

Introduction to scattering with new x-ray sources

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The advent of new X-ray sources such as 3rd generation synchrotron, their upgraded offsprings, or X-ray Free Electron Lasers (XFEL), have considerably changed the way we use X-rays to study condensed matter. This talk aims at discussing pedagogically the conceptual leaps these sources have achieved, and how scattering experiments have evolved to take advantage of the coherent, temporal, or nanometric properties of modern X-ray beams.