

Contents

List of Contributors, ix

- 1 Fundamentals of Nucleic Acids, 3**
Eric C. Long
- 2 The Chemical Synthesis of DNA/RNA, 36**
Serge L. Beaucage and Marvin H. Caruthers
- 3 Enzymatic Methods for the Preparation and Manipulation of Nucleic Acids, 75**
Mark Van Cleve
- 4 Structure of DNA and RNA, 105**
M. Sriram and Andrew H.-J. Wang
- 5 Chemical Mapping of Nucleic Acid Conformation, 144**
Thomas D. Tullius
- 6 Introduction to ^1H NMR Spectroscopy of DNA, 163**
Kenneth J. Addess and Juli Feigon
- 7 The Formation of Alternative Structures in DNA, 186**
David M. J. Lilley
- 8 Reporter Groups for the Analysis of Nucleic Acid Structure, 216**
Maryanne J. O'Donnell and Larry W. McLaughlin
- 9 Nucleic Acid Binding and Catalysis by Metal Ions, 244**
Sergei A. Kazakov
- 10 Small Molecule–DNA Interaction, 288**
John A. Mountzouris and Laurence H. Hurley
- 11 The Chemistry of Protein–DNA Interactions, 324**
Christopher J. Larson and Gregory L. Verdine
- 12 Antisense/Antigene Oligonucleotides, 347**
Paul S. Miller

- 13 Catalytic RNA, 375
Francis J. Schmidt
- 14 The Polymerase Chain Reaction and In Vitro Random Selection, 408
Reuel B. Van Atta and Sam J. Rose
- References, 437
- Index, 495