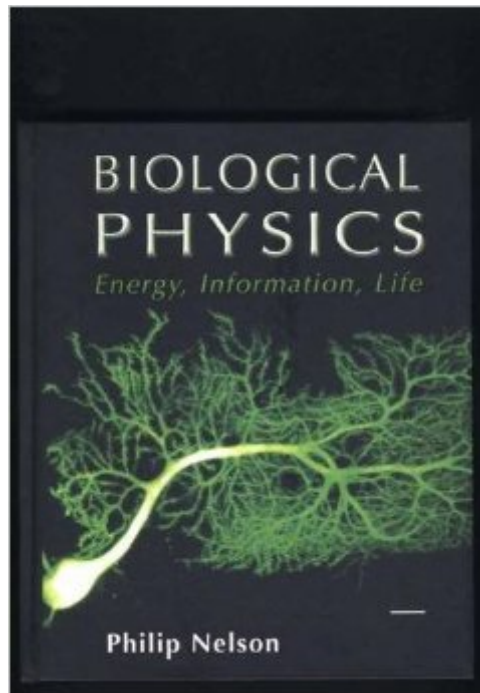


The book was found

# Biological Physics: Energy, Information, Life



## Synopsis

Physics and engineering departments are building research programs in biological physics, but until now there has not been a synthesis of this dynamic field at the undergraduate level. Biological Physics focuses on new results in molecular motors, self-assembly, and single-molecule manipulation that have revolutionized the field in recent years, and integrates these topics with classical results. The text also provides foundational material for the emerging field of nanotechnology. The text is built around a self-contained core geared toward undergraduate students who have had one year of calculus-based physics. Additional "Track-2" sections contain more advanced material for senior physics majors and graduate students.

## Book Information

Hardcover: 600 pages

Publisher: W. H. Freeman; 1st edition (July 18, 2003)

Language: English

ISBN-10: 0716743728

ISBN-13: 978-0716743729

Product Dimensions: 7.6 x 1.5 x 9 inches

Shipping Weight: 2.6 pounds

Average Customer Review: 4.6 out of 5 stars [See all reviews](#) (18 customer reviews)

Best Sellers Rank: #574,761 in Books (See Top 100 in Books) #95 in [Books > Science & Math > Biological Sciences > Biophysics](#) #387 in [Books > Science & Math > Biological Sciences > Biology > Molecular Biology](#) #1573 in [Books > Textbooks > Science & Mathematics > Physics](#)

## Customer Reviews

I used Nelson's Biological Physics textbook for a graduate level reading course in physics, and found it excellent for my needs. I haven't taken a biology course since high school, and although I have researched biological systems for some time, I have had a very fuzzy view of biological physics until recently. I was skeptical of a book that claims it is appropriate for students from second year undergraduate through graduate studies, but by using the Track 2 option, and following up some of the cited papers and suggested readings I found it to be quite suitable. Also, the text was well written, and easy to follow - which is ideal for independent study. Nelson's Biological Physics starts humbly, with a brief introduction of energy, and the size range inherent to biological systems. Using statistical and thermal physics principles, Nelson builds upon simple ideas to end the text with elegant descriptions of complex biological entities like molecular motors and ion channels. Under

other circumstances such topics would frighten even the bravest physics student who has had no initiation to the biological realm of study! With little to no biology background myself, I was apprehensive about a course on biological physics, but found that Nelson usually described relevant systems and experimental methods in sufficient detail and from a perspective that appealed to me. If a topic were not described in great detail, the text generally cited additional resources - especially for more challenging topics. The "Your turn" exercises scattered throughout the text alternated between being helpful and annoying. While useful for engaging the reader, they sometimes provide roadblocks to chapter sections and homework problems when particularly tricky.

[Download to continue reading...](#)

Biological Physics: Energy, Information, Life  
Reiki: The Healing Energy of Reiki - Beginner's Guide  
for Reiki Energy and Spiritual Healing: Reiki: Easy and Simple Energy Healing Techniques Using  
the ... Energy Healing for Beginners Book 1)  
The Solid State: An Introduction to the Physics of  
Crystals for Students of Physics, Materials Science, and Engineering (Oxford Physics Series)  
Noise  
Theory and Application to Physics: From Fluctuations to Information (Advanced Texts in Physics)  
Information and the Internal Structure of the Universe: An Exploration into Information Physics  
Metal  
Ions in Biological Systems: Volume 29: Biological Properties of Metal Alkyl Derivatives  
Photonics of  
Biopolymers (Biological and Medical Physics, Biomedical Engineering)  
Laser-Tissue Interactions:  
Fundamentals and Applications (Biological and Medical Physics, Biomedical Engineering)  
Laser  
Technology in Biomimetics: Basics and Applications (Biological and Medical Physics, Biomedical  
Engineering)  
Entropy, Information, and Evolution: New Perspective on Physical and Biological  
Evolution (Bradford Books)  
Bulletproof Diet Cookbook For Beginners: Quick and Easy Recipes and  
Smoothies to Lose Fat and Increase Energy (Lose Up To A Pound A Day, Reclaim Energy and  
Focus, End Food Cravings)  
Solar Electric Power Generation - Photovoltaic Energy Systems:  
Modeling of Optical and Thermal Performance, Electrical Yield, Energy Balance, Effect on  
Reduction of Greenhouse Gas Emissions  
Solar Power: Proven Lessons How to Build Your Own  
Affordable Solar Power System: (Energy Independence, Lower Bills & Off Grid Living) (Self  
Reliance, Solar Energy)  
The Renewable Energy Handbook: The Updated Comprehensive Guide to  
Renewable Energy and Independent Living  
Energy Myths and Realities: Bringing Science to the  
Energy Policy Debate  
Introduction to Renewable Energy (Energy and the Environment)  
Solar  
Power: How to Save A LOT of Money the Easy Way (Solar Power, Save Money, Solar Energy,  
Solar, Sustainable Energy, Sustainable Homes, Sustainability)  
Wind Energy Essentials for the  
Homeowner: Common Questions About Wind Energy for the Home  
Wind Power Guide - how to use  
wind energy to generate power (OneToRemember Energy Guides Book 1)  
Super Power Breathing:

For Super Energy, High Health & Longevity (Bragg Super Power Breathing for Super Energy)

[Dmca](#)