

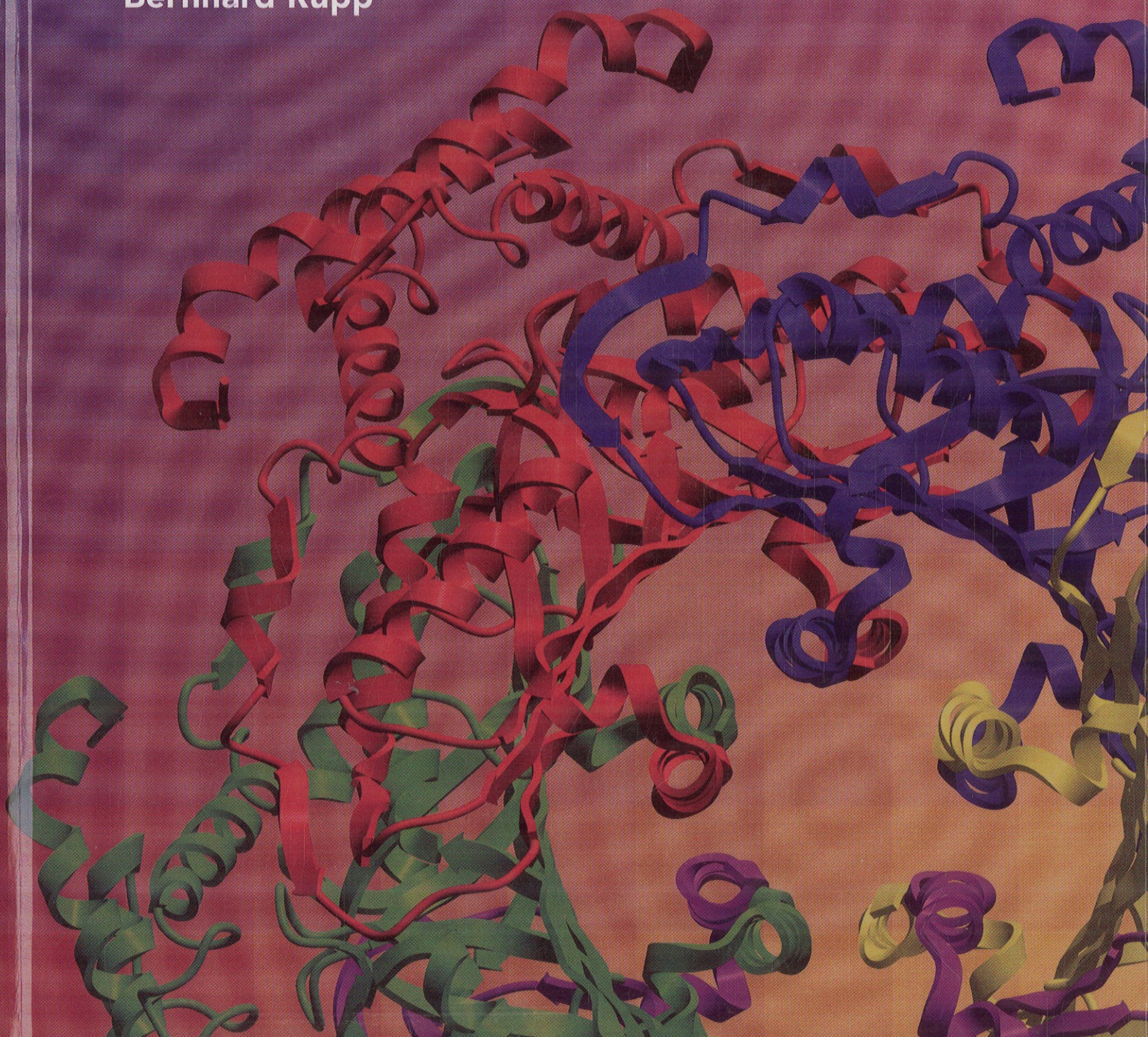


Garland Science

BIOMOLECULAR CRYSTALLOGRAPHY

Principles, Practice, and Application to Structural Biology

Bernhard Rupp



Contents

Part I	From Sequence to Crystals	
1	Introduction: Preparing for your study	1
2	Protein structure	23
3	Protein crystallization	77
4	Proteins for crystallography	141
Part II	Fundamentals of Protein Crystallography	
5	Crystal geometry	197
6	Diffraction basics	247
7	Statistics and probability in crystallography	313
Part III	From Crystal to Data	
8	Instrumentation and data collection	371
Part IV	Determining Your Structure	
9	Reconstruction of electron density and the phase problem	439
10	Experimental phasing	473
11	Non-crystallographic symmetry and molecular replacement	547
12	Model building and refinement	607
Part V	Making Sense of Your Structure	
13	Structure validation, analysis, and presentation	693
	Appendix	737
	Table of Notation	755
	Glossary	758
	Index	795