

## Fundamental processes in the "tender" X-ray region

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We assist to the revival of the scientific interest on the processes taking place after absorption of a tender x-ray photon. This is mainly due to the recent instrumentation development allowing to follow ultrafast processes in the subfemtosecond time scale. We have developed an HAXPES spectrometer [1] and a COLDTRIMS experimental setup [2] dedicated to this purpose. I will concentrate my talk on recoil effects [3] occurring after the ejection of a fast photoelectron, on large Post Collision Interaction [4] and photoelectron recapture [5], on localization/delocalization of a deep core hole [6], on double core hole spectroscopy [7, 8] as well as on ultrafast fragmentation occurring after deep inner shell excitation [9, 10].

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