

Preface

“Nanotechnology for Chemical Engineers” is a revolutionary book describing the basic principles of transforming nanotechnology into nanoengineering with a particular focus on chemical engineering fundamentals. This book aims to provide vital information about differences between descriptive technology and quantitative engineering for students as well as working professionals in various fields of nanotechnology. Besides chemical engineering principles, the fundamentals of nanotechnology is also covered along with detailed explanation of several specific nanoscale processes from chemical engineering point of view. This information is presented as practical examples and case studies that help the engineers and researchers to integrate the processes which can meet the commercial production. It is worth mentioning here that the main challenge in production of nanostructure and nanodevices is nowadays related to the economic point of view.

The uniqueness of this book is a balance between important insight into the synthetic methods of nanostructures and their applications with chemical engineering rules that educates the readers about process design, simulation, modeling, and optimization. Briefly, the book takes the readers through a journey from fundamentals to frontiers of engineering of processes involved in production of nanostructures and those products comprising one or more nanostructures and informs them about industrial perspective research challenges, opportunities, and synergism in chemical engineering and nanotechnology. Utilizing this information the readers can make informed decisions on their career and business.

Nanotechnology for Chemical Engineers

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