



Physical Chemistry for the Biological Sciences

By Hammes, Gordon G.

Wiley-Interscience, 2007. Book Condition: New. Brand New, Unread Copy in Perfect Condition. A+ Customer Service! Summary: PREFACE.THERMODYNAMICS.1. Heat, Work, and Energy.1.1 Introduction.1.2 Temperature.1.3 Heat.1.4 Work.1.5 Definition of Energy.1.6 Enthalpy.1.7 Standard States.1.8 Calorimetry.1.9 Reaction Enthalpies.1.10 Temperature Dependence of the Reaction Enthalpy.References.Problems.2. Entropy and Free Energy.2.1 Introduction.2.2 Statement of the Second Law.2.3 Calculation of the Entropy.2.4 Third Law of Thermodynamics.2.5 Molecular Interpretation of Entropy.2.6 Free Energy.2.7 Chemical Equilibria.2.8 Pressure and Temperature Dependence of the Free Energy.2.9 Phase Changes.2.10 Additions to the Free Energy.Problems.3. Applications of Thermodynamics to Biological Systems.3.1 Biochemical Reactions.3.2 Metabolic Cycles.3.3 Direct Synthesis of ATP.3.4 Establishment of Membrane Ion Gradients by Chemical Reactions.3.5 Protein Structure.3.6 Protein Folding.3.7 Nucleic Acid Structures.3.8 DNA Melting.3.9 RNA.References.Problems.CHEMICAL KINETICS.4. Principles of Chemical Kinetics.4.1 Introduction.4.2 Reaction Rates.4.3 Determination of Rate Laws.4.4 Radioactive Decay.4.5 Reaction Mechanisms.4.6 Temperature Dependence of Rate Constants.4.7 Relationship between Thermodynamics and Kinetics.4.8 Reaction Rates Near Equilibrium.References.Problems.5. Applications of Kinetics to Biological Systems.5.1 Introduction.5.2 Enzyme Catalysis: The Michaelis-Menten Mechanism.5.3 a-Chymotrypsin.5.4 Protein Tyrosine Phosphatase.5.5 Ribozymes.5.6 DNA Melting and Renaturation.References.Problems.SPECTROSCOPY.6. Fundamentals of Spectroscopy.6.1 Introduction.6.2 Quantum Mechanics.6.3 Particle in a Box.6.4 Properties of Waves.References.Problems.7. X-ray Crystallography.7.1 Introduction.7.2 Scattering of X rays by a Crystal.7.3 Structure Determination.7.4 Neutron Diffraction.7.5 Nucleic Acid Structure.7.6 Protein Structure.7.7 Enzyme Catalysis.References.Problems.8. Electronic Spectra.8.1...



READ ONLINE
[7.95 MB]

Reviews

Here is the very best book i have study until now. It is rally fascinating throgh looking at period of time. It is extremely difficult to leave it before concluding, once you begin to read the book.

-- **Dr. Blaze Runolfsson IV**

Complete guideline for pdf fanatics. I could possibly comprehended everything out of this created e pdf. You can expect to like just how the writer compose this pdf.

-- **Nya Kunde**