SFB-Kolloquium

Sprecher: **Prof. Dr. Joachim Burgdörfer**
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Thema: Attosecond physics: from atoms to condensed matter

Abstract

Recent advances in the generation of well characterized sub-femtosecond laser pulses have opened up unpredicted opportunities for the real-time observation of electronic dynamics in atoms, molecules and solids. Such attosecond chronoscopy allows a novel look at a wide range of fundamental photophysical and photochemical processes in the time domain, complementing conventional energy-domain spectroscopy. Attosecond chronoscopy poses fundamental conceptual and theoretical questions as to which novel information becomes accessible and which dynamical processes can be controlled and steered. We will illustrate its potential with a few prototypical examples ranging from the timing of the photoelectric effect and the real-time observation of a Fano resonance to ultrafast currents in dielectrics.

Gastgeber: Prof. Dr. Klaus Richter