SURFACE DYNAMICS - REAL TIME OBSERVATIONS OF ELECTRONIC STRUCTURE

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With the new light sources such as the free-electron laser FLASH at DESY in Hamburg and the Linac Coherent Light Source LCLS in Stanford it is possible to extend the established X-ray spectroscopic techniques for the investigation of the static electronic structure of matter to probing the evolution of the electronic structure after controlled excitation in the time domain. The talk will try to illustrate the opportunities for the study of ultrafast dynamics at surfaces.