Jennifer Herek, Universität Twente, Niederlande Organisation: T. Brixner

Active and passive control strategies for spectroscopy and imaging

Abstract:

Our research exploits the phase properties of light, using advanced nonlinear spectroscopy and imaging techniques. This includes coherent control of biomolecules and nanostructures, as well as coherent anti-Stokes Raman scattering (CARS) for label-free detection and chemical sensitivity of large molecules. In this lecture I will give an overview of these approaches, highlighted by various examples. In particular, the photophysical processes that govern the efficiency of light harvesting in natural and artificial photosynthetic complexes, and visualization of the earliest stages of bone mineralization.