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Nota di contenuto	Intro -- Preface -- Contents -- List of contributors -- 9 Electronic and magnetic materials -- 9.1 Semiconductors -- 9.2 Superconductors -- 9.3 Inorganic materials for chemical sensors -- 9.4 Transparent conducting oxides -- 9.5 Inorganic detector materials -- 9.6 Soft magnets -- 9.7 Permanent magnets -- 9.8 Data storage materials -- 9.9 Piezo- and pyroelectric materials -- 10 Technical ceramics and hard materials -- 10.1 Sanitary ceramics, tableware, porcelain -- 10.2 Separation membranes -- 10.3 Functional ceramics -- 10.4 Structural ceramics -- 10.5 Refractories -- 10.6 Carbides, borides, silicides -- 10.7 Abrasives and hard transition metal oxides -- 10.8 Surface hardening and hard coatings -- 11 Carbon- and sulfur-based materials -- 11.1 Carbon -- 11.2 Sulfur -- 12 Water, mineral acids and bases -- 13.1 Disinfection and inorganic biocides -- 13.1.1 Hydrogen peroxide and ozone -- 13.1.2 Chlorine-based disinfectants -- 13.1.3 Iodine-based disinfection materials -- 13.1.4 Copper-based biocides -- 13.1.5 Antifouling coatings -- 13.2 Radiotracers for diagnostic imaging -- 13.3 Radiotherapeutics -- 13.4 Active inorganic drugs and excipients -- 13.5 Inorganic biomaterials -- 14 Criticality of inorganic resources -- 15 Toxicology of inorganic compounds -- 16 Chemical products: gradients, energy balances, entropy -- Subject index -- Formula index.

Sommario/riassunto

Many elements and inorganic compounds play an extraordinary role in daily life for numerous applications, e. g., construction materials, inorganic pigments, inorganic coatings, steel, glass, technical gases, energy storage and conversion materials, fertilizers, homogeneous and heterogeneous catalysts, photofunctional materials, semiconductors, superconductors, soft- and hard magnets, technical ceramics, hard materials, or biomedical and bioactive materials. The present book is written by experienced authors who give a comprehensive overview on the many chemical and physico-chemical aspects related to application of inorganic compounds and materials in order to introduce senior undergraduate and postgraduate students (chemists, physicists, materials scientists, engineers) into this broad field.
