Record Nr. UNINA9910966811403321 Handbook of nanophysics . 7 Nanomedicine and nanorobotics // **Titolo** edited by Klaus D. Sattler Pubbl/distr/stampa Boca Raton, Fla., : CRC Press, 2010 **ISBN** 1-04-022006-1 0-429-19317-3 1-4200-7549-7 Edizione [1st ed.] Descrizione fisica 1 online resource (888 p.) Collana Handbook of Nanophysics;; v.v. 7 Altri autori (Persone) SattlerKlaus D Disciplina 610.28/4 620.5 Soggetti Nanotechnology **Nanostructures** Nanomedicine Robots 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. Nota di contenuto Front cover; Contents; Preface; Acknowledgments; Editor; Contributors; Part I: Nano-Bio Interfacing; Chapter 1. Quantum Dots: Basics to Biological Applications; Chapter 2. Viral Biology and Nanotechnology; Chapter 3. Nano-Bio Interfacing with Living Cell Biochips; Chapter 4. Micro- and Nanomechanical Biosensors; Chapter 5. Enzymatic Nanolithography; Chapter 6. Biomimetic Synthesis of Nanostructures Inspired by Biomineralization; Chapter 7. Nanotubes for Biotechnology; Chapter 8. Nanoscale Forces in Protein Recognition and Adhesion; Chapter 9. Force Spectroscopy on Cells Chapter 10. Nanoscale Magnetic BiotransportChapter 11. Nanomechanical Sensors for Biochemistry and Medicine; Chapter 12. Analyzing Individual Biomolecules Using Nanopores; Part II: Nanotoxicology; Chapter 13. Chances and Risks of Nanotechnology; Chapter 14. Human and Natural Environment Effects of Nanomaterials; Chapter 15. Toxicology, Diagnostics, and Therapy Functions of

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## Sommario/riassunto

This comprehensive reference covers both the fundamental and applied aspects of nanophysics. Although the book is a reference, the information is presented in a tutorial style, providing state-of-the-art scientific contents enriched with fundamental equations and illustrations. This presentation facilitates wider access to the material, giving it a broad readership that includes students and professionals in materials science, solid-state physics, electrical engineering, mechanical engineering, computer science, chemistry, pharmaceutical science, biotechnology, molecular biology, biomedicine,