

Preface

In the preface to Volume I of *Theoretical and Experimental Biophysics* I suggested that the term Biophysics, as applied to this series, will be interpreted in a broad sense, that is "the study or description of biological phenomena in terms of the contributing physical events." The articles included in this volume, I believe, illustrate such an approach.

"Biological Membranes" by Edward Korn is, for the space utilized, a remarkably comprehensive outline of the current state of knowledge of the topic from both the theoretical and experimental viewpoint. George Czerlinski's review discusses the theory and application of chemical relaxation (chemical kinetics following a fast or stepwise perturbation of conditions). This detailed description is by one of the pioneers in the field. The article by Peter Mitchell on chemosmotic coupling presents an original and intriguing approach toward a unified description of (bio)-chemical reactions in terms of the stoichiometric relationships, the energy transductions, and the movement of the reactants. Dr. Andrew Bajer has given a review of the significant technical and practical considerations in time-lapse microphotography, a field of increasing importance in quantitative studies of intracellular and cellular movement and growth kinetics. A discussion of the structure and arrangement of the nucleic acids in viruses, as presently understood, is given in the article by Heather Mayor; such descriptions are obviously necessary before a real understanding of the replicative or genetic processes of viruses can be achieved.

The reader who harbors either the motivation or qualification to find interest in all the contributions of this series is probably a rare duck. It is, however, the intent of the publisher and editor to select contributions such that each volume should contain at least one or two articles of interest to the randomly selected (enlightened?) biological scientist. There certainly is no dearth of topics to choose from. When the publisher first asked for suggestions I found it difficult to terminate a list of dozens that immediately came to mind; such is the price for participation in an evolving field such as biophysics.