1. Record Nr. UNINA9910299833003321

Titolo	Nanoscale and Microscale Phenomena [[electronic resource]] : Fundamentals and Applications / / edited by Yogesh M. Joshi, Sameer Khandekar
Pubbl/distr/stampa	New Delhi : , : Springer India : , : Imprint : Springer, , 2015
ISBN	81-322-2289-X
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (382 p.)
Collana	Springer Tracts in Mechanical Engineering, , 2195-9862
Disciplina	620.106
Soggetti	Nanotechnology Mechanical engineering Energy systems Nanotechnology and Microengineering Mechanical Engineering Energy Systems
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index at the end of each chapters.
Nota di contenuto	Section 1: Chapter 1. Novel Method for Synthesizing Mono-disperse Dispersion of Nanometer Liposomes -- Chapter 2. Preparation of Liposomes for Drug Delivery Applications by Extrusion of Giant Unilamellar Vesicles -- Chapter 3. Worm-like Micelles as Templates for Rod-shaped Nanoparticles: Experiments and Simulations -- Chapter 4. Scalable Synthesis of Noble Metal Nanoparticles -- Section 2: Chapter 5. Dewetting and Hole Formation in Spin-coated Films of Lipid Bilayers -- Chapter 6. Understanding Wetting Transitions Using Molecular Simulation -- Chapter 7. Effect of Electric Field on Planar Fluid-fluid Interfaces -- Chapter 8. Suppression of Interfacial Instabilities Using Soft, Deformable Solid Coatings -- Section 3: Chapter 9. Effect of Asymmetry on Adhesion and Locomotion of Soft Bodied Objects -- Chapter 10. Dynamics of Soft Glassy Materials Under Tensile and Squeeze Flow Fields -- Chapter 11. Carbon Based Hierarchical Micro- and Nano- Structures: From Synthesis to Applications -- Chapter 12. Micro-structured Reactors for Hydrogen Production from Ethanol --

Chapter 13. Axial Back-Conduction through Channel Walls during Internal Convective Micro-channel Flows.

Sommario/riassunto

The book is an outcome of research work in the areas of nanotechnology, interfacial science, nano- and micro-fluidics and manufacturing, soft matter, and transport phenomena at nano- and micro-scales. The contributing authors represent prominent research groups from Indian Institute of Technology Bombay, Indian Institute of Technology Kanpur and Indian Institute of Science, Bangalore. The book has 13 chapters and the entire work presented in the chapters is based on research carried out over past three years. The chapters are designed with number of coloured illustrations, figures and tables. The book will be highly beneficial to academicians as well as industrial professionals working in the mentioned areas.