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Nota di contenuto	1 Crystallizing a Protein -- 2 X-ray Sources and Detectors -- 3 Crystals -- 4 The Theory of X-ray Diffraction by a Crystal -- 5 Average Reflection Intensity and Distribution of Structure Factor Data -- 6 Special Forms of the Structure Factor -- 7 The Solution of the Phase Problem by the Isomorphous Replacement Method -- 8 Phase Improvement -- 9 Anomalous Scattering in the Determination of the Protein Phase Angles and the Absolute Configuration -- 10 Molecular Replacement -- 11 Direct Methods -- 12 Laue Diffraction -- 13 Refinement of the Model Structure -- 14 The Combination of Phase Information -- 15 Checking for Gross Errors and Estimating the Accuracy of the Structural Model -- Appendix 1 A Compilation of Equations for Calculating Electron Density Maps -- Appendix 2 A Compilation of Reliability Indices -- Appendix 3 The Variation in the Intensity of X-ray Radiation -- References.
Sommario/riassunto	New textbooks at all levels of chemistry appear with great regularity. Some fields such as basic biochemistry, organic reaction mechanisms, and chemical thermodynamics are well represented by many excellent

texts, and new or revised editions are published sufficiently often to keep up with progress in research. However, some areas of chemistry, especially many of those taught at the graduate level, suffer from a real lack of up- to-date textbooks. The most serious needs occur in fields that are rapidly changing. Textbooks in these subjects usually have to be written by scientists actually involved in the research that is advancing the field. It is not often easy to persuade such individuals to set time aside to help spread the knowledge they have accumulated. Our goal, in this series, is to pinpoint areas of chemistry where recent progress has outpaced what is covered in any available textbooks, and then seek out and persuade experts in these fields to produce relatively concise but instructive intro- ductions to their fields. These should serve the needs of one-semester or one-quarter graduate courses in chemistry and biochemistry. In some cases, the availability of texts in active research areas should help stimulate the creation of new courses. Charles R. Cantor v Preface to the Second Edition Since the publication of the previous edition in 1994, X-ray crystallography of proteins has advanced by improvements in existing techniques and by addition of new techniques.