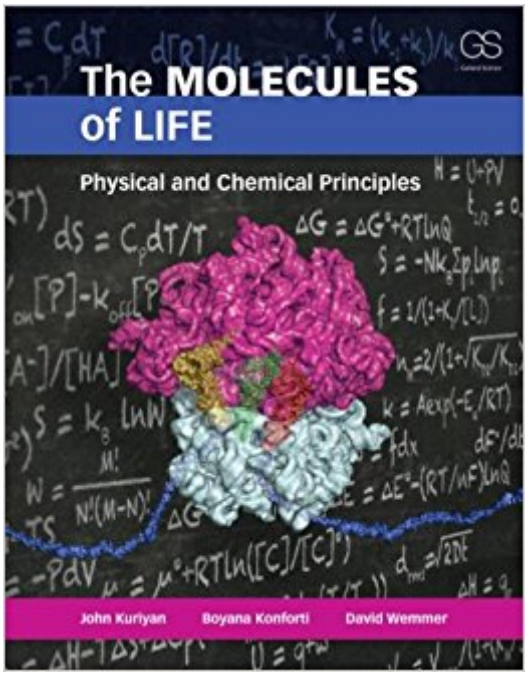
Ebook Directory
the best source of ebook

The book was found

The Molecules Of Life: Physical And Chemical Principles



PDF
Adobe
DOWNLOAD EBOOK

Synopsis

The field of biochemistry is entering an exciting era in which genomic information is being integrated into molecular-level descriptions of the physical processes that make life possible. The Molecules of Life is a new textbook that provides an integrated physical and biochemical foundation for undergraduate students majoring in biology or health sciences. This new generation of molecular biologists and biochemists will harness the tools and insights of physics and chemistry to exploit the emergence of genomics and systems-level information in biology, and will shape the future of medicine. The book integrates fundamental concepts in thermodynamics and kinetics with an introduction to biological mechanism at the level of molecular structure. The central theme is that the ways in which proteins, DNA, and RNA work together in a cell are connected intimately to the structures of these biological macromolecules. The structures, in turn, depend on interactions between the atoms in these molecules, and on the interplay between energy and entropy, which results in the remarkable ability of biological systems to self-assemble and control their own replication. The Molecules of Life deepens our understanding of how life functions by illuminating the physical principles underpinning many complex biological phenomena, including how nerves transmit signals, the actions of chaperones in protein folding, and how polymerases and ribosomes achieve high fidelity.

Book Information

Paperback: 1008 pages

Publisher: Garland Science; 1 edition (July 31, 2012)

Language: English

ISBN-10: 0815341881

ISBN-13: 978-0815341888

Product Dimensions: 1.2 x 8.2 x 10.8 inches

Shipping Weight: 4.3 pounds (View shipping rates and policies)

Average Customer Review: 4.1 out of 5 stars 14 customer reviews

Best Sellers Rank: #20,674 in Books (See Top 100 in Books) #21 inÃ Â Books > Medical Books > Basic Sciences > Cell Biology #41 inÃ Â Books > Engineering & Transportation > Engineering > Bioengineering > Biochemistry #139 inÃ Â Books > Science & Math > Chemistry > General & Reference

Customer Reviews

"This is an excellent book that does exactly what it says on the front cover. The book is indeed

written in what is now the standard format of a student textbook: very clear presentation with good graphics; special points highlighted in shaded boxes; with problems and suggestions for further reading at the end of each chapter."- British Society for Cell Biology Newsletter, January 2013 Ã Â "With its quantitative approach and step-by-step derivations of key equations, this book prepares students in biology and health sciences well for the increasingly quantitative approaches in biology....this is an excellent learning resource for anyone interested in the mechanism and function of biomolecules. The particular strengths of the book are the authorsÃ¢â ¬â„¢ clear and didactic writing style, the excellent figures, and the connection of biophysical principles to current research questions....Kuriyan et al.Ã¢â ¬â„¢s comprehensive undergraduate textbook addresses the future quantitative and physics requirements for students to go on to careers in health care or biomedical researchÃ¢â ¬Â¦" - Quarterly Review of Biology, August 2013 "This detailed paperback, written for undergraduates, starts with straightforward explanations that may also appeal to enthusiastic pre-university students. Biologists in other disciplines will also welcome the information on chemical structure and the molecular mechanisms in biology....It certainly provides a fine reference book for those trying to keep up with the vast amount of new information becoming available in this important area of biological science. I strongly recommend it." - The Biologist, April/May 2013 "The Molecules of Life is an excellent introductory text from Garland Science with an emphasis on the physical and mathematical principles underpinning structure and function of biological macromolecules...This textbook fills a conspicuous void in university-level biology curricula....As would be expected from the eminent crystallographer John Kuriyan, the book is eloquently written and progresses in a clear and logical fashion." -Crystallography Reviews, August 2014 "The text is eloquently written and scattered with high-resolution images and easily interpreted figures and diagrams....The Molecules of Life is ideal for beginning undergraduate or graduate students with a background in biochemistry, physics, and differential equations who wish to begin understanding the physical basis of life....For instructors and professors looking to prepare their students to ask important questions in the quantitative world that awaits the future of biomedical research, The Molecules of Life: Physical and Chemical Properties is an excellent selection." Ã¢â ¬â œYale Journal of Biology and Medicine, March 2015 Ã Â

