



12th December 2019, 10:00–11:00h
CFEL – Building 99, seminar room I and II (ground floor)

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Ultrafast Diffractive Imaging of Molecular Dynamics with Electron Pulses

Many processes in nature are driven by the conversion of light into chemical and mechanical energy at the level of single molecules. After absorbing a photon, chemical bonds can be broken and new bonds made, the structure of the molecule changes, and the extra energy appears in the form of vibrations. Recent advances in ultrafast electron diffraction now allow us to observe these changes as they happen, on femtosecond timescales and with atomic spatial resolution. We will focus on a few exemplary reactions where we have imaged bond breaking, the motion of nuclear wavepackets and coherent vibrations that persist after the molecule returns to the electronic ground state.