

1. Record Nr.	UNINA9910298629403321
Titolo	Hybrid and Hierarchical Composite Materials // edited by Chang-Soo Kim, Charles Randow, Tomoko Sano
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2015
ISBN	3-319-12868-X
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (363 p.)
Disciplina	541.2254 620.11 620.14 620.5
Soggetti	Ceramics Glass Composites (Materials) Composite materials Polymers Nanoscale science Nanoscience Nanostructures Nanotechnology Ceramics, Glass, Composites, Natural Materials Polymer Sciences Nanoscale Science and Technology Nanotechnology and Microengineering
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	Introduction -- Organic-Inorganic Polymer Hybrids: Synthetic Strategies and Applications -- Polymer-Tethered Nanoparticle Materials -- An Emerging Platform for Multifunctional Hybrid Materials -- Multiferroic Magnetoelectric Composites/Hybrids -- Clay/Polymer Nanocomposites: Processing, Properties and Applications -- Medical Applications of Hierarchical Composites -- Electrochemical Hierarchical

Composites -- Bioinspired Structural Hierarchical Composites --
Hierarchical Composites Containing Carbon Nanotubes.

Sommario/riassunto

This book addresses a broad spectrum of areas in both hybrid materials and hierarchical composites, including recent development of processing technologies, structural designs, modern computer simulation techniques, and the relationships between the processing-structure-property-performance. Each topic is introduced at length with numerous and detailed examples and over 150 illustrations. In addition, the authors present a method of categorizing these materials, so that representative examples of all material classes are discussed.
