1. | Record Nr. | UNINA990003435690403321 |
   |---|---|
   | Autore | D'Addario, Arnaldo |
   | Titolo | Il problema senese nella storia italiana ne lla prima met del '500 |
   | Pubbl/distr/stampa | 1958 |
   | Locazione | DECSE |
   | Collocazione | SE 071.07.18- |
   | Lingua di pubblicazione | Italiano |
   | Formato | Materiale a stampa |
   | Livello bibliografico | Monografia |

2. | Record Nr. | UNINA9910788622503321 |
   |---|---|
   | Autore | Uchaikin V. V (Vladimir Vasilevich) |
   | Titolo | Fractional kinetics in solids [[electronic resource] ] : anomalous charge transport in semiconductors, dielectrics, and nanosystems / / Vladimir Uchaikin, Ulyanovsk State University, Russia, Renat Sibatov, Ulyanovsk State University, Russia |
   | Pubbl/distr/stampa | Singapore, : World Scientific, 2013 |
   | ISBN | 1-283-89998-1 |
   | | 981-4355-43-7 |
   | Descrizione fisica | 1 online resource (274 p.) |
   | Altri autori (Persone) | SibatovRenat |
   | Disciplina | 530.4/16 |
   | | 530.416 |
   | | 531.3 |
   | Soggetti | Solid state physics - Mathematics |
   | | Electric discharges - Mathematical models |
   | | Fractional calculus |
   | | Semiconductors - Electric properties |
   | | Electron transport - Mathematical models |
   | | Chemical kinetics - Mathematics |
   | Lingua di pubblicazione | Inglese |
   | Formato | Materiale a stampa |
   | Livello bibliografico | Monografia |
   | Note generali | Description based upon print version of record. |

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| Nota di bibliografia | Includes bibliographical references and index. |
| Nota di contenuto | Contents; Preface; 1. Statistical grounds; 1.1 Levy stable statistics; 1.1.1 Generalized limit theorems; 1.1.2 Two subclasses of stable distributions; 1.1.3 Fractional stable distributions; 1.1.4 Self-similar processes: Brownian motion and Levy motion; 1.1.5 Space-fractional equations; 1.2 Random flight models; 1.2.1 Continuous time random flights; 1.2.2 Counting process for number of jumps; 1.2.3 The Poisson process; 1.2.4 The Fractional Poisson process; 1.2.5 Simulation of waiting times; 1.3 Some properties of the fractional Poisson process; 1.3.1 The nth arrival time distribution<br><br>1.3.2 The fractional Poisson distribution1.3.3 Limit fractional Poisson distributions; 1.3.4 Fractional Furry process; 1.3.5 Time-fractional equation; 1.4 Random flights on a one-dimensional Levy-Lorentz gas; 1.4.1 One-dimensional Levy-Lorentz gas; 1.4.2 The flight process on the fractal gas; 1.4.3 Propagators; 1.4.4 Fractional equation for flights on fractal; 1.5 Subdiffusion; 1.5.1 Integral equations of diffusion in a medium with traps; Necessary and sufficient condition for subdiffusion; 1.5.2 Differential equations of subdiffusion; 1.5.3 Subdiffusion distribution density<br><br>1.5.4 Analysis of subdiffusion distributions1.5.5 Discussion; 2. Fractional kinetics of dispersive transport; 2.1 Macroscopic phenomenology; 2.1.1 A role of phenomenology in studying complex systems; 2.1.2 Universality of transient current curves; 2.1.3 From self-similarity to fractional derivatives; 2.1.4 From transient current to waiting time distribution; 2.2 Microscopic backgrounds of dispersive transport; 2.2.1 From the Scher-Montroll model to fractional derivatives; 2.2.2 Physical basis of the power-law waiting time distribution; 2.2.3 Multiple trapping regime<br><br>2.2.4 Hopping conductivity2.2.5 Bassler's model of Gaussian disorder; 2.3 Fractional formalism of multiple trapping; 2.3.1 Prime statements; 2.3.2 Multiple trapping regime and Arkhipov-Rudenko approach; 2.3.3 Fractional equations for delocalized carriers; 2.3.4 Fractional equation for the total concentration; 2.3.5 Two-state dynamics; 2.3.6 Delocalized carrier concentration; 2.3.7 Percolation and fractional kinetics; 2.3.8 The case of Gaussian disorder; 2.4 Some applications; 2.4.1 Dispersive diffusion; 2.4.2 Photoluminescence decay; 2.4.3 Including recombination; 2.4.4 Including generation<br><br>2.4.5 Bipolar dispersive transport2.4.6 The family of fractional dispersive transport equations; 3. Transient processes in disordered semiconductor structures; 3.1 Time-of-flight method; 3.1.1 Transient current in disordered semiconductors; 3.1.2 Transient current for truncated waiting time distributions; 3.1.3 Distributed dispersion parameter; 3.1.4 Transient current curves in case of Gaussian disorder; 3.1.5 Percolation in porous semiconductors; 3.1.6 Non-stationary radiation-induced conductivity; 3.2 Non-homogeneous distribution of traps<br><br>3.2.1 Non-uniform spatial distribution of localized states |
| Sommario/riassunto | The standard (Markovian) transport model based on the Boltzmann equation cannot describe some non-equilibrium processes called anomalous that take place in many disordered solids. Causes of anomality lie in non-uniformly scaled (fractal) spatial heterogeneities, in which particle trajectories take cluster form. Furthermore, particles can be located in some domains of small sizes (traps) for a long time. Estimations show that path length and waiting time distributions are often characterized by heavy tails of the power law type. This behavior allows the introduction of time and space derivative |