581.133 42 RAB

CONTENTS

Chapter 1PHOTOSYNTHESIS: THE POWER PLANT AND THE CHEMICAL	
FACTORY OF LIFE	1
Chapter 2 OVERALL CHEMISTRY OF PHOTOSYNTHESIS; AUTOTROPHIC AND THE	
HETEROTROPHIC WAYS OF LIFE	11
Chapter 3 OVERALL ENERGETICS OF PHOTOSYNTHESIS	22
Chapter 4 SOLAR ENERGY AND ITS UTILIZATION	34
Chapter 5 ENERGETICS OF PHOTOSYNTHESIS: A CLOSER LOOK	42
Chapter 6 TAKING PHOTOSYNTHESIS APART. I. THE LIGHT AND THE DARK STAGE	
Chapter 7 TAKING PHOTOSYNTHESIS APART. II. PHOTOCHEMICAL ACTIVITIES OF	
CHLOROPLASTS AND CHLOROPHYLL SOLUTIONS	73
Chapter 8 STRUCTURE AND COMPOSITION OF THE PHOTOSYNTHETIC APPARATUS	\$ 82
Chapter 9 THE PHOTOSYNTHETIC PIGMENTS	102
Chapter 10 ABSORPTION OF LIGHT AND FATE OF EXCITATION OENERGY IN PLANT	Г
CELLS	124
Chapter 11 ACTION SPECTRUM AND QUANTUM YIELD OF PHOTOSYNTHESIS	141
Chapter 12 ENERGY TRANSFER AND ENERGY MIGRATION IN PHOTOSYNTHESIS	152
Chapter 13 THE TWO PHOTOCHEMICAL SYSTEMS; THE RED DROP AND THE EMERSON	
EFFECT	168
Chapter 14 DIFFERENCE SPECTROSCOPY: THE ROLE OF THE CYTOCHROMES, P700	
PLASTOQUINONE AND PLASTOCYANIN	183
Chapter 15 FLUORESCENCE AND THE TWO PIGMENT SYSTEMS	196
Chapter 16 SEPARATION OF THE TWO PIGMENT SYSTEMS	216
Chapter 18 PHOTOPHOSPHORYLATION	241
Chapter 19 SUMMARY AND OUTLOOK	250
Bibliography	257
Index	263