

AIChE Process Development Division Spring-Summer Newsletter 2020



20AIChE
Spring Meeting

16TH
GLOBAL
CONGRESS
ON PROCESS
SAFETY



JOIN US: AUGUST 17-21, 2020

For more information, visit <http://www.aiche.org/community/sites/divisions/process-development>

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Message from the Chair

Welcome to our “Spring-Summer” 2020 newsletter. This is Tony Cartolano, the new Division Chair for 2020-2021. As I write this, I have been working from home for almost 140 days straight, the longest I have been in one place for years. The world changed overnight, and it will be a while before things return to “normal,” whatever that is for each of you.

I would like to take this opportunity to thank both our past-chair Bob Huss, and past-past-chair Bill Hollar for their leadership and guidance. I also want to let you know that our Chair-Elect is Qiang Xu, who will be the division chair for 2022-2023. The leadership team information is shown in pages 14 and 15 of this newsletter.

Continuing the theme of things that have changed, as most of you know, the “Spring” Meeting will be held virtually 17-21 August. I encourage you to attend at least part of the meeting. I also understand that the Fall Meeting will also have a virtual component, and those details are being worked out now.

Although the opportunities to get together in person look to be limited for the foreseeable future, the virtual meetings will offer opportunities for networking. I encourage you to take part in some of these events, you never know where it might lead. I also encourage you to take a look at the work done by Adam Whalley (shown in pages 4 and 5), our Membership Chair, and a subcommittee that he assembled, to look at how the division can be more responsive and relevant to our members. Thanks again to Adam and the team for their efforts.

Finally, thanks to all of you for being members of the Division, and for your support. Please consider being more active in the division in any one of a number of ways. One of my key initiatives over the next two years is to bring younger members into leadership roles in the division. The core of the leadership team has been in place for many years, and although we enjoy doing this, it is time to pass the baton to the next generation of process development professionals.

All my regards and stay safe.

Best regards,

Tony Cartolano

Join Process Development Division (PDD)

The PD division promotes networking and communication among engineers and scientists interested in process development through meetings, seminars, courses, and publications. This division also organizes AIChE activities in the field, and materials with other related societies.

In addition, the PD division provides a forum for the engineer and educator to exchange information and ideas.

Chartered: 2000, Dues: \$10

Process Development Division (PDD) Awards

Interested in nominating yourself or a colleague for the following categories

- Excellence in Process Development Research Award
- Process Development Practice Award
- Process Development Division Student Paper Award

Please fill out the Nomination form at

<http://www.aiche.org/community/sites/divisions/process-development/awards>

Congratulations to the recently announced 2020 PDD award winners!

Process Development Practice Award

Award Sponsors: Zeton Inc.

Michael Telgenhoff

Principle Process Research Scientist,
Dow Performance Silicones

Excellence in Process Development Research Award

Award Sponsors: Pfizer Inc.

Prof. Y.A. Liu

Alumni Distinguished Professor,
Frank C. Vilbrandt Endowed Professor
Department of Chemical Engineering, Virginia Tech

Process Development Division Student Paper Award

Award Sponsors: Linde Group

Niket Sharma

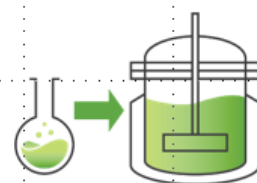
Department of Chemical Engineering, Virginia Tech

Keep a look out for their award bios in the Fall 2020 PDD newsletter.

Process Development Division (PDD) Membership Survey Update

AICHE®

Update: PDD Membership



Sub-Committee Activities to Date

- PDD Membership Improvement Sub-Committee created
- Survey results were analyzed to understand members needs
- Brainstormed ideas for ways to respond to survey results
- Developed positioning matrix
- Performed SWOT analysis
- Determined basic goals
- Development of value proposition/slogan and response strategy currently underway
- Draft letter to PDD membership in editing by sub-committee

