

1. Record Nr.	UNINA9910634046303321
Titolo	Electron spin resonance and related phenomena in low-dimensional structures / / Marco Fanciulli (ed.)
Pubbl/distr/stampa	Berlin ; ; Heidelberg, : Springer-Verlag, c2009
ISBN	3-540-79365-8
Edizione	[1st ed. 2009.]
Descrizione fisica	1 online resource (271 p.)
Collana	Topics in applied physics, , 0303-4216 ; ; 115
Altri autori (Persone)	FanciulliM (Marco)
Disciplina	538.364
Soggetti	Low-dimensional semiconductors Electron paramagnetic resonance
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and indexes.
Nota di contenuto	Resistively Detected ESR and ENDOR Experiments in Narrow and Wide Quantum Wells: A Comparative Study -- Electron-Spin Manipulation in Quantum Dot Systems -- Resistively Detected NMR in GaAs/AlGaAs -- Electron-Spin Dynamics in Self-Assembled (In, Ga)As/GaAs Quantum Dots -- Single-Electron-Spin Measurements in Si-Based Semiconductor Nanostructures -- Si/SiGe Quantum Devices, Quantum Wells, and Electron-Spin Coherence -- Electrical Detection of Electron-Spin Resonance in Two-Dimensional Systems -- Quantitative Treatment of Decoherence -- Measuring the Charge and Spin States of Electrons on Individual Dopant Atoms in Silicon -- Electron Spin as a Spectrometer of Nuclear-Spin Noise and Other Fluctuations -- A Robust and Fast Method to Compute Shallow States without Adjustable Parameters: Simulations for a Silicon-Based Qubit -- Photon-Assisted Tunneling in Quantum Dots.
Sommario/riassunto	This book is devoted to the discussion of the state-of-the-art of spin resonance in low dimensional structures, such as two-dimensional electron systems, quantum wires, and quantum dots. World leading scientists in the field report on recent advances and discuss open issues and perspectives. Frontiers and opportunities for spin resonance techniques, with particular emphasis on fundamental physics, nanoelectronics, spintronics and quantum information processing, are discussed.

