

Language: English

**Date :** Jan.29(Thu), 2015, 15:00–16:00

**Location :** Cooperation Center, 5F Meeting Room, W524  
(研究交流棟5階会議室W524)

**Title :** Electronic processes in molecules driven  
by strong laser fields

**Speaker :** **Dr. Markus Kitzler**

(Photonics Institute, Vienna University of Technology)

I will review some of our recent research activities on the measurement and control of ultrafast processes in molecules with strong laser fields. Specifically I will discuss the results of several experiments by which we could demonstrate that the outcome of molecular restructuring and fragmentation processes in ionic states of polyatomic molecules can be pre-determined on sub-femtosecond time-scales. The key to these achievements is to gain control over the processes of molecular excitation and electron removal during attosecond time intervals. I will furthermore present results of experiments that employ sub-cycle electron wavepacket interferometry to trace the evolution of the phase of bound states during the removal of an electron with sub-10 attosecond resolution.