PDD Membership Improvement Initiative – Subcommittee Members



Juben Chheda



Cawas Cooper



Paul Fanning



Bill Hollar



Ray Rooks



Adam Whalley



Tom Xu

Process Development Division (PDD) Membership Update Continued

As a process development engineer, scientist, or business professional, what is/are your most pressing need(s)?	First Choice	Total Points
1 – Professional skills development and general learning	20	43
2 – Continuous improvement/identifying & implementing best practises	18	51
3 – Assistance with solving process development or manufacturing problems	10	36

In which of the following ways could AIChE's Process Development Division help you meet your most pressing need(s)?	Total Points
1 – Facilitating creative networking and other interactions between academia, government and industry	54
2 – Organizing compelling sessions based on papers relevant to your work	33
3 – Making available an up-to-date Rolodex of subject matter experts within and outside PDD	34
4 – Being a go-to source for sound and thoroughly vetted scale-up advice	28
5 – Providing effective, easy-to-access technical databases, including benchmarking and best practises	51

Brainstorming Output – 4 Basic Categories

- **Networking**
 - speed networking; free mentoring; Zoom lounges; meet the experts
- **Learning/Continuous Improvement**
 - courses; benchmarking courses; Carnegie course
- **Sessions/Posters/Interactive**
 - Industry poster sessions; roundtable sessions; outreach
- **Databases/Information**
 - Rolodex; technical database; white papers; benchmarking studies

2020 Spring Meeting – What you need to know



Process Development Division (PDD) Meetings at Spring Meeting

Although the PDD dinner is not scheduled in the virtual 2020 Spring meeting on vFairs Virtual Platform, please join in on the PDD division sessions to learn more on PDD topics and feel free to reach out to the PDD leadership team (pages 16 and 17 of this newsletter) to get more involved in the division.

PDD programming meeting is planned on Monday Aug 17th, 5.15-6pm on vFairs Virtual Platform

Spring Meeting Featured Events and Speakers

AUGUST 17, 2020

2020 AGILE Award Keynote Address

AUGUST 17, 2020

16th GCPS Welcome Plenary Keynote

AUGUST 17, 2020

Industry 4.0 & Fuels and Petrochemicals Division Joint Plenary

AUGUST 17, 2020

Frontlines of COVID-19: Lead, Learn and Cure

AUGUST 18, 2020

2020 Spring & GCPS Tuesday Keynote

AUGUST 19, 2020

2020 Spring & GCPS Wednesday Keynote



Bhavesh V. (Bob) Patel

Chief Executive Officer,
LyondellBasell



Shakeel Kadri

Executive Director & CEO,
Center for Chemical Process
Safety (CCPS)



Matt Loeb

CEO, SECURE



Mark Johnson

Thomas F. Hash Endowed
Chair in Sustainable
Development & Professor of
Materials Science, Clemson
University



