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Titolo	Structure Determination by X-ray Crystallography : Analysis by X-rays and Neutrons / / by Mark Ladd, Rex Palmer
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Descrizione fisica	1 online resource (784 p.)
Disciplina	548.8
Soggetti	Chemistry, Physical and theoretical Crystallography Proteins Materials science Geophysics Physical Chemistry Crystallography and Scattering Methods Protein Structure Characterization and Evaluation of Materials Geophysics/Geodesy
Lingua di pubblicazione	Inglese
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Note generali	Includes index.
Nota di contenuto	Crystal morphology and crystal symmetry -- Lattices and space-group theory -- X-rays and X-ray diffraction -- Intensities and intensity statistics -- Examination of single crystals: Optical and X-ray diffraction practice -- Fourier series and Fourier transforms -- Fourier techniques in X-ray structure determination -- Direct methods and refinement -- Examples of crystal structure determination -- Proteins and macromolecular X-ray analysis -- Neutron diffraction from single crystals -- Powder diffraction -- Computer-aided crystallography.
Sommario/riassunto	Structure Determination by X-ray Crystallography has been received with acclaim by teachers, researchers and students of crystallography throughout the world since its first edition in 1977. The fifth edition is fully updated, and builds on past successes by presenting up-to-the-minute information on a variety of new topics. The new material

includes sections on fullerenes and icosahedral, black and white, and colour symmetry; modern methods of data collection and measurement; new treatment on bioinformatics and energy minimization; extensive revisions and updates on macromolecular crystallography to parallel advances in the field; a new chapter on neutron diffraction and neutron facilities; mathematical appendices and tailored computer programs presented as web material; many new problems with checked solutions; and numerous references and web site addresses of crystallographic importance. From the Foreword to the 5th Edition “I am privileged to write the Foreword to this fifth edition of Ladd and Palmer’s Structure Determination by X-ray Crystallography, a textbook that is now world renowned and that has helped educate two generations of crystallographers in the theory and practice of modern crystallography, myself included . . . . For the interdisciplinary students of today seeking a thorough and detailed understanding of the principles and methods of modern crystallography, Ladd and Palmer remains as essential and relevant today as when it first appeared some 35 years ago. . . . . Extending the scope of this classic text beyond the purely X-ray Crystallography of its title to include diffraction of other radiations acknowledges some of the new frontiers and ever increasing impact of crystallographic analysis in structural sciences. As has been the case for the last 35 years, Ladd and Palmer is set to educate and equip the students of today to drive and inspire the developments of tomorrow!” Dean A. A. Myles, Neutron Sciences Directorate, Oak Ridge National Laboratory From the Foreword to the 4th Edition “Now there are many books on crystallography and structure determination out there, but Ladd & Palmer is probably unique in being the most thorough treatment you are going to find. The book takes you right through from simple beginnings up to the most recent ideas in macromolecular crystallography. This Fourth Edition is a substantial and scholarly work that deserves to be on the shelves of anyone wishing to determine crystal structures. I am very pleased to have had the opportunity to recommend it to you.” A.M. Glazer, Clarendon Laboratory, Oxford.