



Transport of Energetic Electrons in Solids [Computer Simulation with Applications to Materials Analysis and Characterization /

Dapor, Maurizio.,
author

Springer International Publishing :
Imprint: Springer,
2017

Monografía

This new edition describes all the mechanisms of elastic and inelastic scattering of electrons with the atoms of the target as simple as possible. The use of techniques of quantum mechanics is described in detail for the investigation of interaction processes of electrons with matter. It presents the strategies of the Monte Carlo method, as well as numerous comparisons among the results of the simulations and the experimental data available in the literature. New in this edition is the description of the Mermin theory, a comparison between Mermin theory and Drude theory, a discussion about the dispersion laws, and details about the calculation of the phase shifts that are used in the relativistic partial wave expansion method. The role of secondary electrons in proton cancer therapy is discussed in the chapter devoted to applications. In this context, Monte Carlo results about the radial distribution of the energy deposited in PMMA by secondary electrons generated by energetic proton beams are presented

<https://rebiunoda.pro.baratznet.cloud:38443/OpacDiscovery/public/catalog/detail/b2FpOmNlOGVicmF0aW9uOmVzLmJhcmF0ei5yZW4vMTg0ODYxMDg>

Título: Transport of Energetic Electrons in Solids [Recurso electrónico-En línea] Computer Simulation with Applications to Materials Analysis and Characterization by Maurizio Dapor

Edición: 2nd ed. 2017

Editorial: Cham Springer International Publishing Imprint: Springer 2017

Descripción física: XVIII, 182 p. 58 illus. online resource

Tipo Audiovisual: Physics Solid state physics Applied mathematics Engineering mathematics Materials science Physics Solid State Physics Numerical and Computational Physics, Simulation Characterization and Evaluation of Materials Appl.Mathematics/Computational Methods of Engineering

Mención de serie: Springer Tracts in Modern Physics 0081-3869 999

Documento fuente: Springer eBooks

Nota general: Physics and Astronomy (Springer-11651)

Contenido: Electron Transport in Solids -- Cross-Sections: Basic Aspects -- Scattering Mechanisms -- Random Numbers -- Monte Carlo Strategies -- Backscattering Coefficient -- Secondary Electron Yield -- Electron Energy Distributions -- Applications

Restricciones de acceso: Accesible sólo para usuarios de la UPV

Tipo recurso electrónico: Recurso a texto completo

Detalles del sistema: Forma de acceso: Web

ISBN: 9783319474922 978-3-319-47492-2

Entidades: SpringerLink (Servicio en línea)

Enlace a formato físico adicional: Printed edition 9783319474908

Punto acceso adicional serie-Título: Springer Tracts in Modern Physics 0081-3869 999

Baratz Innovación Documental

- Gran Vía, 59 28013 Madrid
- (+34) 91 456 03 60
- informa@baratz.es