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Nota di contenuto	Intro -- MAGNETIC PROPERTIESOF SOLIDS -- CONTENTS -- PREFACE -- NON-EQUILIBRIUM MAGNETISMOF SINGLE-DOMAIN PARTICLESFOR CHARACTERIZATIONOF MAGNETIC NANOMATERIALS -- Abstract -- 1. Introduction -- 1.1. Real Magnetic Nanoparticles -- 1.2. Basic Properties of Idealized Stoner-Wohlfarth Particles -- 1.3. Néel's Relaxation Approach -- 2. The Stoner-Wohlfarth Model Extended within Néel'sRelaxation -- 2.1. The Extended SW Model: Hysteresis in a Periodic External MagneticField -- 2.2. Temperature Demagnetization Curves for Different Cooling Regimes -- 2.3. High-Temperature Magnetization Limit in the Extended SW Model -- 3. Multilevel Model for Stochastic Relaxationof Particle's Uniform Magnetization -- 3.1. Constant-Energy Magnetization Trajectories as Stochastic States -- 3.2. Non-Langevin High-Temperature Magnetizationin the Slow Diffusion Limit -- 3.3. Equilibrium Magnetization within an Effective Inclusion of Diffusion -- 4. Relaxation Mössbauer Spectra of Magnetic Nanoparticles -- 4.1. Mössbauer Spectra of Nanoparticles and Hyperfine Field Distribution -- 4.2. Two-Level Relaxation Model -- 4.3. Generalized Two-Level Relaxation Model -- 4.4. Mössbauer Spectra within Precession of the Hyperfine Field -- 4.5. Mössbauer Spectra of Nanoparticles within Continuous Diffusion andPrecession of Uniform Magnetization -- 4.6. Mössbauer Spectra of Nanoparticles in a Weak Magnetic Field -- 5. Mössbauer Spectra under Radiofrequency Magnetic FieldExcitation -- 5.1. Mössbauer Spectra under Rf Field Excitation within the Stoner-Wohlfarth Model -- 5.2. Relaxation Mössbauer Spectra under Rf Field Excitation -- 5.3. Mössbauer Spectra under Rf

Field Excitation within the Extended SWModel -- 5.4. Relaxation-Stimulated Resonances in Mössbauer Spectra under Rf FieldExcitation -- 6. Conclusion -- Acknowledgments -- References.
MAGNETIC AND ELECTRONIC STRUCTUREMODIFICATIONS INDUCED BY SURFACESEGREGATION IN LA0.65PB0.35MNO3 THIN FILMS -- Abstract -- 1. Introduction -- 2. Thin Film Deposition -- 3. Bulk Properties of the Thin Films -- 4. Surface Composition -- 5. Surface Debye Temperature -- 6. Surface Electronic Structure -- 7. Summary -- References -- SITE DISORDER AND FINITE SIZE EFFECTSIN RARE-EARTH MANGANITES -- Abstract -- I. Introduction -- 1.1. Outline of Manganites -- 1.2. Disorder Effect -- 1.3. Finite Size Effect -- II. A-Site Disorder Effects -- 2.1. Early Studies on the A-Site Disorder -- 2.2. Large Bandwidth Manganites -- 2.2. Large Bandwidth Manganites -- 2.3. Intermediate Bandwidth Manganites -- 2.4. Small Bandwidth Manganites -- III. B-Site Disorder Effects -- 3.1. Introduction -- 3.2. Theoretical Model -- 3.3. Results and Discussion -- IV. Finite Size Effects in Nanostructure Manganites -- 4.1. Experimental Results -- 4.2. Theoretical Approach -- V. Conclusion -- Acknowledgements -- Refernences -- PROCESSING AND PROPERTIESOF THIN MANGANITE FILMS -- Abstract -- Introduction -- 1. Processing of Thin Manganite Films -- 2. Morphology and Crystalline Quality of La0.7Ca0.3MnO3 ThinFilms -- 2.1. Studies of the Growth Parameters -- 2.2. Microstructure of La0.7Ca0.3MnO3 Epitaxial Thin Films -- 2.3. Oxygen Vacancies in Manganite Thin Films -- 3. Fe DOPED La0.7Ca0.3Mn1-xFexO3 (x=0.2) Thin Films -- 3.1. Structural, Composition and Electronic Characterizationof La0.7Ca0.3Mn0.8Fe0.2O3 Films -- 3.2. Electronic Properties of the Fe (20%) Doped La0.7Ca0.3Mn1-xFexO3 ThinFilms -- Conclusion -- Acknowledgments -- References -- STUDY OF THE MAGNETIC PROPERTIES OF THESEMICONDUCTORS AND THE NANOMATERIALSBY DIFFERENT THEORETICAL METHODS -- Abstract -- I. Introduction -- II. Theoretical Methods -- II.1. Mean Field Theory -- II.2. Probability Law.
II.3. High Temperature Series Expansions (Quantum Method) -- II.4. High-Temperature Series Expansions (Classical Method) -- III. Applications for Different SemiconductorsMagnetic Materials -- III. 1. Semiconductors Spinels Material -- III.1.A. Mean Field Theory and Probability Law -- III.1.B. High Temperature Series Expansions -- III.1. C. Replica Method -- III. 2. Diluted Magnetic Semiconductors (DMS) -- III.3. Illuminates and Perovskites Materials -- III.4. Magnetic Properties and Finite Size Scaling in Nanomaterials -- IV. Discussions and Conclusions -- Annex 1 -- I. Calculation of the Coefficients a (n) -- II. Calculation of the Coefficients e (k) and d (k), for k = 1,2 -- Annex 2 -- References -- FAST DOMAIN WALL DYNAMICSIN THIN MAGNETIC WIRES (REVIEW) -- Abstract -- Introduction -- Theory of Domain Wall Propagation -- Amorphous Glass-Coated Microwires -- Single Domain Wall Propagation in AmorphousGlass- Coated Microwires -- Fast Domain Wall Propagation in Amorphous Glass CoatedMicrowires -- Acknowledgment -- References -- SUBSTITUTION- INDUCED STRUCTURAL,FERROELECTRIC AND MAGNETIC PHASETRANSITIONS IN BI1-XGDXFEO3 MULTIFERROICS -- Abstract -- 1. Introduction -- 2. Experimental -- 3. Results and Discussion -- 3.1. Crystal Structure -- 3.2. Local Ferroelectric Properties -- 3.3. Magnetic Properties -- 4. Conclusion -- Acknowledgements -- References -- PINNING EFFECT ON LOCAL MAGNETIZATIONIN FERRIMAGNETS A2FEMOO6 (A = BA, CA) EXAMINED BY TRANSMISSION ELECTRONMICROSCOPY (TEM) -- Abstract -- 1. Introduction -- Scope of this Paper -- 2. Experimental -- 3. Magnetic Domain Structure in Ba2FeMoO6 -- 4.Temperature Dependence of Maze-Shaped Magnetic Domains -- 5. Antisite Defects

in Ba2FeMoO6 -- 6. Relationship between Magnetic Structure and Antisite Defects -- 7. Microstructure and Magnetic Domain Structure in Ca2FeMoO6 -- 8. Summary -- Acknowledgments.
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Sommario/riassunto

Magnetism is one of the phenomena by which materials exert attractive or repulsive forces on other materials. This book presents a broad range of topics in this growing field, including their use as magnetic agents, receptor particles for microwaves, and more.