

Current At The Nanoscale: An Introduction To Nanoelectronics

By Colm Durkan

Download Read Online

Current At The Nanoscale: An Introduction To Nanoelectronics By Colm Durkan

“This book contains good technical depth and requires a basic understanding of quantum mechanics . . . The author gives clear and concise explanations, making it easier to understand the complex ideas being conveyed. As such, this would be an excellent postgraduate text for learning about quantum mechanics, scanning probe microscopy, and electron transport at nanoscale dimensions.” Ieee Electrical Insulation Magazine This introductory text deals with how electric currents behave at the nanometer scale. The book ties together several aspects of recent research on current flow at the nanoscale, including its relevance in defects, grain boundaries, tunneling, and atomic contacts; its effects through nanostructures, particularly for transistor miniaturization; and the techniques used to probe currents and voltages at the nanoscale, focusing on scanning probe microscopy and transport measurements. It covers topics such as quantum transport, mesoscopic physics, and molecular electronics, among others. Unlike other books on this subject that are almost entirely theoretical, the introductory nature of this book strikes a balance between theory and experiment. Moreover, given the introductory nature of the book, it will not become obsolete quickly and chapters can be added at later stages as new developments inevitably arise. Based largely on Meng and Mphil courses that have been originated and taught by the author, as well as on his own research, the book is written primarily for postgraduate students, but contains elements that undergraduates can also understand and apply. The wide coverage of topics allows for a broad readership base, and serves as a good starting point for those who wish to do work on nanoscale transport.

Download Current At The Nanoscale: An Introduction To Nanoe ...pdf

Read Online Current At The Nanoscale: An Introduction To Nan ...pdf

Current At The Nanoscale: An Introduction To Nanoelectronics

By Colm Durkan

Current At The Nanoscale: An Introduction To Nanoelectronics By Colm Durkan

“This book contains good technical depth and requires a basic understanding of quantum mechanics . . . The author gives clear and concise explanations, making it easier to understand the complex ideas being conveyed. As such, this would be an excellent postgraduate text for learning about quantum mechanics, scanning probe microscopy, and electron transport at nanoscale dimensions.” Ieee Electrical Insulation Magazine This introductory text deals with how electric currents behave at the nanometer scale. The book ties together several aspects of recent research on current flow at the nanoscale, including its relevance in defects, grain boundaries, tunneling, and atomic contacts; its effects through nanostructures, particularly for transistor miniaturization; and the techniques used to probe currents and voltages at the nanoscale, focusing on scanning probe microscopy and transport measurements. It covers topics such as quantum transport, mesoscopic physics, and molecular electronics, among others. Unlike other books on this subject that are almost entirely theoretical, the introductory nature of this book strikes a balance between theory and experiment. Moreover, given the introductory nature of the book, it will not become obsolete quickly and chapters can be added at later stages as new developments inevitably arise. Based largely on Meng and Mphil courses that have been originated and taught by the author, as well as on his own research, the book is written primarily for postgraduate students, but contains elements that undergraduates can also understand and apply. The wide coverage of topics allows for a broad readership base, and serves as a good starting point for those who wish to do work on nanoscale transport.

Current At The Nanoscale: An Introduction To Nanoelectronics By Colm Durkan Bibliography

- Published on: 2008-01-09
- Released on: 2008-01-09
- Original language: English
- Dimensions: 8.99" h x .51" w x 6.00" l,
- Binding: Paperback
- 224 pages

Download Current At The Nanoscale: An Introduction To Nanoe ...pdf

Read Online Current At The Nanoscale: An Introduction To Nan ...pdf

Download and Read Free Online Current At The Nanoscale: An Introduction To Nanoelectronics By Colm Durkan

Editorial Review

Review
This book contains good technical depth and requires a basic understanding of quantum mechanics]] The author gives clear and concise explanations, making it easier to understand the complex ideas being conveyed. As such, this would be an excellent postgraduate text for learning about quantum mechanics, scanning probe microscopy, and electron transp -- IEEE Electrical Insulation Magazine "IEEE Electrical Insulation Magazine"

Users Review

From reader reviews:

Curtis Tyson:

In this 21st one hundred year, people become competitive in every way. By being competitive today, people have do something to make all of them survives, being in the middle of the actual crowded place and notice through surrounding. One thing that occasionally many people have underestimated that for a while is reading. Yeah, by reading a publication your ability to survive raise then having chance to remain than other is high. For yourself who want to start reading a book, we give you this kind of Current At The Nanoscale: An Introduction To Nanoelectronics book as beginner and daily reading publication. Why, because this book is usually more than just a book.

Susan Peterson:

Spent a free time and energy to be fun activity to complete! A lot of people spent their spare time with their family, or their own friends. Usually they carrying out activity like watching television, planning to beach, or picnic inside park. They actually doing same thing every week. Do you feel it? Do you wish to something different to fill your free time/ holiday? May be reading a book may be option to fill your free time/ holiday. The first thing you ask may be what kinds of e-book that you should read. If you want to attempt look for book, may be the book untitled Current At The Nanoscale: An Introduction To Nanoelectronics can be fine book to read. May be it may be best activity to you.

Lynn Groff:

Many people spending their period by playing outside together with friends, fun activity together with family or just watching TV the entire day. You can have new activity to invest your whole day by reading a book. Ugh, do you think reading a book can really hard because you have to use the book everywhere? It alright you can have the e-book, having everywhere you want in your Cell phone. Like Current At The Nanoscale: An Introduction To Nanoelectronics which is getting the e-book version. So , why not try out this book? Let's notice.

Anne Corchado:

Reading a publication make you to get more knowledge as a result. You can take knowledge and information from the book. Book is composed or printed or outlined from each source which filled update of news. With this modern era like right now, many ways to get information are available for you. From media social including newspaper, magazines, science book, encyclopedia, reference book, story and comic. You can add your knowledge by that book. Isn't it time to spend your spare time to spread out your book? Or just searching for the Current At The Nanoscale: An Introduction To Nanoelectronics when you desired it?

Download and Read Online Current At The Nanoscale: An Introduction To Nanoelectronics By Colm Durkan #MS7B1UHZC9P

Read Current At The Nanoscale: An Introduction To Nanoelectronics By Colm Durkan for online ebook

Current At The Nanoscale: An Introduction To Nanoelectronics By Colm Durkan Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Current At The Nanoscale: An Introduction To Nanoelectronics By Colm Durkan books to read online.

Online Current At The Nanoscale: An Introduction To Nanoelectronics By Colm Durkan ebook PDF download

Current At The Nanoscale: An Introduction To Nanoelectronics By Colm Durkan Doc

Current At The Nanoscale: An Introduction To Nanoelectronics By Colm Durkan Mobipocket

Current At The Nanoscale: An Introduction To Nanoelectronics By Colm Durkan EPub