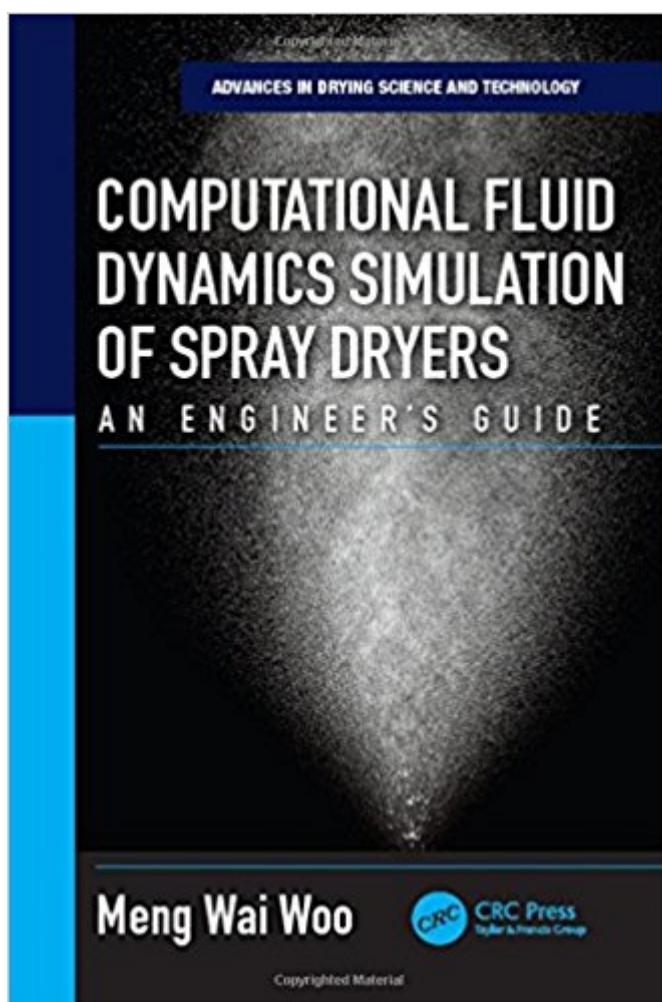


The book was found

Computational Fluid Dynamics Simulation Of Spray Dryers: An Engineerâ€™s Guide (Advances In Drying Science And Technology)



Synopsis

Bridging the gap in understanding between the spray drying industry and the numerical modeler on spray drying, Computational Fluid Dynamics Simulation of Spray Dryers: An Engineerâ™s Guide shows how to numerically capture important physical phenomena within a spray drying process using the CFD technique. It includes numerical strategies to effectively describe these phenomena, which are collated from research work and CFD industrial consultation, in particular to the dairy industry. Along with showing how to set up models, the book helps readers identify the capabilities and uncertainties of the CFD technique for spray drying. After briefly covering the basics of CFD, the book discusses airflow modeling, atomization and particle tracking, droplet drying, quality modeling, agglomeration and wall deposition modeling, and simulation validation techniques. The book also answers questions related to common challenges in industrial applications.

Book Information

Series: Advances in Drying Science and Technology (Book 2)

Hardcover: 152 pages

Publisher: CRC Press; 1 edition (November 2, 2016)

Language: English

ISBN-10: 1498724647

ISBN-13: 978-1498724647

Product Dimensions: 0.5 x 6.5 x 9.2 inches

Shipping Weight: 14.1 ounces (View shipping rates and policies)

Average Customer Review: Be the first to review this item

Best Sellers Rank: #732,873 in Books (See Top 100 in Books) #245 in Books > Science & Math > Chemistry > Industrial & Technical #503 in Books > Engineering & Transportation > Engineering > Industrial, Manufacturing & Operational Systems > Manufacturing #1455 in Books > Science & Math > Agricultural Sciences > Food Science

Customer Reviews

"A friendly text that has provided just enough description of the subject for readers to go on carrying out analysis using Computational Fluid Dynamics with a certain degree of confidence, and that has given sufficient details on the practical examples that have been exercised before (mostly by the author himself). The experiences shared are highly illustrative. One should also appreciate the authorâ™s enthusiasm about Computational Fluid Dynamics applications on spray drying, which is well known in the drying community. • Xiao Dong Chen, Soochow University, Suzhou, Jiangsu,

China " A comprehensive analysis of spray drying processes oriented to CFD modeling of air flow, droplet drying and quality issues." • Ireneusz Zbicinski, Lodz University of Technology, Poland

Meng Wai Woo is currently a senior lecturer of chemical engineering at Monash University, Australia. His research interest is in spray drying. He has experience in computational fluid dynamics (CFD) analysis of the spray drying process and in applying this technique for industry. Within the area of spray drying, he is also examining the droplet evaporation, particle formation or interaction phenomena and in engineering the functionality of particles. Dr. Woo also explores new approaches to spray drying in introducing the antisolvent vapor precipitation approach and most recently, the narrow tube spray drying technique.

[Download to continue reading...](#)

Computational Fluid Dynamics Simulation of Spray Dryers: An Engineer's Guide (Advances in Drying Science and Technology) Atmospheric and Space Flight Dynamics: Modeling and Simulation with MATLAB® and Simulink® (Modeling and Simulation in Science, Engineering and Technology) How to Spray Paint: Learn how to Spray Paint like a Pro Advances in Corrosion Science and Technology: Volume 6 (Advances in Corrosion Science & Technology) Advances in Nuclear Science and Technology: Volume 22 (Advances in Nuclear Science & Technology) Drying Garden Herbs: The Ultimate Guide To Drying Herbs - Amazing Tips And Tricks On How To Easily Dry Fresh Herbs Computational Fluid Mechanics and Heat Transfer, Third Edition (Series in Computational and Physical Processes in Mechanics and Thermal Sciences) Computational Approaches to Protein Dynamics: From Quantum to Coarse-Grained Methods (Series in Computational Biophysics) Fluid Dynamics: Theory, Computation, and Numerical Simulation Numerical Computation of Internal and External Flows: The Fundamentals of Computational Fluid Dynamics, Second Edition Computational Fluid Dynamics Computational Fluid Dynamics, Second Edition: A Practical Approach Molecular Gas Dynamics: Theory, Techniques, and Applications (Modeling and Simulation in Science, Engineering and Technology) Introduction to Computational Science: Modeling and Simulation for the Sciences, Second Edition Understanding Molecular Simulation, Second Edition: From Algorithms to Applications (Computational Science Series, Vol 1) Molecular Gas Dynamics and the Direct Simulation of Gas Flows (Oxford Engineering Science Series) Molecular Simulation Studies on Thermophysical Properties: With Application to Working Fluids (Molecular Modeling and Simulation) Computational Electronics: Semiclassical and Quantum Device Modeling and Simulation Biological Modeling and Simulation: A Survey of Practical Models, Algorithms, and Numerical Methods (Computational Molecular Biology) The Monte Carlo

[Contact Us](#)

[DMCA](#)

[Privacy](#)

[FAQ & Help](#)