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S. Salah Eldin Elnashaie, F. Danafar, H. Hashemipour  
**Nanotechnology for Chemical Engineers**

- ▶ A pioneering book that relates chemical engineering principles to the design of nanoscale processes and nanoengineering
- ▶ Provides a holistic approach for transforming nanotechnology into nanoengineering through chemical engineering principles
- ▶ Presents a strong focus on experimental and mathematical modeling
- ▶ Includes a chapter on industrial perspective research challenges and opportunities for future researches
- ▶ Provides specific examples with detailed solutions in each chapter for students to learn concepts effectively
- ▶ Provides solutions for questions at the end of each chapter for students and instructors

The book describes the basic principles of transforming nano-technology into nano-engineering with a particular focus on chemical engineering fundamentals. This book provides 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 are also covered along with detailed explanation of several specific nanoscale processes from chemical engineering point of view. This information is presented in form of 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 nanostructure and nanodevices production is nowadays related to the economic point of view.

The uniqueness of this book is a balance between important insights into the synthetic methods of nano-structures and nanomaterials and their applications with chemical engineering rules that educates the readers about nanoscale process design, simulation, modelling and optimization. Briefly, the book takes the readers through a journey from fundamentals to frontiers of engineering of nanoscale processes and informs them about industrial perspective research challenges, opportunities and synergism in chemical Engineering and nanotechnology. Utilising this information the readers can make informed decisions on their career and business.



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