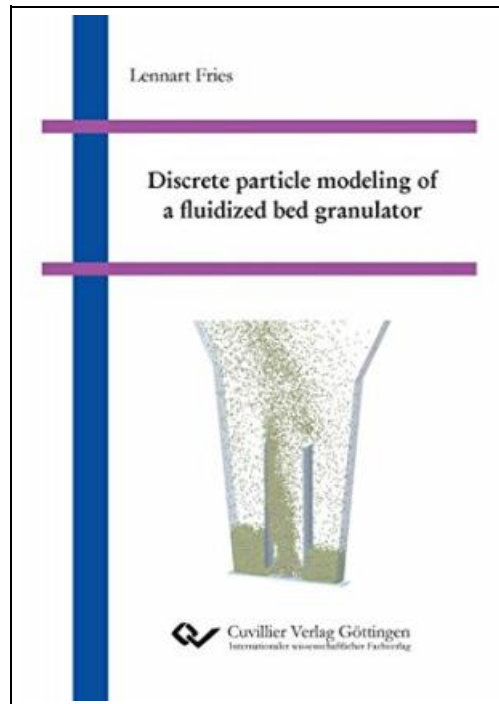


## Discrete particle modeling of a fluidized bed granulator



Filesize: 9.18 MB

### Reviews

*It is one of the most popular publications. It really is filled with knowledge and wisdom. It has been designed in an exceedingly straightforward way and it is merely soon after I finished reading this pdf by which it actually transformed me, affecting the way in my opinion.*

**(Gerardo Rath)**

## DISCRETE PARTICLE MODELING OF A FLUIDIZED BED GRANULATOR

[DOWNLOAD](#)

To read **Discrete particle modeling of a fluidized bed granulator** PDF, remember to follow the hyperlink beneath and download the ebook or gain access to other information which are related to DISCRETE PARTICLE MODELING OF A FLUIDIZED BED GRANULATOR book.

Cuvillier Verlag Okt 2012, 2012. Taschenbuch. Condition: Neu. Neuware - Size-enlargement and structuration processes in fluidized beds such as granulation and agglomeration play an important role in the pharmaceutical and fine chemical industries as well as in food technology to improve the flowability and the instant properties of solid products. Dustfree and free-flowing particles can be produced in a process with favourable heat- and mass transfer conditions. Furthermore, this technology allows the formulation of particles with novel functionalities by applying coating layers or via the encapsulation of active ingredients. Several interdependent micro mechanisms including particle collisions, wetting, drying and phase transitions govern the process dynamics and complicate predictions on the effect of variable operating conditions on product properties such as structure, strength and re-dissolution behaviour. Profound knowledge on these mechanisms is needed to understand the influence of individual process parameters on the final product properties. A suitable approach to model the particle interactions in fluidized beds is the Discrete Element Method (DEM) coupled with Computational Fluid Dynamics (CFD). Information on gas and particle velocities, particle rotation and collision dynamics, which are very complicated to measure in fluidized beds, can be studied in detail with this technique. This thesis presents DEM-CFD simulation results for three different granulator configurations (top-spray, Wurster-coater, spouted bed) in comparison to experimental results, regarding the agglomeration of amorphous maltodextrin (DE 21). In simulation and experiment the identical geometry of the equipment was used. Mechanical material properties, such as the coefficient of restitution and the Young's modulus, which are required for the DEM model and which are frequently used as fitting parameters, were measured via static and dynamic deformation tests using maltodextrin agglomerates, beads and bars. The strength of the experimentally produced agglomerates was characterized with a compression tester. Their flow behaviour was assessed with the help of a shear...

[Read Discrete particle modeling of a fluidized bed granulator Online](#)[Download PDF Discrete particle modeling of a fluidized bed granulator](#)

# You May Also Like



[PDF] **Joey Green's Rainy Day Magic: 1258 Fun, Simple Projects to Do with Kids Using Brand-name Products**  
Follow the web link under to download and read "Joey Green's Rainy Day Magic: 1258 Fun, Simple Projects to Do with Kids Using Brand-name Products" document.  
[Download PDF »](#)



[PDF] **I Am Reading: Nurturing Young Children s Meaning Making and Joyful Engagement with Any Book**  
Follow the web link under to download and read "I Am Reading: Nurturing Young Children s Meaning Making and Joyful Engagement with Any Book" document.  
[Download PDF »](#)



[PDF] **Dom's Dragon - Read it Yourself with Ladybird: Level 2**  
Follow the web link under to download and read "Dom's Dragon - Read it Yourself with Ladybird: Level 2" document.  
[Download PDF »](#)



[PDF] **With Chatwin: Portrait of a Writer**  
Follow the web link under to download and read "With Chatwin: Portrait of a Writer" document.  
[Download PDF »](#)



[PDF] **Shlomo Aronson: Making Peace with the Land, Designing Israel's Landscape**  
Follow the web link under to download and read "Shlomo Aronson: Making Peace with the Land, Designing Israel's Landscape" document.  
[Download PDF »](#)



[PDF] **Let's Find Out!: Building Content Knowledge With Young Children**  
Follow the web link under to download and read "Let's Find Out!: Building Content Knowledge With Young Children" document.  
[Download PDF »](#)