



PHYSIKALISCHES KOLLOQUIUM

AM 26. JUNI 2017 UM 17 UHR C.T.

IM HÖRSAAL I, PHYSIKHOCHHAUS



WHAT VIBRATIONS TELL US ABOUT (BIO-)MOLECULAR DYNAMICS

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Vibrations are sensitive probes of molecular structure and dynamics. Interrogated by ultrafast and multidimensional infrared spectroscopy techniques, vibrations reveal information on molecules from a few atoms to protein complexes. In my talk I will discuss various examples, including the investigation of equilibrium dynamics in liquids by two-dimensional infrared spectroscopy, the structure of short lived catalytically active species for enantioselective synthesis and the potential relation between vibrational energy transfer and information transfer in proteins.

Mixed infrared/visible laser pulse sequences can address the interaction between vibrational and electronic degrees of freedom. In my talk will discuss new possibilities opened up by mixed IR/VIS multidimensional spectroscopies, such as the control of photochemistry by vibrational excitation.