



IN THIS ISSUE:

Newsletter Editor: Susan Edwards

Highlights of 2005 Spring Meeting.....	1
Message from Chair.....	2
PDD Programming Summary	3
Webmaster Update and Upcoming Conferences.....	4
Awards and Nominations.....	5
2006 Process Development Symposium Call for Papers.....	6
2005 Annual Fall AIChE Meeting Call for Papers.....	7
Process Development Division Leadership.....	8
Process Development Division Area Leadership.....	9

2005 Annual Spring Meeting

April 10 – 14th, 2005

Hyatt Regency in Atlanta, GA

Register at: <http://www.aiche.org/spring>



Stone Mountain

PROCESS DEVELOPMENT SESSIONS

Monday, April 11th

- Innovation in Process Intensification I (8:00 a.m.; Inman - Hyatt)
- Area 12a and 12c Meeting (11:30 am – 1:30 pm)
- Innovation in Process Intensification II (2:00 pm; Inman - Hyatt)

Tuesday, April 12th

- Fuel Cell and Gas to Liquid Fuels Pilot Plants (8:30 a.m.; Kennesaw - Hyatt)
- Area 12b and 12d Meeting (11:30 am – 1:30 pm)
- Short Course: From Innovation to Manufacturing: The Path Forward (2:00 – 5:00 pm; Cost: \$0, but pre-registration required; course description on page 4)
- PDD Dinner at Max Lager's American Grill & Brewery (7:30 pm)

Wednesday, April 13th

- Design for Six Sigma and Design for Manufacture (8:30 am; Kennesaw - Hyatt)
- Process Development Division Meeting (11:30 am – 1:30 pm)
- Innovation in Fuel Cell Development (2:00 pm; Kennesaw - Hyatt)
- PDD Steering Committee Meeting (2:00 – 5:00 pm)

Thursday, April 14th

- Integrating Risk and Uncertainty Analysis in Chemical Manufacturing (8:30 am; University - Hyatt)



From the Chair...

Welcome to 2005! The Process Development Division has a very exciting 2005 planned.

To start the year with a bang – our very own **Cheryl Teich is the AIChE 2005 Spring Meeting Programming Chair!** Cheryl introduced revolutionary programming tracks to better reflect the discipline's approach and success in problem solving. The Spring meeting tracks are:

Global Congress and Process Safety
Ethylene Producers Conference
Fuels, Petrochemicals and Refining
Sustaining the Manufacturing Base
Tools for Commercial Success
Profitable Paths for New Process Technology
Enabling Energy Strategies
Applying Core Competencies to the 21st Century Problems

And, yes, Cheryl talked me into being the 2005 Spring Meeting Co-chair. Thus, I saw all the issues Cheryl solved and viewed the volumes of emails that she authored. Being the MPC is an immense amount of work. When you see Cheryl at the Spring meeting, please thank her for this service to AIChE.

At the 2005 Spring AIChE meeting, the Process Development Division has seven very interesting sessions. In addition, the division is sponsoring the following free course - **Process Development: From Innovation to Manufacturing, the Path Forward presented by John Corn** – on Tuesday April 12th 2:00 to 5:00 pm (please note that pre-registration is required).

The Process Development Awards are back on track and the **2004 and 2005 Process Development Practice Awards will be presented to Jack Jubin and Kamlesh Bhatia**. And last, don't forget to register for the Process Development Dinner (Mac Lager's American Grill and Brewery) on Tuesday April 12th.

The Process Development Division has several new Fellow members: **George Liebermann, Prabir Basu, and Ka Ng!** And there are several additional members with outstanding division service under Fellow review.

The PTP (Proposal To Present) is open for the Annual meeting until May 25, 2005. Please consider submitting a PTP to one of the 15 Process Development sessions.

The Process Development Division Mission is to promote programming of process development topics at the AIChE Meetings and to promote networking and communication among those involved in process development. The Division has four exciting areas:

- 12a Process Innovation
- 12b Pilot Plants
- 12c Technology Transfer
- 12d Manufacturing

The Division Leadership is provided at the end of the newsletter. Please feel free to contact any of us; we welcome comments, suggestions and especially volunteers!

