

Colloquium
Department of Mathematics

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*Gas Transport and
Applications to Materials Processing*

Abstract: Accurate gas transport modeling and simulation is necessary to optimize the processing of composites formed by deposition or infiltration. We begin with the Dusty-Gas model for multi-component diffusion and convection. Current simulations neglect gas flux due to binary diffusion as this term makes the resulting equations non-linear and presents computational obstacles.

In this presentation we solve the full Dusty-Gas model and discuss its role in optimizing the Atomic Layer Deposition (ALD) and the Chemical Vapor Infiltration Process (CVI).

Friday

Dec 11, 2015

111 Math Sciences

4:00 PM

Refreshments will be served at 3:30 PM

Room 306 Math Sciences (Math Common Room)