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Nota di contenuto	; 1. Introduction -- ; 2. Basic physics of X-ray absorption and scattering -- ; 3. Experimental -- ; 4. Theory -- ; 5. Data analysis -- ; 6. Related techniques and conclusion -- ; App. 1. Introduction to Fourier transforms in EXAFS -- ; App. 2. Cumulants in EXAFS -- ; App. 3. Optimizing X-ray filters -- ; App. 4. Reference spectra -- ; App. 5. X-ray tables.
Sommario/riassunto	X-ray absorption fine structure spectroscopy (XAFS) is a powerful and versatile technique for studying structures of materials in chemistry, physics, biology and other fields. This textbook is a comprehensive, practical guide to carrying out and interpreting XAFS experiments. Assuming only undergraduate-level physics and mathematics, the textbook is ideally suited for graduate students in physics and

chemistry starting XAFS-based research. It contains concise executable example programs in Mathematica 7. Supplementary material available at www.cambridge.org/9780521767750 includes Mathematica code from the book, related Mathematica programs, and worked data analysis examples. The textbook addresses experiment, theory, and data analysis, but is not tied to specific data analysis programs or philosophies. This makes it accessible to a broad audience in the sciences, and a useful guide for researchers entering the subject.