Thomas Munoz

Emergency Manager and
Homeland Security Director,
Texas City

2020 Spring Meeting – What you need to know

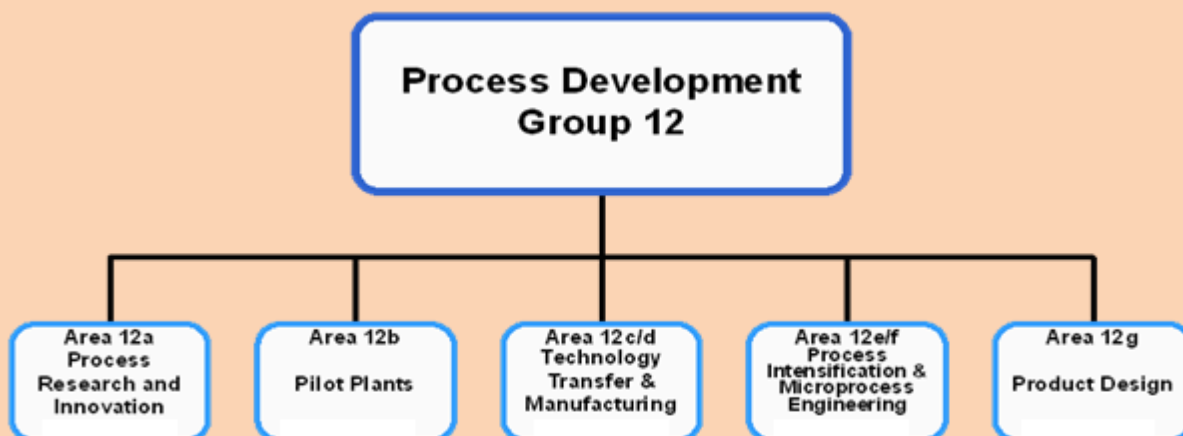
Featured events – Process Safety Tracks

54th Annual Loss Prevention Symposium (LPS)	Focuses on process safety technology – new developments, cutting-edge solutions, and innovative/novel approaches to hazard identification and risk assessment/management
22nd Process Plant Safety Symposium (PPSS)	Focuses on providing perspectives, methods and tools that can be readily practiced and provide value to personnel at the plant level
35th Center for Chemical Process Safety (CCPS) International Conference	Promotes process safety by identifying emerging process safety issues and advancing leading process safety management practices
9th Process Safety Management Mentoring (PSMM) Forum	Aimed at professionals who may be new to the field of process safety. Highlight tools, techniques and process safety lessons learned
Perspectives on Process Safety from Around the World	Provides a forum for attendees from across the world to gather and discuss the issues that are significantly impacting the development in Process Safety in their regions

Featured events – Process Safety Tracks

Leadership Development – Professional Skills to Catalyze your Career	Pick up valuable lessons on working as a team and best practices in two-way communication.
Process Intensification	Focus on the reactive separations, centrifugal, and other intensified unit operations.
Industry 4.0 Topical Conference	Learn the application of big-data analytics and first principles in process industries.
32nd Ethylene Producers' Conference	Review regulatory changes, critical flare system design and operating experiences in ethylene plant flare systems in an environmental panel discussion.
Emerging Technologies in Clean Energy	Hear about energy challenges in the area of carbon capture, sequestration, storage and utilization.
20th Topical Conference on Gas Utilization	Explore process simulation, optimization and controls in gas applications.
23rd Topical Conference on Refinery Processing	Explore new developments in energy conservation for refineries, gas and petrochemical plants.
Distillation Symposium	Explore topics on tray equipment, packing, optimization and safety.
8th International Conference on Upstream Engineering & Flow Assurance	Focus on upstream engineering projects spanning both offshore and onshore applications.
Heat Exchangers	Discuss the latest on technologies, software and best practices in heat exchanger design, monitoring and operations.
Hydrogen Safety	Learn about hydrogen as a sustainable energy carrier, use in commercial and industrial applications and more.
Waste Plastics	Explore alternative to traditional plastics, ecosystem impacts, waste management and more.

