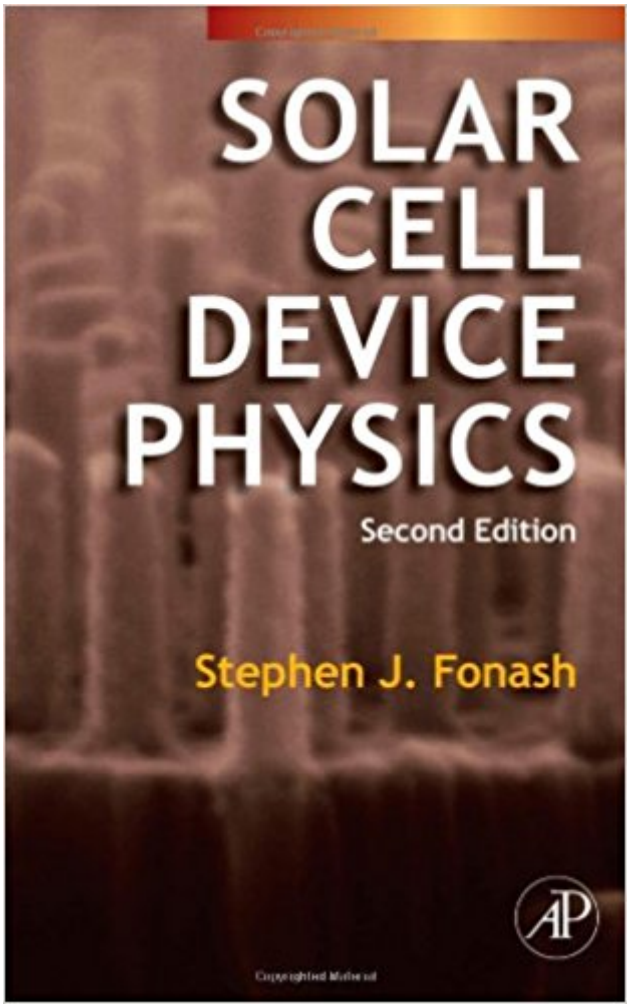
Solar Cell Device Physics, Second Edition



Synopsis

There has been an enormous infusion of new ideas in the field of solar cells over the last 15 years; discourse on energy transfer has gotten much richer, and nanostructures and nanomaterials have revolutionized the possibilities for new technological developments. However, solar energy cannot become ubiquitous in the world's power markets unless it can become economically competitive with legacy generation methods such as fossil fuels. The new edition of Dr. Stephen Fonash's definitive text points the way toward greater efficiency and cheaper production by adding coverage of cutting-edge topics in plasmonics, multi-exiton generation processes, nanostructures and nanomaterials such as quantum dots. The book's new structure improves readability by shifting many detailed equations to appendices, and balances the first edition's semiconductor coverage with an emphasis on thin-films. Further, it now demonstrates physical principles with simulations in the well-known AMPS computer code developed by the author. *Classic text now updated with new advances in nanomaterials and thin films that point the way to cheaper, more efficient solar energy production *Many of the detailed equations from the first edition have been shifted to appendices in order to improve readability*Important theoretical points are now accompanied by concrete demonstrations via included simulations created with the well-known AMPS computer code

Book Information

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Customer Reviews

â œIâ ™m a big fan of this book. Itâ ™s one of the best PV textbooks out there, and in particular it provides unparalleled discussion of the device physics of solar cells.” - Associate Professor

Kylie Catchpole, Research School of Engineering, Australian National University

This is the definitive textbook on getting started in the PV world. This second edition is less intense in the math rigor as compared to the older first edition. Still, the readability is improved. This book represents a great starting point.

Solar Power: The Ultimate Guide to Solar Power Energy and Lower Bills: (Off Grid Solar Power Systems, Home Solar Power System) (Living Off Grid, Wind And Solar Power Systems) Solar Cell Device Physics, Second Edition DIY: How to make solar cell panels easily with no experience!: Master Making Solar Panels Faster! (Master Solar Faster Book 1) Solar Electricity Handbook: 2017 Edition: A simple, practical guide to solar energy ? designing and installing solar photovoltaic systems. Solar Electricity Handbook - 2015 Edition: A simple, practical guide to solar energy - designing and installing solar PV systems. Solar Electricity Handbook - 2013 Edition: A Simple Practical Guide to Solar Energy - Designing and Installing Photovoltaic Solar Electric Systems Solar Electricity Handbook - 2014 Edition: A Simple Practical Guide to Solar Energy - Designing and Installing Photovoltaic Solar Electric Systems Solar Electricity Handbook - 2012 Edition: A Simple Practical Guide to Solar Energy - Designing and Installing Photovoltaic Solar Electric Systems Solar Cooking: Different Types of Solar Cookers: The Pros and Cons of Different Types of Solar Cookers and What Will Work Best For You How to Add a Device to Account: How to add a device to my account - 3 easy steps in few minutes Making Cell Groups Work: Navigating the Transformation to a Cell-Based Church Introduction to Cell and Tissue Culture: Theory and Technique (Introductory Cell and Molecular Biology Techniques) Cell Phones and Distracted Driving (Cell Phones and Society) Solar Water Heating--Revised & Expanded Edition: A Comprehensive Guide to Solar Water and Space Heating Systems (Mother Earth News Wiser Living Series) Top 40 Costly Mistakes Solar Newbies Make: Your Smart Guide to Solar Powered Home and Business 2016 Edition El Sistema de EnergÃ- a Solar: Una completa guÃ- a prÃ¡ctica para el diseÃ o de un sistema de energÃ- a solar para Smart Dummies (Spanish Edition) Energia Solar FV Fuera de Red: CÃ mo Construir Sistemas de EnergÃ- a Solar FV para Sistemas de Potencias Aislados de IluminaciÃ n LED, CÃ¡maras, ... Viviendas en Sitios Remotos (Spanish Edition) Carbon Nanotube and Graphene Device Physics Build A Solar Hydrogen Fuel Cell System Profiting from Clean Energy: A Complete Guide to Trading Green in Solar, Wind, Ethanol, Fuel Cell, Carbon Credit Industries, and More