1. Record Nr. UNINA9910412150803321 Autore Shabalin Igor L **Titolo** Ultra-High Temperature Materials III: Refractory Carbides II (Ti and V Carbides) / / by Igor L. Shabalin Dordrecht:,: Springer Netherlands:,: Imprint: Springer,, 2020 Pubbl/distr/stampa **ISBN** 94-024-2039-8 Edizione [1st ed. 2020.] 1 online resource (XV, 797 p. 2 illus., 1 illus. in color.) Descrizione fisica Disciplina 620.11217 Soggetti Materials science Inorganic chemistry Ceramics Glass Composites (Materials) Composite materials Characterization and Evaluation of Materials Inorganic Chemistry Ceramics, Glass, Composites, Natural Materials Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di contenuto Introduction -- Titanium Monocarbide -- Vanadium Monocarbide --Addendum -- Index (Physical Properties) -- Index (Chemical Systems). This exhaustive work in several volumes and over 2500 pages provides Sommario/riassunto a thorough treatment of ultra-high temperature materials (with melting points around or over 2500 °C). The first volume focuses on carbon (graphene/graphite) and refractory metals (W, Re, Os, Ta, Mo, Nb and Ir), whilst the second and third are dedicated to refractory transition metal 4-5 groups carbides. Topics included are physical (structural, thermal, electro-magnetic, optical, mechanical, nuclear) and chemical (more than 3000 binary, ternary and multi-component systems, including those used for materials design, data on solid-state diffusion, wettability, interaction with various elements and compounds in solid and liquid states, gases and chemicals in aqueous solutions) properties

of these materials. It will be of interest to researchers, engineers,

postgraduate, graduate and undergraduate students alike. The readers/users are provided with the full qualitative and quantitative assessment, which is based on the latest updates in the field of fundamental physics and chemistry, nanotechnology, materials science, design and engineering.