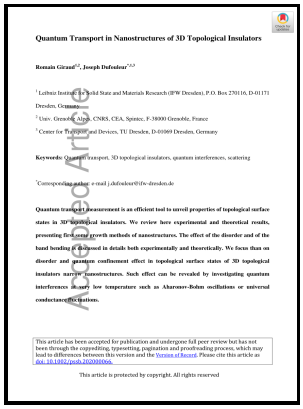
Transport in nanostructures

Cambridge University Press - Transport in Nanostructures (Edition 2) (Hardcover)



Quantum Transport in Nanostructures of 3D Topological Insulators

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Quantum transport measurement is an efficient tool to unveil properties of topological surface states in 3D topological insulators. We review here experimental and theoretical results, presenting first some growth methods of nanostructures. The effect of the disorder and of the band bending is discussed in details both experimentally and theoretically. We focus than on disorder and quantum confinement effect in topological surface states of 3D topological insulators naturally nanostructures. Such effect can be revealed by investigating quantum interferences in many low temperature such as Aharonov-Bohm oscillations or universal conductance fluctuations.

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6
Cambridge studies in semiconductor physics and microelectronic engineering ;Transport in nanostructures
Notes: Includes bibliographical references and index.
This edition was published in 1997

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Transport in Nanostructures — Arizona State University

Separate chapters are devoted to interference in diffusive transport, temperature decay of fluctuations, and non-equilibrium transport and nanodevices.

Transport in Nanostructures (豆瓣)

Separate chapters are devoted to interference in diffusive transport, temperature decay of fluctuations, and non-equilibrium transport and nanodevices.

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Detailed descriptions of the crossover from tunneling to thermally activated transport, of the properties of Josephson junctions with barriers tuned near the metal-insulator transition, and of thermoelectric coolers and power generators are provided as applications of the theory. A systematic exposition for the NEGF method is presented, starting from the fundamental definitions of the Green's functions, and ending with equations of motion for the

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The sample is built on a special chip-carrier that can be inserted into a He dilution fridge to allow measurement with 8 Tesla magnetic field and milliKelvin temperature. Example data are shown below for CoSi2 NWs on Si 110.

Transport in Nanostructures by Stephen M. Goodnick, David K. Ferry and Jonathan Bird (2009, Hardcover) for sale online

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