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Soggetti	Superconductivity Superconductors Low temperature physics Low temperatures Materials—Surfaces Thin films Solid state physics Magnetism Magnetic materials Strongly Correlated Systems, Superconductivity Low Temperature Physics Surfaces and Interfaces, Thin Films Solid State Physics Magnetism, Magnetic Materials
Lingua di pubblicazione	Inglese
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Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Introduction -- Overview of Superconducting Materials with Tc Higher than 23 K -- Copper Oxide Superconductors -- Iron-Based Superconductors -- Summary and Perspectives.
Sommario/riassunto	This book presents an overview of material-specific factors that influence Tc and give rise to diverse Tc values for copper oxides and iron-based high- Tc superconductors on the basis of more than 25 years of experimental data, to most of which the author has made important contributions. The book then explains why both compounds are distinct from others with similar crystal structure and whether or

not one can enhance T_c , which in turn gives a hint on the unresolved pairing mechanism. This is an unprecedented new approach to the problem of high-temperature superconductivity and thus will be inspiring to both specialists and non-specialists interested in this field. Readers will receive in-depth information on the past, present, and future of high-temperature superconductors, along with special, updated information on what the real highest T_c values are and particularly on the possibility of enhancing T_c for each member material, which is important for application. At this time, the highest T_c has not been improved for 20 years, and no new superconductors have been discovered for 5 years. This book will encourage researchers as well as graduate-course students not to give up on the challenges in the future of high- T_c superconductivity.
