08. November 2016 / 10:00 Uhr c.t., Raum MG 272
Campus Duisburg

Selective experiments on electronic and nuclear degrees of freedom in molecular dynamics

Prof. Dr. Markus Gühr,

Institut für Physik und Astronomie, Universität Potsdam
Campus Golm, Karl-Liebknechtstr. 24/25, 14476 Potsdam

Molecules selectively transform light energy into other forms of energy like heat, electricity, or chemical energy with high quantum efficiency. The energy conversion process is the result of a correlated motion of electrons and nuclei after photoexcitation, often under breakdown of the Born-Oppenheimer approximation.

This talk is about ultrafast experiments aimed at resolving light induced molecular dynamics separately from the perspective of electronic structure and nuclear geometry. I will show experiments that use probe pulses in the extreme ultraviolet and soft x-ray spectral domain, which are highly sensitive to electronic structure.

In addition, I will show experimental results from a gas phase ultrafast electron diffraction campaign resolving coherent vibrational wavepackets in isolated molecules with a time resolution of 200 fs and a spatial accuracy of 0.1 Angstrom.

Für diese Zeit steht eine Kinderbetreuung nach vorheriger Anmeldung zur Verfügung.

Contact: Prof. Dr. Uwe Bovensiepen, Faculty of Physics
Phone: +49 (203) 379 4566 / Mail: uwe.bovensiepen@uni-due.de