Chris Seymour – Process Development Division Chair

John Peragine – Process Development Division Chair Elect



Programming Summary

We are currently planning for 2006 and opening up the Proposal to Present (PTP) process for the Annual 2005 meeting; Session chairs should be contacting the presenters for the Spring meeting. The deadline for the Annual meeting is 12:01 AM EST on May 25th and may be extended depending on how many papers are submitted to your session. If the session does not have at least 5 papers and we cannot transfer papers from a session that is more filled, then we may cancel or combine sessions. Typical timelines are:

1. About 1 year in advance, area chairs decide which sessions will be conducted at area meetings; session chairs and vice-chairs are also selected.
2. Programming chair negotiates with other divisions and AIChE to fulfill requests.
3. Session chairs are selected about 1.5 years before the meeting, but there are fill-ins as needed.
4. Session chairs write the session description and start soliciting papers.
5. Programming chair enters sessions into AIChE Web page and session chairs enter session description into AIChE Web page.
6. PTP process opens - session chair monitors entries to determine the # of papers entered - adjusts efforts to obtain papers.
7. PTP process closes about 5 months prior to meeting.
8. Session chairs select/transfer/reject papers in consultation with area and programming chairs.
9. Session chairs communicate paper status with authors.
10. Session arrangements take place.
11. Authors are typically given 4 weeks to upload their abstracts - this is based on the CD-ROM duplicating schedule.
12. Session chairs keep in communication with authors, making sure that they know when to show up and determining what their needs are (such as an overhead projector).

For the Spring 2005 Meeting, the sessions are as follows:

- 12001 174 - Innovation in Fuel Cell Development
- 12002 170 - Innovation in Process Intensification I
- 12003 172 - Fuel Cell and Gas to Liquid Fuels Pilot Plants
- 12005 173 - Design for Six Sigma and Design for Manufacture
- 12006 175 - Integrating Risk and Uncertainty Analysis in Chemical Manufacturing
- 12007 171 - Innovation in Process Intensification II
- TG006 92 - Case Histories and Lessons Learned - Joint Session (LPS and PPSS)

For the Annual 2005 Meeting, the sessions are as follows:

Division 12

- Innovative Feedstocks and Energy Utilization for Sustainable Process Development
- Process Optimization
- Process Development for Electronics Products
- Best Practices for Developing Inherently Safe Processes
- Pilot Plant Economics
- Safety in Design and Operation - Pilot Plants and Unit Operation Labs
- Debottlenecking of Manufacturing processes
- Advancement in Manufacturing Tech.
- Process Development and Manufacturing for Novel, High-Tech Materials
- Pharmaceutical Process Development and Scale-up

Division 12 - Collaboration

- Developing Value through International Collaboration (by Groups 12,10,5,23)
- Panel Discussion for Topical Conf on Developing Value Through Synergistic Collaboration (by Groups 12,10,5,23)
- Process Intensification: Opportunities for Collaboration (by Groups 12,10,5,23)
- Strategic Sustainability Management (by Groups 12,10,5,23)
- Successful Collaborations between Government, Academia, and Industry (by Groups 12,10,5, 23)

Co-Sponsored Sessions

- Industrial Innovation in Process Design and Operations
- Process Analytical Technology
- High Throughput Technology in Pharmaceutical Development
- Cell Culture Process Characterization and Validation

For 2006, we plan on conducting the session discussions using message board software. The address is www.aiche-program.com. Before the 2005 Spring meeting, AIChE will have a programming meeting, where all of the programming folks will discuss the meetings. This is an excellent forum to discuss co-sponsored sessions.



Brain Teaser

A person wanted to withdraw X rupees and Y paise from the bank. But cashier made a mistake and gave him Y rupees and X paise. Neither the person nor the cashier noticed that.

After spending 20 paise, the person counts the money. And to his surprise, he has double the amount he wanted to withdraw.

Find X and Y. (1 Rupee = 100 Paise)

Answer on last page.

WEBMASTER UPDATE:

Our website continues to be a regular source of information about the division. We regularly get about 1500 visitors to the website each month, although the last few months have seen an upward trend with over 2000 visitors in January. The most popular pages on the website are consistently the home page, plus any pages that are linked from this page, such as this newsletter, papers and steering committee minutes.

If you have any questions or suggestions about the website, please contact Jack Vinson at webmaster@pd-aiche.com.

Short Course at 2005 Spring Meeting **From Innovation to Manufacturing: The Path Forward**

Overview: The nebulous term of Process Development is divided into four overlapping phases. As each phase is identified and characterized, specific examples are discussed. The audience is encouraged to offer additional examples to demonstrate the character of each process phase. Key transition elements are identified as a project matures through the phases to culminate in a commercial success.

Instructor: John Corn

UPCOMING CONFERENCES:

[The 7th World Chemical Engineering Congress](#)

July 10 – 14, 2005
Glasgow, Scotland

[Indian Institute of Chemical Engineers](#)

December 14 – 17, 2005
New Delhi

[Process Intensification Conference](#)

September 24 - 29, 2006
Christchurch, New Zealand

[2005 Annual Meeting](#)

October 30 - November 4, 2005
Cincinnati Convention Center, OH

[Process Development Symposium](#)

June 11-14, 2006
Doral Desert Princess Resort,
Palm Springs, CA



AWARDS/NOMINATIONS:

The 2004 and 2005 Process Development Practice Awards sponsored by Zeton have been awarded to:
2004, **Jack Jubin**, JCJ Associates (Lyondell)
2004, **Kamlesh Bhatia**, DuPont

The following two awards are calling for nominations:

Excellence in Process Development Research Award

Sponsor: Pfizer

Description & Selection Criteria: Recognizes individuals who have made significant technical contributions to the advancement of process development within research, teaching, or regulatory activities. Accomplishments must be disseminated by means of well-documented materials. Emphasis will be placed on accomplishments and advances made within the last ten years although the award can also be given to someone for an outstanding career.

