Westfälische Wilhelms-Universität Münster

Fachbereich Physik

› Allgemeines Physikalisches Kolloquium

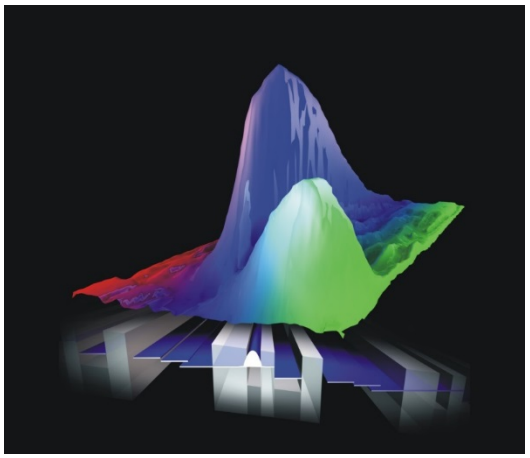
› Donnerstag, 06.07.2017 um 16 Uhr c.t.

Prof. Dr. Karl Unterrainer

Technische Universität Wien

Generating and shaping light in the THz frequency range

With the tremendous development of ultrafast lasers we are provided with a tool for efficient wavelength conversion. Down conversion allows generation of mid-infrared and THz light and provides in addition also the ability to control the phase. This additional control knob is a new feature for optical experiments which we are just beginning to use. I will show a few experiments with semiconductor nanostructures and quantum cascade lasers where the phase information allows observing physical processes directly; this includes population transfer, amplification, and short pulse formation. In addition to the phase information, down conversion and quantum cascade lasers provide us with very large bandwidth- spanning more than one octave. Handling these bandwidths is an interesting challenge and also extremely attractive for new optical methods like frequency comb sensing.



Kolloquiums-Kaffee
ab 16 Uhr vor dem Hörsaal

Wilhelm-Klemm-Straße 10
Institutsgruppe 1 Hörsaal HS 2