

1. Record Nr.	UNINA9910777322803321
Titolo	Annual review of nano research . Volume 1 [[electronic resource] /] / editors, Guozhong Cao, C. Jeffrey Brinker
Pubbl/distr/stampa	New Jersey ; ; London, : World Scientific, c2006
ISBN	1-281-37324-9 9786611373245 981-277-237-5
Descrizione fisica	1 online resource (650 p.)
Collana	Annual review of nano research ; ; v.1
Altri autori (Persone)	BrinkerC. Jeffrey CaoGuozhong
Disciplina	620.5072
Soggetti	Nanostructures Nanotechnology
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.
Nota di contenuto	CONTENTS ; Preface ; Contributing Authors ; Chapter 1. Recent Progress in Syntheses and Applications of Inverse Opals and Related Macroporous Materials Prepared by Colloidal Crystal Templating ; 1. General Introduction ; 2. Synthesis of Colloidal Crystals 3. Properties and Applications of 3DOM Materials 4. Conclusion ; Acknowledgements ; References ; Chapter 2. Photonic Crystals: Fundamentals and Applications ; 1. Introduction ; 2. Preparation of Photonic Crystals ; 3. Summary ; Acknowledgements ; References Chapter 3. Nanoparticle-Micelle: A New Building Block for Facile Self-Assembly and Integration of 2-, 3- Dimensional Functional Nanostructures1. Introduction ; 2. Synthesis of NP-Micelles ; 3. Synthesis of Ordered NP Arrays ; 4. Integration of NP Arrays for Charge Transport Study ; 5. Conclusions and Outlook ; Acknowledgements ; References

Chapter 4. Electrospinning Nanofibers with Controlled Structures and Complex Architectures

1. Introduction ; 2. Experimental Setup for Electrospinning ; 3. History and Mechanism of Electrospinning ; 4. Nanofibers Containing Nanoscale Fillers  
5. Electrospinning with a Dual-Capillary Spinneret  
6. Porous Nanofibers ; 7. Complex Nanofibers via Post-Spinning Treatment ; 8. Ordered Architectures of Electrospun Nanofibers  
; 9. Concluding Remarks ; Acknowledgements  
; References  
Chapter 5. Structure of Doped Single Wall Carbon Nanotubes

---

Sommario/riassunto

The first volume in an exciting new series, Annual Review of Nano Research, this formidable collection of review articles sees renowned contributors from eight different countries tackle the most recent advances in nanofabrication, nanomaterials and nanostructures. The broad coverage of topics in nanotechnology and nanoscience also includes a special focus on the hot topic of biomedical applications of nanomaterials. The important names contributing to the volume include: M R Bockstaller (USA), L Duclaux (France), S Forster (Germany), W Fritzsche (Germany), L Jiang (China), C Lopez (Spain),

---