

TECHNICAL PROGRAM GRID

MONDAY, APRIL 11, 2016

5:30 – 7:00 PM Welcome Reception & Registration

TUESDAY, APRIL 12, 2016

7:15 – 8:00 AM Continental Breakfast & Registration

8:00 – 8:15 AM **CHAIRMAN'S WELCOME**

Ben Freireich, *The Dow Chemical Company*

8:15 – 9:00 AM **ACADEMIC KEYNOTE**

Multiscale Strategy to Describe Breakage and Attrition Behavior of Agglomerates, Stefan Heinrich, *Hamburg University of Technology*

9:00 – 10:00 AM **ATTRITION & BREAKAGE FUNDAMENTALS**

9:00 AM **Development of First Principles Attrition Model to Determine Solid Makeup Cost of Novel CFB Technologies at NETL**, Ronald Breault, *National Energy Technology Laboratory*

9:30 AM TBD

10:00 – 10:30 AM Morning Refreshment Break

10:30 AM – 12:00 PM **APPLICATION OF THE FUNDAMENTALS**

10:30 AM **Towards Better Size Reduction Flowsheets: How the Application of Some Simple, yet Powerful Philosophies and Principles Can Improve Both Process Operation and Product Quality**, Karl Jacob, *The Dow Chemical Company*

11:00 AM **Industrial Challenges in Particulate Flow and Attrition**, Paul Mort, *Procter & Gamble*

11:30 AM **Fundamentals of Jet Milling and Hammermilling**, Gary Liu, *DuPont*

12:00 – 1:00 PM Lunch

1:00 – 2:30 PM **BREAKAGE MODELING I**

1:00 PM **Discrete Element Method Modeling of Particle Attrition**, Carl Wassgren, *Purdue University*

1:30 PM **Bonded-Particle Modeling of Fracture and Flow**, David Potyondy, *Itasca Consulting Group, Inc.*

2:00 PM **Approaches for Accurate Modeling of Particle Attrition in DEM Simulations**, Alex Potapov, *Rocky DEM Inc.*

2:30 – 3:00 PM Afternoon Refreshment Break

3:00 – 4:30 PM **BREAKAGE MODELING II**

3:00 PM **Investigating Jet Cup attrition: Experiments and CFD-DEM Simulations**, Ravindra Aglave, *CD-adapco*

3:30 PM **Population Balance Models of Particle Attrition – Attrition Fragment Distributions and Inference of Parameters**, R. Bertrum Diemer, Jr., *University of Delaware*

4:00 PM **Modeling Catalyst Extrudate Breakage by Impulsive Forces**, Jean Beeckman, *ExxonMobil Research & Engineering Company*

4:30 – 5:30 PM **TESTING & MEASUREMENTS OF PARTICLE ATTRITION I**

4:30 PM **Laboratory Evaluation of the Attrition Resistance of FCC Catalysts**, Melissa Clough, *BASF*

5:00 PM **Combined High-Energy Synchrotron X-Ray Diffraction and Computed Tomography to Characterize Fracture Behavior of Sand**, Khalid Alshibli, *University of Tennessee*

5:30 – 7:30 PM Poster Session & Reception



TECHNICAL PROGRAM GRID

WEDNESDAY, APRIL 13, 2016

7:15 – 8:00 AM	Continental Breakfast & Registration
8:00 – 8:45 AM	INDUSTRIAL KEYNOTE Effective Use of Discrete Element Method (DEM) Modeling of Particle Attrition Applications and Understanding Unforeseen Consequences with Attrition Reduction Design Techniques, John Carson, <i>Jenike & Johanson, Inc.</i>
8:45 – 10:15 AM	TESTING & MEASUREMENTS OF PARTICLE ATTRITION II
8:15 AM	Particle Attrition: Mechanisms and Methods to Determine Attrition Indices, Reddy Karri, <i>Particulate Solids Research Inc. (PSRI)</i>
8:45 AM	Attrition Testing Using a Jet Cup Rig for the Chemical Looping Process Development, Benjamin Amblard, <i>IFP Energies Nouvelles</i>
9:15 AM	Overcoming The Limitations Of Today's Particle Characterization Technology, Paul Freud, <i>Microtrac</i>
10:15 – 10:45 AM	Morning Refreshment Break
10:45 AM – 11:45 AM	BREAKUP OF AGGLOMERATES
10:45 AM	Breaking up is hard to do: On the De-agglomeration of Cohesive Particles, Christine Hrenya, <i>University of Colorado, Boulder</i>
11:15 AM	Could Granule Morphology be the Key to Understanding Breakage Behavior?, Heather Emady, <i>Arizona State University</i>
11:45 AM – 12:45 PM	Lunch
12:45 – 2:45 PM	CASE STUDIES
12:45 PM	On the Origin of High Powder Cohesion after Milling: Micro-Scale Examination and Fundamental Approach to Reduced Cohesion, Rajesh Davé, <i>New Jersey Institute of Technology</i>
1:15 PM	Attrition of Limestone Particles Related to the Fluidized Bed Capture of SO ₂ and CO ₂ , John Grace, <i>University of British Columbia</i>
1:45 PM	Application of Attrition-Resistant Materials for Novel Clean Energy Technologies, Atish Kataria, <i>RTI International</i>
2:15 PM	Predicting and Controlling Attrition of Active Pharmaceutical Ingredients during Agitated Drying, Brenda Remy, <i>Bristol-Myers Squibb</i>
2:45 – 3:00 PM	WRAP-UP & ADJOURN

