

Contents

Preface	v
Contributors	ix
CH. 1. Introduction <i>Mark R. Sanderson</i>	1
CH. 2. Overexpression, Isolation, and Crystallization of Proteins <i>Jane V. Skelly and C. Bernadette Madden</i>	23
CH. 3. Preliminary Characterization of Crystals <i>Sherin S. Abdel-Meguid, David Jeruzalmi, and Mark R. Sanderson</i>	55
CH. 4. Modern Methods for Rapid X-Ray Diffraction Data Collection from Crystals of Macromolecules <i>Elsbeth F. Garman</i>	87
CH. 5. Use of Multiple-Wavelength Anomalous Diffraction Measurements in <i>Ab Initio</i> Phase Determination for Macromolecular Structures <i>H. M. Krishna Murthy</i>	127
CH. 6. Structure Determination Using Isomorphous Replacement <i>Sherin S. Abdel-Meguid</i>	153
CH. 7. Molecular Replacement Using Known Structural Data <i>Ian J. Tickle and Huub P. C. Driessen</i>	173
CH. 8. Density Modification in X-Ray Crystallography <i>Alberto D. Podjarny, Bernard Rees, and Alexandre G. Urzhumtsev</i>	205
CH. 9. Refinement of Protein and Nucleic Acid Structures <i>Eric Westhof and Philippe Dumas</i>	227
CH. 10. Recent Developments for Crystallographic Refinement of Macromolecules <i>Axel T. Brünger</i>	245
CH. 11. The Crystallization and Structure Analysis of Oligonucleotide Sequences <i>Stephen Neidle</i>	267

CH. 12. Crystallography in the Study of Protein–DNA Interactions <i>David G. Brown and Paul S. Freemont</i>	293
CH. 13. Virus Crystallography <i>Elizabeth Fry, Derek Logan, and David Stuart</i>	319
CH. 14. Crystallization and Structure Analysis of Membrane Proteins <i>Richard Newman</i>	365
Index	389