

03: Particle Technology Forum

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Chair: Darrell Velegol

Vice Chair: Nickolas Kotov

- 171a [Facile Synthesis and Colloidal Stabilization of Metal Nanoparticles in Aqueous Amphiphilic Block Copolymer Solutions](#)
Toshio Sakai and Paschalis Alexandridis

Session 174 - Nanoparticle Synthesis and Stabilization II *

Chair: Darrell Velegol

Vice Chair: Nickolas Kotov

Session 206 - Materials Synthesis and Processing with Supercritical Fluids I *

Chair: Mark C Thies

Vice Chair: Barbara L Knutson

Session 268 - Poster Session: Particle Technology Forum

Chair: Stelios C Tsinontides

Vice Chair: Joseph J McCarthy

- 268a [Discrete Element Modeling for Flows of Granular Material](#)
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Madhusuden Agrawal, André Bakker, Michael T. Prinkey
- 268g [Dispersion of Solids Using Spinning Wheel Feeders](#)
Todd Francis, Brian Stephens-Hotop, Alan W. Weimer, Christopher Gump
- 268h [Development of Liquefaction Technique of Pulverized Ligneous Biomass Powder](#)
Toyoyuki Sato, Nobusuke Kobayashi, Yoshinori Itaya, Shigekatsu Mori
- 268i [Effects of Hydrocarbon Liquid Feed on Particle Temperature Rise During Gas Phase Polymerization of Polyethylene](#)
K.K. Botros, G. Price, V. Ker, Y. Jiang, S. K. Goyal

Session 269 - Synthesis and Coating via Supercritical Processing *

Chair: Rajesh Dave

Vice Chair: Randy Weinstein

Session 270 - Multi-scale and Population Balance Modelling of Particle Technology for Materials Processing

Chair: Paul Mort

Vice Chair: Alon V McCormick

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Bjorn Niemann, Dendy Adityawarman, Kai Sundmacher
- 270b [Modeling Crystallization in CMSMPR: Results of Validation Study on Population Balance Modeling in FLUENT](#)
Bin Wan, Terry A. Ring, Kumar M. Dhanasekharan, Jayanta Sanyal
- 270e [Modeling of Coarse Particle Shape Evolution During Attrition in a Stirred Vessel](#)
Kumar Vedantham, Priscilla J. Hill

270h [Self-Similarity of Particle Size Distribution from Pneumatic Conveying Attrition](#)
Robert A. Hamilton, Jennifer S. Curtis, Doraiswami Ramkrishna

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Chair: Shrikant Dhodapkar

Vice Chair: George E Klinzing

271c [Experimental and Plant Data of Pneumatic Conveying Characteristics of Seven Granular Polyethylene Resins in Horizontal and Vertical Pipes](#)

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271d [Electrostatics of the Granular Flow in a Vertical Pneumatic Conveying System](#)

Jun Yao, Yan Zhang, Chi-Hwa Wang, Shuji Matsusaka, Hiroaki Masuda

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Ronald W. Breault, Lawrence J. Shadle

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Vice Chair: Roger Place

Session 273 - Molecular Modeling and Surface Interactions

Chair: Roger Place

Vice Chair: Alon V McCormick

273f [Structure and Dynamics of Graphite Supported Bimetallic Transition Metal Clusters.](#)

Subramanian KRSS, Venkat R. Bhethanabotla, Babu Joseph

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Chair: Manuk Colakyan

Vice Chair: Ye Mon Chen

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Ye-Mon Chen

274b [Dynamic Behavior of Local Solids Concentration in Fluidized Beds: Experimental Validation of an Eulerian-Eulerian Model](#)

Clay R. Sutton, John C. Chen

274c [Bubble Size Reduction in Electric-Field-Enhanced Fluidized Beds](#)

F. Kleijn van Willigen, J.R. van Ommen, J. van Turnhout, C.M. van den Bleek

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Yassir Makkawi, Phillip Wright, Raffaella Ocone

274e [The effect of process conditions on the fluidization behaviour of gas fluidized beds](#)

Giovanna Bruni, Paola Lettieri, Tim Elson, John Yates

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Glenn Price, Blake Chandrasekaran, Ian Hulme, Apostolos Kantzas

