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Nota di contenuto	Frontmatter -- Preface -- Contents -- List of contributors -- Volume 1 (From Construction Materials to Technical Gases) -- 1 Construction materials and coatings -- 1.1 Basics of cement chemistry -- 1.2 Inorganic insulation materials -- 1.3 Conservation: silicon chemistry in building protection -- 1.4 Inorganic pigments -- 1.5 Anodized aluminum and particle coatings -- 1.6 Vitreous enamel -- 1.7 Flame retardants -- 2 Metals and intermetallics -- 2.1 Resources: ores, recycling and urban mining -- 2.2 Special steels and alloys for industrial use -- 2.3 Metallic light-weight alloys: Al, Ti, Mg -- 2.4 Copper and copper alloys -- 2.5 Solder materials in electronics -- 2.6 Metallic coatings -- 2.7 Be and Be alloys -- 2.8 Metals for implants and prosthesis -- 2.9 Precious metals -- 2.10 Shape memory alloys -- 2.11 Bulk metallic glasses -- 3 Technical glasses -- 3.1 Ultra-strong glasses and glass-ceramics and bioactive materials -- 3.2 Special glasses for optical and electrical device applications -- 3.3 Glass fibers -- 4 Technical gases -- 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.