PDD Spring Meeting 2020 Programming



2020 AIChE Spring Meeting and 16th GCPS AGILE Award Keynote Address

vFairs Virtual Platform, AGILE Award & Keynote Presentations

10:00 AM - 11:00 AM

Aug 17, 2020

2020 AIChE Spring Meeting & 16th GCPS Tuesday Keynote

vFairs Virtual Platform, AGILE Award & Keynote Presentations

9:30 AM - 10:15 AM

Aug 18, 2020

Applications of Big Data Analytics for Manufacturing Process Improvements

vFairs Virtual Platform, Process Development

11:00 AM - 12:00 PM

Aug 18, 2020

Initiatives in Process Intensification and Modular Chemical Processing

vFairs Virtual Platform, Process Intensification

11:00 AM - 12:00 PM

Aug 18, 2020

PDD Spring Meeting 2020 Programming Continued

Process Intensification

vFairs Virtual Platform, F&PD Refinery Processing

11:00 AM - 12:00 PM

Aug 18, 2020

Initiatives in Process Intensification and Modular Chemical Processing

vFairs Virtual Platform, Process Intensification

11:00 AM - 12:00 PM

Aug 18, 2020

Cost-Effective Commercialization of New Processes or Products I

vFairs Virtual Platform, Process Development

1:30 PM - 2:30 PM

Aug 18, 2020

Cost-Effective Commercialization of New Processes or Products II

vFairs Virtual Platform, Process Development

3:00 PM - 4:00 PM

Aug 18, 2020

Intensified Separation Processes

vFairs Virtual Platform, Process Intensification

3:00 PM - 4:00 PM

Aug 18, 2020

2020 AIChE Spring Meeting & 16th GCPS Wednesday Keynote

vFairs Virtual Platform, AGILE Award & Keynote Presentations

9:30 AM - 10:15 AM

Aug 19, 2020

PDD Spring Meeting 2020 Programming Continued

Advances in Modular Technology

vFairs Virtual Platform, Process Intensification

11:00 AM - 12:00 PM

Aug 19, 2020

Pilot Plant Success Stories I

vFairs Virtual Platform, Process Development

11:00 AM - 12:00 PM

Aug 19, 2020

Process Development and Chemical Engineering Under Global Warming Reality I

vFairs Virtual Platform, Process Development

11:00 AM - 12:00 PM

Aug 19, 2020

Lessons Learned from the Industrial Practice of the Open Innovation Model for the Development of New Products

vFairs Virtual Platform, Management

1:30 PM - 2:30 PM

Aug 19, 2020

Opportunities in Process Intensification - Industrial Perspective

vFairs Virtual Platform, Process Intensification

1:30 PM - 2:30 PM

Aug 19, 2020

Process Development and Chemical Engineering Under Global Warming Reality II

vFairs Virtual Platform, Process Development

1:30 PM - 2:30 PM

Aug 19, 2020

PDD Spring Meeting 2020 Programming Continued

Pilot Plant Success Stories II

vFairs Virtual Platform, Process Development

2:30 PM - 3:30 PM

Aug 19, 2020

Sponsored Technology Workshop - Extract More Value From Your Existing Simulation

Software Today - Chemstations

vFairs Virtual Platform, Process Development

3:00 PM - 4:00 PM

Aug 19, 2020

Spring Meeting & GCPS Poster Session

vFairs Virtual Platform, Poster Sessions

3:00 PM - 4:00 PM

Aug 19, 2020

2020 AIChE Spring Meeting & 16th GCPS Thursday Keynote

vFairs Virtual Platform, AGILE Award & Keynote Presentations

9:30 AM - 10:15 AM

Aug 20, 2020

Advances in Process Design and Development I

vFairs Virtual Platform, Process Development

11:00 AM - 12:00 PM

Aug 20, 2020

Chemical Process Maintenance and Risk Reduction

vFairs Virtual Platform, Process Development

11:00 AM - 12:00 PM

Aug 20, 2020

Advances in Process Design and Development II

vFairs Virtual Platform, Process Development

1:30 PM - 2:30 PM

Aug 20, 2020

PDD Spring Meeting 2020 Programming Continued

Process Intensification Opportunities

vFairs Virtual Platform, Process Development

1:30 PM - 2:30 PM

Aug 20, 2020

Advances in Process Design and Development III

vFairs Virtual Platform, Process Development

3:00 PM - 4:00 PM

Aug 20, 2020

Biomass Conversion to Valuable Products

vFairs Virtual Platform, Process Development

3:00 PM - 4:00 PM

Aug 20, 2020

Pilot Plant and Laboratory Safety

vFairs Virtual Platform, Process Development

11:00 AM - 12:00 PM

Aug 21, 2020

Modeling Tools and Techniques for Process R&D I

vFairs Virtual Platform, Process Development

1:30 PM - 2:30 PM

Aug 21, 2020

Modeling Tools and Techniques for Process R&D II

vFairs Virtual Platform, Process Development

3:00 PM - 4:00 PM

Aug 21, 2020

2020 AIChE® ANNUAL MEETING

The Increasing Diversity of
Chemical Engineering

SAVE THE DATE: NOVEMBER 15-20, 2020

Join global leaders at this year's event featuring cutting-edge research, new technologies, and unique perspectives on emerging areas in chemical engineering.