275d [Detection of Inelastic Collapse in 3-D Shear Flow](#)

Michael E. Lasinski, Joseph F. Pekny, Jennifer S. Curtis

275h [Modeling the Nonlinear Dynamics of Circulating Fluidized Beds Using Neural Networks](#)
Wei Chen, Atsushi Tsutsumi, Haiyan Lin, Kentaro Otawara

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Chair: Stephen E Rankin
Vice Chair: Jan Sefcik

Session 277 - Fundamentals of Fluidization II

Chair: Manuk Colakyan
Vice Chair: Isaac K Gamwo

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J. Ruud van Ommen, Sijbe Sijbesma, John Nijenhuis, Berend G.M. van Wachem

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Dimitri Gidaspow, Jonghwun Jung, Raj K. Singh, Mehmet Tartan

277c [New Sustainable Process for Carbon Dioxide and Waste Management](#)
A. Scuzzarella, M. Fernandez Bertos, S. J. Simons, C. D. Hills, P.J. Carey

277d [Combined Effects of Mechanical and Acoustic Vibrations on Fluidization of Cohesive Powders](#)
Edward K. Levy, Brian Celeste

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Leon Glicksman, Ezra Carr, Peter Noymer

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Session 279 - Thomas Baron Award Lecture: Population Balances, Future Prospects *

Chair: Alan W Weimer

Session 280 - Circulating Fluidized Beds

Chair: Ray Cocco
Vice Chair: S B Reddy Karri

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Ronald W. Breault

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Vice Chair: Hendrik J Viljoen

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Christopher J Bulian, Tyler T Kerr, Jacek J Swiatkiewicz, Jan A Puszynski

281d [A Study in Mechano-Chemistry: Pressure Induced Reactions and Nonequilibrium Phenomenon](#)
Alexander Gordopolov, Hendrik J. Viljoen

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Charles DUBOIS, Patrick BROUSSEAU, Cedric ROY, Pierre LAFLEUR

281f [Nanofuel/Oxidizers For Energetic Compositions](#)
Randall J. Cramer

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Vice Chair: Zoran R Jovanovic

- 282a [Spouting Enhancement by Addition of Small Quantities of Liquid to Large-Particle Gas-Spouted Beds](#)
Y. Nagahashi, J. R. Grace, N. Epstein, Y. Asako, D.H. Lee, A. Yokogawa
- 282d [A comparison of one-dimensional traveling waves in inverse and normal fluidized beds](#)
Maureen A. Howley, Benjamin J. Glasser

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Chair: Dilhan M Kalyon

Vice Chair: Kristin L Jasinkiewicz

- 283a [Rheological characterization platforms for the extrudability and safety analysis of energetic materials](#)
Dilhan M. Kalyon
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- 283c [Continuous Processing of Black Powder](#)
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- 283d [Rheology of polyethylene-coated aluminum nanoparticles suspensions](#)
Baptiste MARY, Charles DUBOIS, Pierre J. Carreau, Patrick Brousseau
- 283e [Twin screw extrusion processing of double base rocket propellant](#)
Suzanne Prickett, William Newton, Stuart Richman, Wayne Thomas, Christopher Gonzalez, Dilhan Kalyon, Halil Gevgilili, Moinuddin Malik, Tugrulbey Kiryaman, James E. Kowalczyk

Session 284 - Solids Handling and Processing

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Vice Chair: Steve J Tallon

- 284d [Tracking Study on Solids Motion in Vertically Vibrated Granular Beds](#)
Wong, Y.S, Gan, C.H., Wang, C.H.
- 284h [In-Line Density-Compensated Moisture Measurement in Free-Flowing Bulk Solids with an Off-the-Shelf Capacitance Level Probe](#)
Clive Davies, Stephen Tallon
- 284i [Mechanical Dispersion of Fine Solids Feeding Transport Tube Processes](#)
Todd Francis, Brian Stephens-Hotop, Alan W. Weimer, Christopher Gump

