1. Record Nr. UNINA9910139822403321

Titolo	High Magnetic Fields : Applications in Condensed Matter Physics and Spectroscopy / / edited by Claude Berthier, Laurent P. Levy, Gerard Martinez
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2001
ISBN	9783540456490 354045649X
Edizione	[1st ed. 2001.]
Descrizione fisica	1 online resource (X, 493 p.)
Collana	Lecture Notes in Physics, , 0075-8450 ; ; 595
Disciplina	538/.3
Soggetti	Magnetism Magnetic materials Condensed matter Optical materials Electronics - Materials Metals Superconductivity Superconductors Biophysics Magnetism, Magnetic Materials Condensed Matter Physics Optical and Electronic Materials Metallic Materials Strongly Correlated Systems, Superconductivity Biological and Medical Physics, Biophysics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Quantum Hall Effect: Macroscopic and Mesoscopic Electron Transport -- Theories of the Fractional Quantum Hall Effect -- Magneto-optics of Composite Fermions -- Stripe and Bubble Phases in Quantum Hall Systems -- Low Dimensional Magnets -- Frustrated Quantum Magnets -- NMR Studies of Low-Dimensional Quantum Antiferromagnets --

Magnetized States of Quantum Spin Chains -- Electronic Phases of Low-Dimensional Conductors -- Two Prototypes of One-Dimensional Conductors: (TM)2X and Cuprate Spin Ladders -- Nucleation of Superconductivity in Low-Dimensional Systems Under Magnetic Fields -- Superconductivity Under High Magnetic Fields in Low-Dimensional Organic Salts -- Vortex Phases -- Colossal Magnetoresistive Oxides in High Magnetic Fields -- Half-Metallic Ferromagnets -- Effects of Electron—Electron Interactions Near the Metal-Insulator Transition in Indium-Oxide Films -- Interference Effects in Disordered Insulators -- High Resolution NMR of Biomolecules -- High-Resolution Solid-State NMR -- High Frequency EPR Spectroscopy -- Pulsed-High Field/High-Frequency EPR Spectroscopy.

Sommario/riassunto

The quantum Hall effect, low-dimensional systems, vortices and superconductivity, high-resolution NMR and EPR spectroscopy - all these and many other landmark contributions of high-magnetic-field physics to solid state science, analytical chemistry and structural biology are presented in this book. Each chapter describes the key concepts and future prospects in the corresponding field. The text can be read at different levels: researchers will find depth and insight, while students will come to understand the basic concepts. This book, written by leading scientists, will serve as a reference work on high-magnetic-field science for many years to come.