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)