1. Record Nr. UNINA9910963740703321 Autore Gupta K. M. Engineering materials: research, applications and advances / / K.M. Titolo Gupta Pubbl/distr/stampa Boca Raton:,: Taylor & Francis,, [2015] ©2015 **ISBN** 1-04-021936-5 0-429-18858-7 1-4822-5798-X Edizione [1st ed.] Descrizione fisica 1 online resource (622 p.) 620.11 Disciplina Materials Soggetti Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia A CRC title. Note generali Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Front Cover; Contents; Preface; Acknowledgments; Author; Basic Preliminary Information the Readers Need to Know; List of Abbreviations: Chapter 1: Introduction to Some Recent and Emerging Materials; Chapter 2: Peculiar Materials with Fascinating Properties; Chapter 3: Amorphous Materials and Futuristic Scope of Plastics; Chapter 4: Structures and Applications of Ceramics, Refractories and Glasses, etc.; Chapter 5: Polymeric Composite Materials: Types and Mechanics; Chapter 6: Sandwich Composite Materials, and Stitched and Unstitched Laminates; Chapter 7: Biocomposite Materials Chapter 8: Special Kinds of CompositesChapter 9: Biomimetics and Biomimetic Materials; Chapter 10: Superhard Materials; Chapter 11: Advances in Powder Metallurgy; Chapter 12: Trends in the Development of Ferrous Metals and Alloys, and Effects of Alloying Elements on Them; Chapter 13: Recent Non-Ferrous Metals and Alloys; Chapter 14: Emerging and Futuristic Materials: Chapter 15: Special Materials in Specialized Applications; Chapter 16: Vivid Fields of Ongoing Researches; Chapter 17: Trends in the Research of Natural Fibre-Reinforced Composites and Hybrid Composites Chapter 18: Recent Researches and Developments of Magical MaterialsBack Cover

## Sommario/riassunto

Introduces Emerging Engineering MaterialsMechanical, materials, and production engineering students can greatly benefit from Engineering Materials: Research, Applications and Advances. This text focuses heavily on research, and fills a need for current information on the science, processes, and applications in the field. Beginning with a brief overview, the book provides a historical and modern perspective on material science, and describes various types of engineering materials. It examines the industrial process for emerging materials, determines practical use under a wide range of conditi