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Nota di contenuto	1. Introduction -- 2. Theory of Inner Shell Excitation Spectra -- 3. Symmetry and Molecular Orbitals -- 4. Experimental and Calculated K-Shell Spectra of Simple Free Molecules -- 5. Principles, Techniques, and Instrumentation of NEXAFS -- 6. Spectra of Condensed, Chemisorbed, and Polymeric Molecules: An Overview -- 7. Analysis of K-Shell Excitation Spectra by Curve Fitting -- 8. ?* Resonance Position and Bond Length -- 9. The Angular Dependence of Resonance Intensities -- 10. Selected Applications of NEXAFS -- 11. A Look into the Future -- Appendices -- A. Derivation of the EXAFS Equation -- B. Chemisorbed Molecules Studied by NEXAFS -- References.
Sommario/riassunto	This comprehensive treatment of the fundamental principles and

applications of NEXAFS spectroscopy develops all concepts from an elementary level, presenting a unified picture of the latest theoretical and experimental results. The power of this technique is demonstrated, in particular, in the application to low-Z molecules bonded to surfaces, systems of special interest in surface chemistry, where NEXAFS reveals the electronic and structural properties of the molecules. While researchers and students without extensive prior knowledge of X-ray absorption spectroscopy are catered for by the systematic presentation of the underlying concepts, pracicing spectroscopists will find here details of state-of-the-art instrumentation in analysis techniques, and results, along with tabulated information about the various molecular adsorption systems that have already been studied by NEXAFS.