

# 2012 Process Development Symposium

# From Concept to Commercialization: Plan for Success from the Beginning

Register Today

June 5 - 7, 2012 • HYATT house, King of Prussia, PA

The Process Development Division, in partnership with AIChE Headquarters, cordially invites you to the biennial 2012 Process Development Symposium.

Similar to previous years, this symposium is expected to gather more than one hundred chemical engineers and other professionals in the industry at the HYATT house in King of Prussia, PA for a content driven symposium to exchange ideas, develop their professional knowledge and network.

This year's symposium is dedicated to providing a forum for discussion on effective R&D programs, which should result in a safe, operable, and cost effective process that produces materials that meet the expectations of the client and customer. Effective process development engineers must recognize both technical and non-technical factors that can lead to inoperable processes and sub-optimum cost performance. The development of such instincts requires experience, which is frequently based on failures. This Process Development Symposium is offered as a means for development professionals to discuss experiences in the hope that, collectively, we can refine our predictive abilities and repeat good habits while rejecting bad ones.

These topics are germane to all industries that are served by chemical engineers and chemists. At this Symposium, experts from the chemical, pharmaceutical, food, electronics, oil and gas and specialty chemicals' businesses will share ideas and proven methodologies for early recognition of troublesome technical and non-technical issues and their resolution.

Keynote Speaker: Mauricio Futran - Former Vice President of Process R&D at Bristol-Myers Squibb and Professor and Chair of Chemical & Biochemical Engineering at Rutgers University will speak on Addressing the Pharmaceutical Process Development Challenges.

#### Wednesday, June 6th

## **Session I: Robust Process and Product Design: Accommodating Uncertainty**

Shankar Vaidyaraman, Eli Lilly and Company: Investigation of the Impact of Mode of Operation (Batch vs. Flow) on Design Space Map

Michael Schaller, The Dow Chemical Co.: Management for New Process Technology Implementation: Some Key Components

Steven Weisser, GlaxoSmithKline: Biopharmaceutical Purification Process Development: Identifying Risks and Dealing with Uncertainty

#### **Session II: Inherently Safer Processes**

Dennis Hendershot, Center for Chemical Process Safety: Introduction to Inherently Safer Design

John Dillon, Pfizer: The Design of Safe, Efficient and Green Processes for API's Throughout Product Lifecycle

#### **Session III: Scale-Up Issues: Examples and Effective Solutions** David Berg, *DuPont*: Use of Piloting to Reduce Scale-Up Risk

Martin Johnson, Eli Lilly and Company: Design and Scale Up of Fully Continuous Processes including Reaction, Workup, and Isolation

Brad Duckworth, Eastman: The Search for the Piloting and Scale-Up Vision of the Future

### **Session IV:**

Panel Discussion (Recap of Day's Discussion)

#### Thursday, June 7th

#### Session V: Innovation: Feeding the Funnel

Kevin Joback, Molecular Knowledge Systems: Using Physical Properties to Develop Better Chemical Products and Processes

Monty Alger, Air Products: Developing and Adapting Novel Ideas for Plant Upgrades

Michael Schultz, *Lanzatech*: Develop the Right Innovative Concepts Using Early Stage Process Design

# Session VI: Multi-Functional Teams: Collecting Experiences to **Maximize Insights**

Jack Hipple, Innovation TRIZ: Working with Parallel Universes

Mark Shmorhun, Myriant Corporation: From Process Technology to **Commercial Scale Production** 

Michael Popule. Air Products: Global Dimensions of New Product Development: A Case Study

#### Session VII: Planning Project Handoffs

John Peragine, Bristol-Myers Squibb: Transfer of Pharmaceutical Finished Product Processes to Third Party Manufacturers

Joan Roller, CRI: Outsourcing of Manufacturing Services from the Tolling Company's Perspective

Ron Leng, The Dow Chemical Co.: Technology Transfer: Managing the Handoff

Session VIII: Panel Discussion (Recap of the Workshop)

The PDS Registration Includes: breakfasts, lunches, an opening reception, meeting refreshments and admission to all sessions.



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