



PHYSIKALISCHES KOLLOQUIUM

Mittwoch, 05.11.2014, um **16.00 Uhr**

Ort: Reichenhainer Str. 90; Neues Hörsaalgebäude, Raum: 2/N013



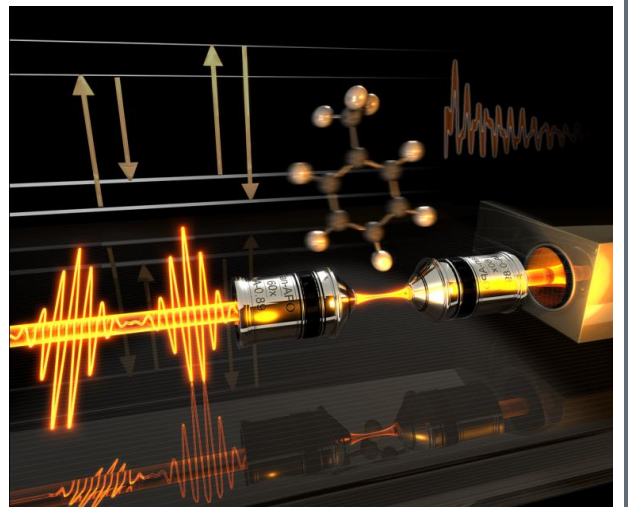
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Nonlinear spectroscopy using tailor-made femtosecond laser pulses

Nonlinear spectroscopic methods have seen a tremendous development over the recent years resulting in many different applications in physics, chemistry, and the life sciences. One main reason is the availability of powerful ultrashort laser pulses which easily produce all kinds of nonlinear light-matter interactions. If such ultrashort and spectrally broad laser pulses are combined with a pulse shaper, which allows the generation of specifically tailored excitation fields over a broad spectral range, the different nonlinear responses can be even coherently controlled, resulting for example in selectively excited vibrational quantum states or the manipulation of the motion of molecules.

In this talk I will present the experimental realization of such single-beam approach combined with pulse shaping and show in detail the successful implementation of different Raman schemes and other nonlinear modalities for spectroscopy which finally offers a simple route for multimodal microscopy.



Alle Zuhörer sind ab 15:45 Uhr zum Kaffee vor dem Hörsaal eingeladen.