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Nota di contenuto	Lectures -- to Magnetism and Magnetic Materials -- Spectroscopy and Magnetism: An Introduction -- Instrumentation Developments for Polarization Dependent X-ray Spectroscopies -- Dichroism in X-ray Absorption -- A Photoemission Primer -- Micromagnetics: Dynamical Aspects -- Magnetization Reversal of Nano-particles -- Molecular Magnetism: Design of High-TC Prussian Blue Molecule Based Magnets -- Spin-Resolved Circularly Polarised Resonant Photoemission: Cu <sup>2+</sup> as a Model System -- X-ray Magnetic Circular Dichroism at Low Temperature -- High-Pressure Magnetism and Magnetic Circular Dichroism -- Resonant Inelastic X-ray Scattering -- Some Nuclear Techniques in Experimental Magnetism: Mössbauer Effect, Neutron Scattering and Nuclear Magnetic Resonance -- Linear and Non-linear Magneto-optical Effects: Magnetism of Thin Film Structures -- Topical

Cases -- Relation Between X-ray Magnetic Linear Dichroism and Magnetocrystalline Anisotropy -- Field Induced Magnetic Circular Dichroism in Paramagnetic Solids -- X-ray Magnetic Circular Dichroism in the Investigation of Magnetisation Dynamics in the Nanosecond Time Scale -- Magnetism in Nanoscale Fe Clusters Studied by Dichroism in X-ray Absorption and Photoemission -- X-ray Spectromicroscopy and Applications to Magnetic Materials -- Magnetic Ordering and Resonance Process in Sm Epitaxial Films and Superlattices: An RXMS Study -- X-ray Gyrotropy Related Spectroscopies: Natural Circular Dichroism and Non-reciprocal Linear Dichroism -- Synchrotron-Based Mössbauer Spectroscopy at Iron Islands and Clusters on Tungsten (110).

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Sommario/riassunto

The aim of this book is to provide both an introduction and a state-of-the-art report on research into magnetism and magnetic materials. Particular emphasis has been put on the contribution of synchrotron radiation in relevant experimental investigations. Graduate students and nonspecialists will benefit from the tutorial approach while specialists will find the latest results that round off the material presented in the lectures.

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