

Table of Contents

CONTRIBUTORS TO VOLUME 259.		xi
PREFACE.		xv
VOLUMES IN SERIES		xvii
1. Pathway of Allosteric Control as Revealed by Intermediate States of Hemoglobin	JO M. HOLT AND GARY K. ACKERS	1
2. Probes of Energy Transduction in Enzyme Catalysis	YINGWEN HUANG AND D. W. BOLEN	19
3. Macromolecules and Water: Probing with Osmotic Stress	V. ADRIAN PARSEGHIAN, R. PETER RAND, AND DONALD C. RAU	43
4. Linkage of Protein Assembly to Protein-DNA Binding	ISAAC WONG AND TIMOTHY M. LOHMAN	95
5. Linkage at Steady State: Allosteric Transitions of Thrombin	ENRICO DI CERA, QUOC D. DANG, YOUHNA AYALA, AND ALESSANDRO VINDIGNI	127
6. Thermal Denaturation Methods in the Study of Protein Folding	ERNESTO FREIRE	144
7. Kinetics of Lipid Membrane Phase Transitions: A Volume Perturbation Calorimeter Study	LUBIN CHEN, RODNEY L. BILTONEN, AND MICHAEL L. JOHNSON	169
8. Tight Binding Affinities Determined from Thermodynamic Linkage to Protons by Titration Calorimetry	MICHAEL L. DOYLE, GODFREY LOUIE, PAUL DAL MONTE, AND THEODORE SOKOLOSKI	183
9. Calorimetric Methods for Interpreting Protein-Ligand Interactions	HARVEY F. FISHER AND NARINDER SINGH	194
10. Extracting Thermodynamic Data from Equilibrium Melting Curves for Oligonucleotide Order-Disorder Transitions	KENNETH J. BRESLAUER	221
11. Predicting Thermodynamic Properties of RNA	MARTIN J. SERRA AND DOUGLAS H. TURNER	242
12. Thermodynamics and Mutations in RNA-Protein Interactions	KATHLEEN B. HALL AND JAMES K. KRANZ	261

13. Melting Studies of RNA Unfolding and RNA–Ligand Interactions	DAVID E. DRAPER AND THOMAS C. GLUICK	281
14. Structural-Perturbation Approaches to Thermodynamics of Site-Specific Protein–DNA Interactions	LINDA JEN-JACOBSON	305
15. Thermodynamic Parameters from Hydrogen Exchange Measurements	YAWEN BAI, JOAN J. ENGLANDER, LELAND MAYNE, JOHN S. MILNE, AND S. WALTER ENGLANDER	344
16. Application of Pressure to Biochemical Equilibria: The Other Thermodynamic Variable	CATHERINE A. ROYER	357
17. Molecular Volume	LORRAINE M. RELICK AND WAYNE J. BECKTEL	377
18. Hydrostatic and Osmotic Pressure as Tools to Study Macromolecular Recognition	CLIFFORD R. ROBINSON AND STEPHEN G. SLIGAR	395
19. Sedimentation Equilibrium as Thermodynamic Tool	THOMAS M. LAUE	427
20. Footprint Phenotypes: Structural Models of DNA-Binding Proteins from Chemical Modification Analysis of DNA	JIE YANG AND JANNETTE CAREY	452
21. Low-Temperature Electrophoresis Methods	MICHELE PERRELLA AND ILYA DENISOV	468
22. Use of Multiple Spectroscopic Methods to Monitor Equilibrium Unfolding of Proteins	MAURICE R. EFTINK	487
23. Probing Structural and Physical Basis of Protein Energetics Linked to Protons and Salt	BERTRAND GARCÍA-MORENO	E. 512
24. Evaluating Contribution of Hydrogen Bonding and Hydrophobic Bonding to Protein Folding	C. N. PACE	538
25. Analyzing Solvent Reorganization and Hydrophobicity	B. LEE	555
26. Simple Force Field for Study of Peptide and Protein Conformational Properties	TREVOR P. CREAMER AND GEORGE D. ROSE	576
27. Probes for Analysis of Stability of Different Variants of Aspartate Aminotransferase	MARINO MARTINEZ-CARRION, ANTONIO ARTIGUES, ALAN BEREZOV, MARIA L. BIANCONI, ALEJANDRO M. REYES, AND ANA IRIARTE	590
28. Thermodynamic Approaches to Understanding Aspartate Transcarbamylase	NORMA M. ALLEWELL AND VINCE J. LICATA	608

29. On the Interpretation of Data from Isothermal Processes	RUFUS LUMRY	628
AUTHOR INDEX		721
SUBJECT INDEX		745