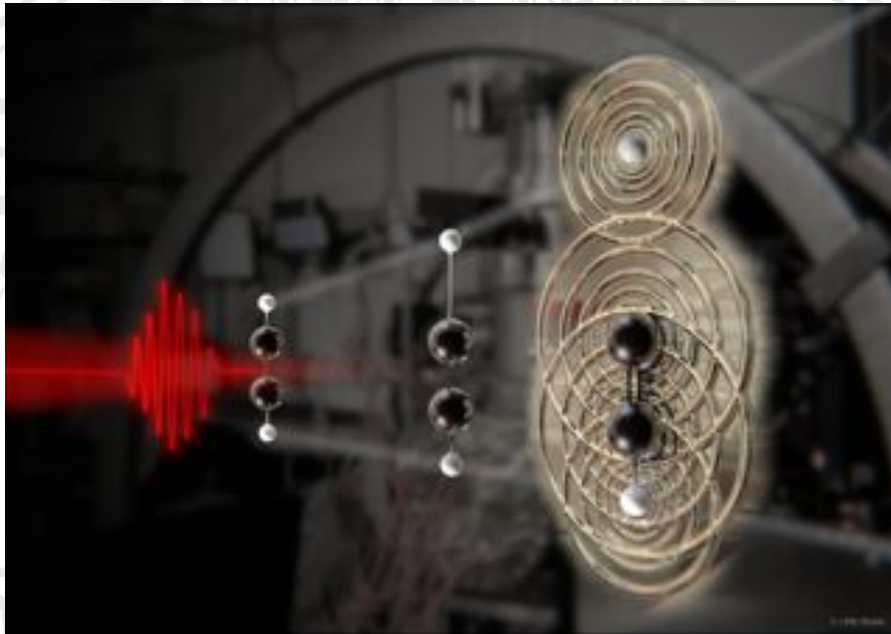


PHYSIKALISCHES KOLLOQUIUM

AM 11. DEZEMBER 2017 UM 17 UHR C.T.

IM GROßEN HÖRSAAL



MOLECULAR DIFFRACTION IMAGING AND ATTOSECOND SOFT-X-RAYS

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Electron recollision in an intense laser field is at the centre of attoscience research and gives rise to a variety of phenomena, ranging from electron diffraction to coherent soft X-ray emission. We have, over the years, developed intense sources of waveform controlled mid-IR light to exploit ponderomotive scaling, quantum diffusion and quasi-static photo emission. I will describe our recent achievements to image a molecule while one of its bonds breaks with sub-Angstrom resolution and report on the generation of isolated attosecond pulses at the carbon K-shell edge (284 eV) and application to soft X-ray absorption spectroscopy in correlated materials.