G

Tools for Chemical Product Design
Process Development Considerations during Product Design

Process Development Division Leadership (2010-2012)

Chair	Raymond Rooks Praxair, Inc Phone: (716) 879-7447 raymond_rooks@praxair.com	Chair Elect	Michael Hill Columbia University 212-854-1095 Email: mhill@columbia.edu
Program Chair	Robert S. Huss, Ph.D. Eastman Chemical Company Phone: 423-229-6425 Email: rhuss@eastman.com	Membership Chair	Open
Assistant Program Chair	Joe Powell Shell Global Solutions US Inc. Phone: (281) 544-8976 Email: Joe.Powell@shell.com	CTOC Liaison	Cawas A. Cooper AIChE Fellow Phone/Fax: (610) 509-7660 E-Mail: cawas.cooper@gmail.com
Treasurer	David Edwards Zeton Inc. Phone: (905) 632-3123 Email: dedwards@zeton.com	Awards Chair	Jay Miller LyondellBasell Industries Phone: (610) 359-2092 Email: j.miller@lyondellbasell.com
Communications Chair	Open	Past Chair	Cawas A. Cooper AIChE Fellow Phone/Fax: (610) 509-7660 E-Mail: cawas.cooper@gmail.com
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		EBPC Liason	John F. Peragine Bristol-Myers Squibb Phone: (732) 227-5688 E-Mail: John.Peragine@bms.com

Area Leadership

	Chair	Chair Elect	Area Coordinator
12a Process Research & Innovation pd-aiiche.com/area12a	Joe Schroer CWB Tech. 909-595-8928 jschroer@cwbttech.com	Santiago Faucher Xerox Research 905-823-7091 x261 Santiago.faucher@xerox.com	Qiang Xu ChE Dept Lamar University 409-880-7818 qiang.xu@lamar.edu
12b Pilot Plants pd-aiiche.com/area12b	Adam Whalley Zeton Inc. 905-632-3123 x235 awhalley@zeton.com	David Attride Eastman Chemicals 423-967-8840 dattride@eastman.com	Kiran Gupte BP 630- 420-4390 qiran.gupte@bp.com
12c/d Technology Transfer & Manufacturing pd-aiiche.com/area12c	Juben Chheda Shell 281-544-8232 juben.chheda@shell.com		
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12g Product Design pd-aiiche.com/area12g	Kevin Joback Molecular Knowledge Systems, Inc. Phone: 603-472-5315 kevin@molknow.com	Yogendra Shastri University of Illinois at Urbana-Champaign 312- 375-2354 yshast1@illinois.edu	Ken Cox Rice University 713- 348-3529 krcox@rice.edu