

Introduction to X-ray absorption spectroscopy

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X-ray Absorption Fine Structure (XAFS), say the fine structure of the X-ray absorption coefficient, carries original information on the local properties (structural, thermal and electronic) of materials. In this lecture, after a general introduction to the x-ray absorption process, the attention is focussed on the *extended* fine structure (EXAFS). The main approximations that lead to a relatively simple and effective interpretation of EXAFS spectra are reviewed; the peculiar effects of thermal disorder are stressed. The basic instrumentation for EXAFS measurements is described and the most important procedures of data analysis are presented.