Deadline: June 15

Award: A plaque and \$1,000.

Process Development Division Student Paper Award

Sponsor: Eli Lilly

Description & Selection Criteria: Presented to a full-time graduate or undergraduate student who prepares the best technical paper to describe the results of process development related studies within chemical engineering. Selection criteria include: 1. Papers will be judged primarily on technical merit. The student must demonstrate depth and breadth of knowledge in the subject. 2. The work presented must be carried out while the student is enrolled at a university with an accredited chemical engineering program. 3. The student must be the primary author (faculty advisors may be co-authors). 4. The paper must describe original research (experimental, numerical, or theoretical) or design; papers consisting of literature reviews are not permitted. 5. The paper must be suitable for publication in a refereed journal. 6. The student must be a member of AIChE.

Deadline: July 15

Award: A plaque and \$200, plus some amount to defray student expenses associated with attending the Annual AIChE meeting (amount to be determined at a later date).

Submit the nomination package, consisting of a completed [nomination form](#) at the AIChE website and other relevant supporting documentation, by a combination of hard copy and electronic mail. **Send signed original documents and e-mail copies of all documents** to the Process Development Division Awards Committee Chair:

Cheryl Teich
Rohm and Haas Company
727 Norristown Road
PO Box 904
Spring House, PA 19477
CTeich@rohmmaas.com



Process Development Symposium 2006

Learn from the Past, Plan for the Future

VENUE: Doral Desert Princess Resort, Palm Springs, CA

CALL FOR PAPERS:

Our industry is at a turning point owing to changes in several sectors such as the product lines, corporate structure, market intensity, etc. In this conference, we will discuss the lessons that we have learned in the past and also the changes that we must make to be better prepared for tomorrow.

We solicit papers in the following areas of process development:

- Process Research and Innovation
- Technology Transfer
- Pilot Plants
- Manufacturing

We are especially interested in:

Learn from the Past

- Any successful case study
- Non-obvious fatal mistakes that we should avoid
- Know “how” and know “when”

Plan for the Future

- New technologies and skills needed
- Collaboration among various skills (e.g. chemists & chemical engineers)
- Collaboration among various teams (internal & external)
- Product-centered vs. Process-oriented approach
- Process development in new emerging business verticals such as new materials, electronics, biotechnology, etc.
- New paradigm for managing and executing a project
- New paradigm for maintaining critical skill sets
- Funding and collaboration opportunities among academia, industry and government agencies

We look forward to seeing you at the conference!

Please send an extended abstract of at least 500 words no later than **October 31, 2005 to:**

Symposium Chair

Lionel O’Young

ClearWaterBay Technology

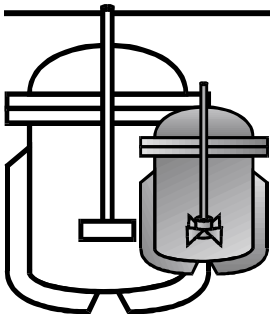
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CALL FOR PAPERS

SESSION TITLE:

Pilot Plant Economics

AIChE Fall National Meeting

Oct 30 – Nov 4, 2005 Cincinnati, OH

This session will focus on all aspects of the economics of pilot plants from justification through to operation. You are invited to share your experiences on the following suggested (but not exclusive) topics:

- Economic justification for building new pilot plants
- Economics of external pilot plant tolling vs. in-house R&D
- Analysis of pilot plant costs (operating and capital), how they are measured, and how to control them
- Economics of pilot testing vs. process modeling
- Decision making on what to pilot and how much money to spend
- Techniques for pilot plant resource prioritization
- How to staff and fund pilot plants
- How to allocate pilot plant costs: central R&D vs. per-project costing
- New technologies and rules of thumb to reduce pilot plant costs
- Utilization of academic labs vs. in-house testing

Please submit the proposed abstract by **May 6, 2005 on the AIChE web site at www.aiche.org, or to:**

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<http://www.pd-aiiche.com/area12a/>

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Leadership of Area 12b: Pilot Plants

<http://www.pd-aiiche.com/area12b/>

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Leadership of Area 12d: Manufacturing

<http://www.pd-aiiche.com/area12d/>

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Answer to Brainteaser: X = 26 & Y = 53