Methods in Enzymology

Volume 295

Energetics of Biological Macromolecules Part B

EDITED BY

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This volume honors Kensal E. van Holde for his important and creative contributions to the understanding of macromolecular assemblies in biology. His research has played important and germinal roles in the development and use of sedimentation methods[1,2] for characterizing the structures and interactions of multisubunit respiratory complexes, including hemocyanins,[3] and of nucleosomal core particles (nucleosomes).[4,5] As a professor at the University of Illinois and at Oregon State University, and as Director of the renowned Woods Hole Marine Biology Laboratory Physiology Course, he has led many young scientists as well as more senior colleagues through the important, but often uncertain, interface that connects biology with physical chemistry. During five decades his numerous research papers and widely read books[6–8] have informed and stimulated the thinking of a broad community of students, postdoctoral fellows, and advanced researchers throughout the world.

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Preface

It has been three years since "Energetics of Biological Macromolecules," *Methods in Enzymology,* Volume 259 was published. During this time the demand for modern thermodynamic techniques and conceptualizations has continued to grow in parallel with ongoing discoveries and syntheses (e.g., by recombinant methods) of previously unknown biological macromolecules and the increased efforts to understand their biological significance at new levels of structural and energetic detail. These trends, and the strongly favorable response to the earlier volume, have motivated a second ensemble of biothermodynamic articles. We trust that this volume will also be especially useful to researchers and students whose goal is to connect the functional energetics of macromolecular structures with their biological functions.

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