

Contents

Preface.....	vii
List of Contributors.....	xi
Mechanisms of Electron Transfer	
<i>R.D. Cannon.....</i>	1
Electron Transfer Effect in Chemical Compounds	
<i>B. Jeżowska-Trzebiatowska and W. Wojciechowski.....</i>	21
Light Induced Electron Transfer of Metal Complexes	
<i>A. Vogler and H. Kunkely.....</i>	31
Coordinative Aspects of Single Electron Exchange between Main Group or Transition Metal Compounds and Unsaturated Organic Substrates	
<i>W. Kaim.....</i>	45
Electron Hopping and Delocalization in Mixed-Valence Metal-Oxygen Clusters	
<i>H. So and M.T. Pope.....</i>	71
Electron Transfer in Semiconducting Colloids and Membranes, Applications in Artificial Photosynthesis	
<i>M. Grätzel.....</i>	95
Electron Transfer in Photosynthetic Reaction Centers	
<i>Ch.C. Moser, J.M. Keske, K. Warncke and P.L. Dutton.....</i>	111
Exchange Interaction in Electron Transfer Proteins and their Model Compounds	
<i>W. Haase and S. Gehring.....</i>	127
Multi-Electron Transfer Processes in Nitrogen Fixation and other Natural Systems	
<i>D.J. Lowe.....</i>	149
Electron Transfer in Anaerobic Microorganisms	
<i>A. Kröger, C. Körtner, F. Lauterbach, F. Droß, M. Bokranz, O. Klimmek, T. Kraft and M. Gutmann.....</i>	167
The Importance of Inhibitors as an Analytic Tool for the Study of the Quinol	
Oxidation Centre and the Quinol Oxidase Reaction	
<i>G. von Jagow and U. Brandt.....</i>	177
Electron and Proton Transfer through the Mitochondrial Respiratory Chain	
<i>T.A. Link.....</i>	197

Coupled Proton and Electron Transfer Pathways in the Acceptor Quinone Complex of Reaction Centers from <i>Rhodobacter Sphaeroides</i> <i>E. Takahashi, P. Maróti and C.A. Wright</i>	219
The Water Oxidizing Enzyme - An Alternative Model <i>E.K. Pistorius</i>	237
Proton Pumps, Proton Flow and Proton ATP Synthases in Photosynthesis of Green Plants <i>W. Junge, G. Althoff, P. Jahns, S. Engelbrecht, H. Lill and G. Schönknecht</i>	253
Diffusion of Proton in Microscopic Space: Effect of Geometric Constraints and Dielectric Discontinuities <i>M. Gutman, E. Shimoni and Y. Tsafadia</i>	273
Protonation of the Schiff Base Chromophore in Rhodopsins <i>C. Sandorfy</i>	287
Proton Transfer along the Hydrogen Bridge in Some Hydrogen-Bonded Molecular Complexes <i>H. Ratajczak</i>	293
Hydrogen-Bonded Systems with Large Proton Polarizability due to Collective Proton Motion as Pathways of Protons in Biological Systems <i>G. Zundel</i>	313
NMR Studies of Multiple Proton and Deuteron Transfers in Liquids, Crystals and Organic Glasses <i>H.-H. Limbach</i>	329
Proton Transfer Reactions in Solutions: A Molecular Approach <i>D. Borgis</i>	345
Recent Developments in Solitonic Model of Proton Transfer in Quasi-One-Dimensional Infinite Hydrogen-Bonded Systems <i>E. Kryachko</i>	363
Index of Contributing Authors	387
Subject Index	389