FEATURED PROGRAMMING



Presidential Lecture

FRANCES H. ARNOLD
Linus Pauling Professor of Chemical
Engineering, Bioengineering and
Biochemistry
California Institute of Technology



John M. Prausnitz Institute Lecture

MICHAEL DOHERTY
Duncan & Suzanne Mellichamp Chair
in Process Systems Engineering
University of California Santa Barbara



William R. Schowalter Lecture

ALICE P. GAST
President
Imperial College London



Meet the Leaders: Engineering for Inclusion

CHRISTINE GRANT
Professor & Associate Dean
North Carolina State University



James Y. Oldshue Lecture

ARTURO J. HERNÁNDEZ-MALDONADO
Professor of Chemical Engineering
University of Puerto Rico at Mayaguez



James E. Bailey Lecture

CAYO T. LAURENCIN
University Professor and Van Dusen
Distinguished Endowed Professor,
Chief Executive Officer
Connecticut Convergence Institute for
Translation in Regenerative Engineering,
The University of Connecticut



Meet the Leaders: Engineering for Inclusion

GARY S. MAY
Chancellor
University of California, Davis



Dankowerts Lecture

MASSIMO MORBIDELLI
Professor and Decano
Dipartimento di Chimica
Materiali e Ingegneria Chimica del
Politecnico di Milano



Meet the Leaders: Engineering for Inclusion

LORI RYERKIRK
Chief Executive Officer
Celanese Corporation



Andreas Acrivos Award for Professional Progress in Chemical Engineering Lecture

MICHAEL S. STRANO
Carson P. Dubbs Professor of Chemical
Engineering
Massachusetts Institute of Technology

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Process Development Area Leadership



	Chair	Chair Elect	Area Coordinator
12A Process Research & Innovation	James Marek James.marek@abbvie.com	Ray Jian rjian@sabic.com	Ben Yang xiaochuan.yang@fda.hhs.gov
12B Pilot Plants	Nitin Tople SABIC 412-576-4840 nitin.tople@sabic.com	Mike Trainor mtrainor@zeton.com	Madhav Ghanta Madhav.ghanta@sabic- hpp.com
12C/D Technology Transfer & Manufacturing	Rob Nunley MATRIC rob.nunley@matricinnovates.com	Ha Dinh Ha.Dinh@honeywell.com	Micheal Telgenhoff Micheal.telgenhoff@dow.com
12E/F Process Intensification & Microprocess Engineering	Matthaeus Siebenhofer m.siebenhofer@tugraz.at	Robert Broekhuis rbroekhuis@sabic.com	Patrick Heider plheider@dow.com
12G Product Design	Kishori Deshpande Dow Chemical Company kdeshpande@dow.com	Mu Wang wang.m.13@pg.com	Shaibal Roy Shaibal.fmc@fmc.com

Process Development Symposium Liaison:

Kevin G. Joback (kevin@molecularknowledge.com)

Process Development Division Leadership (2020-2021)

Chair 	Anthony Cartolano Anellotech Inc. E-mail: arcartolano@gmail.com	Chair Elect 	Qiang Xu Lamar University Phone: (409) 880-7818 Email: Qiang.xu@lamar.edu
Fall Program Chair 	Tom Xu Email: xxl4_tomxu98@yahoo.com	Membership Chair 	Adam Whalley Zeton Inc. Phone: 905.632.3123 x235 Email: awhalley@zeton.com
Spring Program Chair 	Juben Chheda Shell Oil Company Phone: 281 544 8232 Email: juben.chheda@shell.com	Awards Chair 	Jay Miller Phone: (610) 359-2092 Email: jmillerg@gmail.com
Treasurer 	Raymond Rooks Praxair Email: Raymond_Rooks@praxair.com	Newsletter Editor 	Vinod Kumar Venkatakrishnan Shell Oil Company Phone: 281-544-7567 Email: v.venkatakrishnan2@shell.com
Past Chair and Webmaster 	Robert Huss Eastman Chemical Company Phone: 423-229-6425 E-mail: rhuss@eastman.com	YP Liaison 	Ahmed Youssef SABIC E-mail: ahmed.youssef@sabic.com