John Kuriyan is Professor of Molecular and Cell Biology and of Chemistry at the University of California, Berkeley. He began his career at Rockefeller University, New York and has been an Investigator of the Howard Hughes Medical Institute since 1990. His laboratory uses x-ray crystallography to determine the three-dimensional structures of proteins involved in signaling and

replication, as well as biochemical, biophysical, and computational analyses to elucidate mechanisms. Kuriyan was elected to the US National Academy of Sciences in 2001. Boyana Konforti is the launch Editor of Cell Reports, an open-access journal focused on short papers in biology. Konforti earned her PhD at Stanford University in the Biochemistry Department with Ronald W. Davis studying the mechanism of DNA recombination. Her postdoctoral studies at Rockefeller University with Magda Konarska and Columbia University with Anna Pyle were on the mechanisms of RNA splicing. Konforti has been a professional editor for over 13 years; most recently she was Chief Editor of Nature Structural & Molecular Biology. David Wemmer is Professor of Chemistry at the University of California, Berkeley and has served as Vice Chair, Assistant Dean, and Executive Associate Dean since joining the faculty in 1985. His research in structural biology uses magnetic resonance methods to investigate the structure of proteins and DNA toward a better understanding of how these molecules function. Systems studied include DNA-ligand complexes, covalent DNA adducts, protein-DNA complexes, and diverse proteins involved in cellular regulatory processes. Wemmer is a Fellow of the AAAS and a member of Phi Kappa Phi and Sigma Xi.

This book is well-written and well-organized with plenty of helpful examples, graphs and figures. It’s a little equation-heavy, yet it still manages to keep the reader’s focus on point.

This is an excellent book. Includes quantitative problems and explanations, but the approach is highly conceptual. Writing is clear and easy to read, at least, for a science text. I dropped the class because my schedule was too full, but am keeping the book as a resource.

This is a great textbook. Perfect for teaching biochemistry, introductory biophysics.

good price, good condition, fast delivery ! I am satisfied.

Good book for biochemestry.

Nice textbook.

Well written text with quality diagrams.For those renting the e-book, be aware that even though the rental page states this can be read on the Kindle for PC, that is not accurate. At the time of this writing, this is available only on iPad, regardless of website claims.

Really like this book!

Download to continue reading...

The Molecules of Life: Physical and Chemical Principles Atoms, Molecules and Optical Physics 2: Molecules and Photons - Spectroscopy and Collisions (Graduate Texts in Physics) Molecules of Murder: Criminal Molecules and Classic Cases Basic Principles and Calculations in Chemical Engineering (8th Edition) (Prentice Hall International Series in the Physical and Chemical Engineering Sciences) Fundamental Concepts and Computations in Chemical Engineering (Prentice Hall International Series in the Physical and Chemical Engineering Sciences) Analysis, Synthesis and Design of Chemical Processes (4th Edition) (Prentice Hall International Series in the Physical and Chemical Engineering Sciences) Fundamentals of Chemical Engineering Thermodynamics (Prentice Hall International Series in the Physical and Chemical Engineering Sciences) Elements of Chemical Reaction Engineering (5th Edition) (Prentice Hall International Series in the Physical and Chemical Engineering Sciences) Essentials of Chemical Reaction Engineering (Prentice Hall International Series in Physical and Chemical Engineering) Chemical Process Safety: Fundamentals with Applications (3rd Edition) (Prentice Hall International Series in the Physical and Chemical Engineering Sciences) The Nature of the Chemical Bond and the Structure of Molecules and Crystals: An Introduction to Modern Structural Chemistry Dynamics of Molecules and Chemical Reactions Electron Transfer: From Isolated Molecules to Biomolecules, Part 2 (Advances in Chemical Physics) Chemical Physics of Free Molecules Nmr of Paramagnetic Molecules in Biological Systems (Physical Bioinorganic Chemistry Series) Muscles and Molecules: Uncovering the Principles of Biological Motion Healing Severe Chemical and EMF Sensitivity: Our Breakthrough Cure for Multiple Chemical Sensitivities (MCS) and Electro-hypersensitivity (EHS) Solvent Effects and Chemical Reactivity (Understanding Chemical Reactivity) Chemical Reactions and Chemical Reactors Chemical Oscillations and Instabilities: Non-linear Chemical Kinetics (International Series of Monographs on Chemistry)

Contact Us

DMCA

Privacy

FAQ & Help