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Nota di contenuto	Toward the Full Determination of the Superconducting Order Parameter of Sr2RuO4 -- Magnetic Excitations in 214-Ruthenates -- Unconventional Superconductivity with Either Multi-component or Multi-band, or with Chirality -- The Behaviour of a Triplet Superconductor in a Spin Only Magnetic Field -- Coexistence of Spin-Triplet Superconductivity and Ferromagnetism Induced by the Hund’s Rule Exchange -- Quasi-particle Spectra of Sr2RuO4 -- Normal State Properties of Sr2RuO4 -- The Nature of the Superconducting State in Rutheno-Cuprates -- Coexistence of Superconductivity and Weak-Ferromagnetism in Eu2?x Ce x RuSr2Cu2O10?? -- A Phase Diagram Approach to Superconductivity and Magnetism in Rutheno-Cuprates -- The Synthesis, Structure and Physical Properties of the Layered Ruthenocuprates RuSr2GdCu2O8 and Pb2Sr2Cu2RuO8Cl -- Magnetism and Superconductivity in Ru1?x Sr2RECu2+x O8?d (RE=Gd, Eu) and RuSr2Gd1?y Ce y Cu2O8 Compounds -- ESR Studies of the Magnetism

in Ru-1212 and Ru-2212 -- Structure and Morphology of NdSr2RuCu2O y and GdSr2RuCu2Oz -- Synthesis Effects on the Magnetic and Superconducting Properties of RuSr2GdCu2O8 -- Comparison of Electronic Structure, Magnetic Mechanism, and Symmetry of Pairing in Ruthenates and Cuprates -- Magnetism, Spin Fluctuations and Superconductivity in Perovskite Ruthenates -- Metamagnetic Quantum Criticality in Sr3Ru2O7 -- Metamagnetic Transition and Low-Energy Spin Density Fluctuations in Sr3Ru2O7 -- Decrease of Ferromagnetic Transition Temperature in Nonstoichiometric SrRu1?v O3 Perovskites -- Strain Effects in SrRuO3 Thin Films and Heterostructures.

Sommario/riassunto

Ruthenate materials have come into focus recently because of their very interesting magnetic and superconducting properties. From the first international conference on this topic, the present volume has emerged as a first coherent account of the considerable body of work, both theoretical and experimental, gathered in this field within a short time span. The book has been written in the form of a set of lectures and tutorial reviews with the aim of providing the research community with both a comprehensive and modern source of reference and a tutorial introduction for postgraduate students and nonspecialists working in related areas.