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Vice Chair: Doris Anders

- 285d [Experimental Study Of The Cracked Shell Phenomenon](#)
P. Brousseau, J. Lewis, G. Ampleman, S. Thiboutot, P. Dubé
- 285e [Phytoremediation of RDX: Using Arabidopsis thaliana to Determine the Genetics and Biochemistry of the Transformation Pathway](#)
Sarah Rollo, Hangsik Moon, Murali Subramanian, David J. Oliver, Jacqueline V. Shanks

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Chair: George Fotou

Vice Chair: Karsten Wegner

- 286f [Generation of Aluminum Nanoparticles Using an Atmospheric Pressure Plasma Torch](#)
John C. Weigle, Claudia C. Luhrs, C.-K. Chen, W. Lee Perry, Joseph T. Mang, Gabriel P. Lopez, Jonathan Phillips

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- 287a [Investigating the Effect of Bidispersity and Number of Particles on Stress](#)
Michael E. Lasinski, Joseph F. Pekny, Jennifer S. Curtis
- 287d [Prediction of Cone-in-cone Blender Efficiencies and Scale-up Parameters From Knowledge of Basic Material Properties](#)
Kerry Johanson

Session 288 - Transport in Fluidized Beds

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- 288a [Analysis of different drag Models for bubbling fluidized beds using CFD](#)
Olumuyiwa Owoyemi, Luca Cammarata, Paola Lettieri, Derek Colman
- 288f [Simulation of Pressure Fluctuations in Bubbling Fluidized Beds](#)
José-Francisco Perales, Luis Puigjaner

Session 289 - Computational and Numerical Approaches to Particle Flow

Chair: Jennifer S Curtis

Vice Chair: Pedro E Arce

- 289d [The effect of model parameters on the predictions of core-annular flow behavior in a fast-fluidized gas/solids bed](#)
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- 289e [CFD Study on Aerosol Deposition in Human Upper Respiratory Tract](#)
Kewu Zhu, Kwek Jin Wang, Tan RBH
- 289h [Open-Source Development of a Gas/Particle Flow Problem Solving Environment](#)
Thomas J. O'Brien, Sreekanth Pannala, Madhava Syamlal, Michael Prinkey, Aytekin Gel, Philip Nicoletti, Sofiane Benyahia

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Vice Chair: George Fotou

- 290b [Radiopaque flame-made Ta₂O₅/SiO₂ nanoparticles with controlled refractive index and transparency](#)
Heiko Schulza (speaker), Lutz Mädler, Sotiris E. Pratsinisa, Peter Burtscherb, Norbert Mosznerb
- 290c [Fluidization Behavior and Conformal Coating of Nanoparticles in Fluidized Beds by ALD](#)
Luis F. Hakim, Julie L. Portman, Michelle D. Casper, Alan W. Weimer

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- 291e [Formation of Nanoparticles in Flames Measurement by Particle Mass Spectrometry and Numerical Simulation](#)
H.-R. Paur, H. Mätzing, H. Seifert

291g [Effect of Annealing on the Mechanical Properties of Porous Titania Nanoparticle Agglomerate Films](#)
O. A. Ogunsola, S. H. Ehrman

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Chair: Yangchuan Xing
Vice Chair: Michael Z Hu

Session 365 - Liquid-Phase Synthesis of Nanoparticles *

Chair: Michael T Harris
Vice Chair: Michael S Wong

Session 468 - Mixing Challenges in the Pharmaceutical and Biotechnology Industries *

Chair: Christopher L Burcham
Vice Chair: Subodh S Deshmukh

Session 489 - Systems Biology "Omics" Technology Development *

Chair: George S Michaels
Vice Chair: Matthew P DeLisa

Session 575 - Self and Directed Assembly at the Nanoscale I *

Chair: Hank Ashbaugh
Vice Chair: Kristen A Fichthorn

Session 581 - Self and Directed Assembly at the Nanoscale II

Chair: Hank Ashbaugh
Vice Chair: Kristen A Fichthorn

581f [Equilibrium Microstructure of Complex Fluids](#)
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Session 584 - Self and Directed Assembly at the Nanoscale III

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Harpreet Singh, Paul E. Laibinis and T. Alan Hatton

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Chair: Mark W Vaughn
Vice Chair: Venkat R Bhethanabotia

* These papers were unavailable at the time of publication.