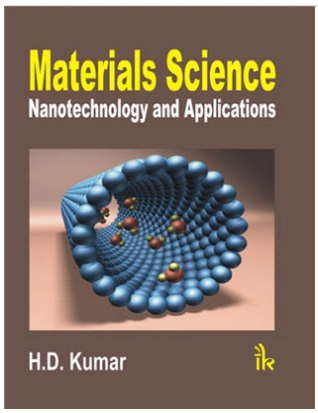
Book Information Sheet



Materials Science: Nanotechnology and Applications, 1/e

H.D. Kumar

2011 | 392 pp | Hardback | ISBN: 9789381141175 | Price: 1,195.00

About the Book

Prompted by the substantial impact of nanoscience and nanotechnology on the diverse materials, metals and minerals being used by over six billion people on the disturbingly overcrowding, increasingly mobile and energy guzzling planet, the author has attempted to produce a readable and comprehensive outline of the physics, chemistry, biology and engineering dimensions and processes relating to the exploitation of various kinds of materials, nanomaterials and nanoparticles, with special reference to carbon-based and silicon-based materials. The study introduces the reader to novel, superfunctional and composite materials, metamaterials, electronics, electrets, carbon nanotubes, nanowires, molecular transistors, and graphene currently attracting research focus.

Besides its overall utility for all scientists and engineers, the monograph would serve as a supplementary textbook for advanced courses in several areas of engineering, physics, chemistry, nanotechnology, pharmaceutical biotechnology and biomedicine in traditional universities, engineering colleges, institutes of technology and medical colleges. It is supported by the most up-to-date literature citations, of direct interest to researchers on materials science and nanotechnology.

Salient Features

Salient Features:

- Discusses in depth nanomaterials and nanotechnology.
- Has dedicated chapters on carbon nanotubes and nanostructures, superfunctional materials, composite materials, and silica-based materials.
- Chemical dimensions of nanotechnology has been discussed in a separate chapter.
- The book provides all the important units in the beginning, before introducing the subject matter.

Table of Contents

- General Introduction
- Useful Novel Materials
- Nanomaterials and Nanoparticles
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