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anisotropies of nonuniaxial symmetry; 3.1.4 Cubic anisotropy; 3.1.5 Anisotropy coefficients; 3.1.6 Anisotropy fields; 3.2 Models of pair anisotropy; 3.2.1 Dipolar interactions and shape anisotropy; 3.2.2 Demagnetizing factors; 3.2.3 Applicability of the shape-anisotropy model; 3.2.4 The Neel model; 3.3 Spin-orbit coupling and crystal-field interaction; 3.3.1 Relativistic origin of magnetism; 3.3.2 Hydrogen-like atomic wave functions; 3.3.3 Crystal-field interaction; 3.3.4 Quenching; 3.3.5 Spin-orbit coupling
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5.1.4 Landau theory

Sommario/riassunto

Models of magnetism have been pivotal in the understanding and advancement of science and technology. The book is the first one to cover the field as a whole, complementing a rich literature on specific models of magnetism. It is written in an easily accessible style, with a limited amount of mathematics, and covers a wide range of phenomena. - ;For hundreds of years, models of magnetism have been pivotal in the understanding and advancement of science and technology, from the Earth's interpretation as a magnetic dipole to quantum mechanics, statistical physics, and modern nanotechnology. This