



WESTFÄLISCHE  
WILHELMS-UNIVERSITÄT  
MÜNSTER



FACHBEREICH  
PHYSIK

# › Allgemeines Physikalisches Kolloquium

› Donnerstag, 14.06.2018 um 16 Uhr c.t.

*Prof. Dr. Ulrich Höfer*

Philipps Universität Marburg



## “Ultrafast Electron Dynamics at Surfaces and Internal Interfaces”

Electron transfer processes at surfaces and interfaces play a crucial role in diverse fields of materials sciences. Time-resolved two-photon photoemission (2PPE), a method that combines femtosecond pump-probe techniques with photoelectron spectroscopy, can provide detailed information about the ultrafast dynamics of these processes.

In a first example, I will discuss results obtained for well-defined model systems of organic/metal contacts and demonstrate that interface-specific electronic states can efficiently mediate the electron transfer between metals and organic semiconductors. In a second example, I will discuss Dirac surface states of topological insulators and show how we optically induce electrical currents in these states and directly access the dynamics of the photocurrent in momentum space. Finally, I will outline new perspectives of time-resolved photoelectron spectroscopy resulting from the use of high laser harmonics.

Kolloquiums-Kaffee  
ab 16 Uhr vor dem Hörsaal

Wilhelm-Klemm-Straße 10  
Institutsgruppe 1 Hörsaal HS 2