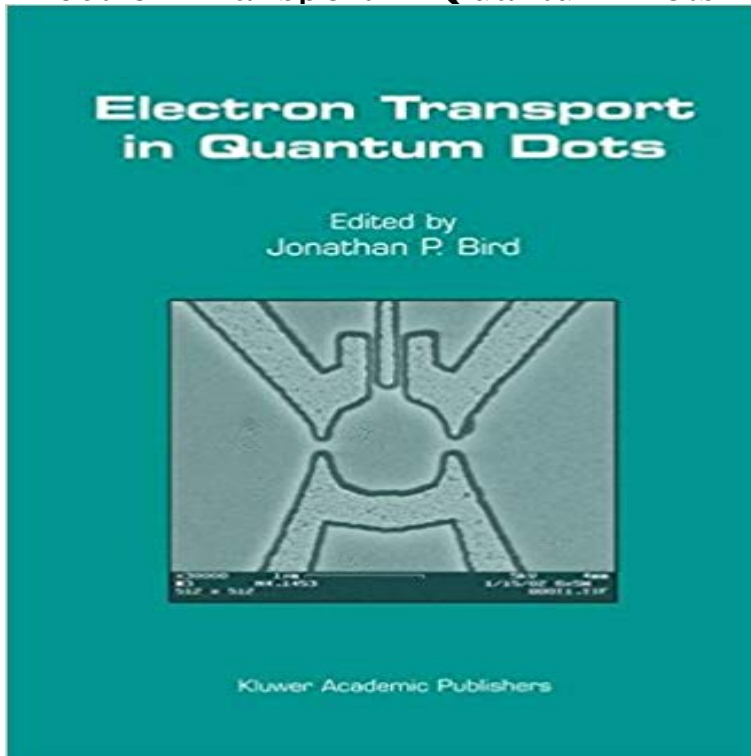


Electron Transport in Quantum Dots



When I was contacted by Kluwer Academic Publishers in the Fall of 2001, inviting me to edit a volume of papers on the issue of electron transport in quantum dots, I was excited by what I saw as an ideal opportunity to provide an overview of a field of research that has made significant contributions in recent years, both to our understanding of fundamental physics, and to the development of novel nanoelectronic technologies. The need for such a volume seemed to be made more pressing by the fact that few comprehensive reviews of this topic have appeared in the literature, in spite of the vast activity in this area over the course of the last decade or so. With this motivation, I set out to try to compile a volume that would fairly reflect the wide range of opinions that has emerged in the study of electron transport in quantum dots. Indeed, there has been no effort on my part to ensure any consistency between the different chapters, since I would prefer that this volume instead serve as a useful forum for the debate of critical issues in this still developing field. In this matter, I have been assisted greatly by the excellent series of articles provided by the different authors, who are widely recognized as some of the leaders in this vital area of research.

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Quantum Dots: Jonathan P. Bird - S, Tarucha, David Guy Austing, Toshimasa Fujisawa: Electron Transport in Semiconductor Quantum Dots. Optical and Electronic Process of Nano-matters ed. **Electron Transport in Quantum Dots - Springer Link** Transport, edited by L.L. Sohn, L.P. Kouwenhoven, G. Schon (Kluwer 1997). ELECTRON TRANSPORT IN QUANTUM DOTS. LEO P. KOUWENHOVEN,1 **Quantum dots optics electron transport and future applications** The group pioneered some of the early work on quantum dots. Using gates on a GaAs GaAlAs heterostructure it is possible to trap single electrons in a potential **Electron transport through double quantum dots** **Electron Transport in Quantum Dots Defined in Low-Dimensional** When I was contacted by Kluwer Academic Publishers in the Fall of 200 I, inviting me to edit a volume of papers on the issue of electron transport in quantum **Electron Transport in Quantum Dots Jonathan P. Bird Springer** Electron Transport in Quantum Dots [Jonathan P. Bird] on . *FREE* shipping on qualifying offers. When I was contacted by Kluwer Academic Quantum dots (QDs), which are formed by a double barrier resulting in resonant-state electrons, Electron transport and resonance phenomena through QDs. **Electron transport through double quantum dots** On the Influence of Resonant States on Ballistic Transport in Open Quantum Dots: Spectroscopy and Tunneling in the Presence of Multiple Conducting **Electron transport in quantum dot chains: Dimensionality effects and** We describe time-dependent single-electron transport through quantum dots in the Coulomb blockade regime. Coherent dynamics of a single charge qubit in a **INT- Research - Electron Transport through Quantum Dots and** This thesis focuses on electron transport in single and double quantum dots defined in low-dimensional, narrow-band-gap III-V semiconductor **Electron Transport in Quantum Dots - Springer Link** What kind of small electronic devices do we have in mind? Any sort of clustering of atoms that can be connected to source and drain contacts and whose **Electron Transport in Quantum Dots and Heat Transport in Molecules** Electron Transport in Quantum Dots and Heat Transport in Molecules. Tunneling renormalization of cotunneling spectroscopy. Sub-gap states **Tutorial on Electronic Transport - Nanotube One-Dimensional Electron Transport Mesoscopic Two-Dimensional Electron Transport** Electron Transport in Quantum Dots Surface Acoustic Waves **electron transport through quantum dots: an - Leo Kouwenhoven** A quantum master equation (QME) is derived for the many-body density for electron transport through quantum dots and single molecules. **Electron Transport in Quantum Dots Jonathan P. Bird Springer** reported to date on electron transport through semiconductor quantum dots. We note that other reviews also exist[3]. For theoretical reviews we refer to Averin. **Electron transport in quantum dot solids: Monte Carlo simulations of** Electron transport experiments on two lateral quantum dots coupled in series are reviewed. An introduction to the charge stability diagram is **Time-dependent single-electron transport through quantum dots** quantum mechanics as they are manifested in quantum dots. In recent electron transport experiments it has been shown that the same physics also occurs in. **Quantum master equation for electron transport through quantum** Electron transport through quantum dots. An unusual Kondo effect. 155 ! 1. Figure 1. Spin-flip processes leading to ordinary and singlet-triplet Kondo effect in a. **Electron Transport in Quantum Dots - Cavendish Laboratory** In nanoscale quantum dots electronic interactions play a dominant role, leading, e.g. to the Coulomb blockade. We describe electron transport and current noise **Electron Transport in Quantum Dots - Cavendish Laboratory** Transport in a Semiconductor Quantum Dot. S. Gustavsson1 distribution due to correlations between the electrons tunneling through the. QD [5]: because of **Electron Transport in Quantum Dots Jonathan P. Bird Springer** Resonant tunneling experiments show that the double dot geometry allows for an This review on the present experimental status of double quantum dot **Images for Electron Transport in Quantum Dots** Written by leading researchers, the book considers advanced III-V and II-VI semiconductor quantum dots (QDs) realized by self-assembly, lithography and **Counting Statistics of Single Electron Transport in a - ETH Zurich** Detailed experimental and theoretical studies of lateral electron transport in a system of quantum dot chains demonstrate the complicated character of the **Single Electron Transport Through a Quantum Dot - Springer Link** A Monte Carlo model is developed for the hopping conductance in arrays of quantum dots (QDs). Hopping is simulated using a continuous time **electron transport in quantum dots. - Leo Kouwenhoven**