1. Record Nr. UNINA9910350229203321

Autore	Hata Tokuro
Titolo	Non-equilibrium Many-body States in Carbon Nanotube Quantum Dots / / by Tokuro Hata
Pubbl/distr/stampa	Singapore : , : Springer Singapore : , : Imprint : Springer, , 2019
ISBN	981-13-7660-3
Edizione	[1st ed. 2019.]
Descrizione fisica	1 online resource (XIII, 76 p. 41 illus., 37 illus. in color.)
Collana	Springer Theses, Recognizing Outstanding Ph.D. Research, , 2190-5053
Disciplina	620.5
Soggetti	Nanoscale science Nanoscience Nanostructures Superconductivity Superconductors Statistical physics Solid state physics Nanoscale Science and Technology Strongly Correlated Systems, Superconductivity Statistical Physics and Dynamical Systems Solid State Physics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Introduction -- Experimental Methods -- Non-equilibrium Fluctuations in Strongly Correlated Kondo States -- Non-equilibrium Fluctuations along Symmetry Crossover in a Kondo-correlated Quantum Dot -- Kondo–Andreev Competing System in Carbon Nanotube -- Summary.
Sommario/riassunto	This book presents the first experiment revealing several unexplored non-equilibrium properties of quantum many-body states, and addresses the interplay between the Kondo effect and superconductivity by probing shot noise. In addition, it describes in detail nano-fabrication techniques for carbon nanotube quantum dots, and a measurement protocol and principle that probes both equilibrium and non-equilibrium quantum states of electrons. The book offers

various reviews of topics in mesoscopic systems: shot noise measurement, carbon nanotube quantum dots, the Kondo effect in quantum dots, and quantum dots with superconducting leads, which are relevant to probing non-equilibrium physics. These reviews offer particularly valuable resources for readers interested in non-equilibrium physics in mesoscopic systems. Further, the cutting-edge experimental results presented will allow reader to catch up on a vital new trend in the field.