

# Simultaneous Reconstruction and Structural Fitting of the Complex Atomic Fine Structure of Copper and Iron

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X-Ray Absorption Spectroscopy is an incredibly powerful tool for probing the atomic and molecular structures of materials. While it is both popular and versatile, conventional approaches have been limited when applied to weakly absorbing samples, such as thin films or samples of a low concentration. Phase-based measurements, which are generally orders of magnitude larger, offer significant improvements in these areas. This presentation describes a novel technique for measuring complex atomic fine structure, involving a simultaneous measurement of both absorption and phase components. Developments toward a phase analogue to X-ray Absorption Spectroscopy will also be discussed.