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Titolo	Energy Transduction in Biological Membranes [[electronic resource]] : A Textbook of Bioenergetics / / edited by William A. Cramer, David B. Knaff
Pubbl/distr/stampa	New York, NY : , : Springer New York : , : Imprint : Springer, , 1990
ISBN	1-4612-3220-1
Edizione	[1st ed. 1990.]
Descrizione fisica	1 online resource (XIV, 579 p.)
Collana	Springer Advanced Texts in Chemistry, , 0172-6323
Disciplina	571.6
Soggetti	Cell biology Physical chemistry Biochemistry Cell Biology Physical Chemistry Biochemistry, general
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"With 218 illustrations in 351 parts."
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	I Principles of Bioenergetics -- 1 Thermodynamic Background -- 2 Oxidation-Reduction; Electron and Proton Transfer -- 3 Membrane Structure and Storage of Free Energy -- II Components and Pathways for Electron Transport and H+ Translocation -- 4 Metalloproteins -- 5 The Quinone Connection -- 6 Photosynthesis: Photons to Protons -- 7 Light and Redox-Linked H+ Translocation: Pumps, Cycles, and Stoichiometry -- III Utilization of Electrochemical Ion Gradients -- 8 Transduction of Electrochemical Ion Gradients to ATP Synthesis -- 9 Active Transport -- Appendix I Answers to Problems -- Appendix II Physical, Chemical, and Biochemical Constants -- Appendix III Prediction of Protein Folding in Membranes -- References -- Glossary of Abbreviations.
Sommario/riassunto	Energy Transduction in Biological Membranes was primarily designed for graduate courses in bioenergetics. Not only does it discuss basic principles and concepts central to modern membrane biochemistry, biophysics and molecular biology, but also (1) the components and pathways for electron transport and hydrogen ion translocation, and (2)

the utilization of electrochemical ion gradients. The book is unique in presenting a comparative treatment of respiratory and photosynthetic energy transduction, and in using protein sequence data coupled with physical concepts to discuss the mechanisms of energy transducing proteins.