

エクストリームフォトンクスセミナー *Extreme Photonics Seminar*

No.10

Language: **English**

Date: Nov. 24th(Wed), 2010, 13:30 ~ 14:30

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

Title: The Attosecond laboratory at Imperial College,
attosecond dynamics in gases and nano-structures

Speaker: Dr. Christopher Arrell
(Imperial College London)

I will present the current work of the Attosecond Laboratory at Imperial College London. Recent work has focused on the measurement of an isolated attosecond pulse of 250as using an atomic streak camera technique. The isolated pulse was produced through carrier envelope phase stabilisation of a few cycle IR pulse.

I will also present the surface science apparatus that has also been developed to investigate the temporal dynamics of enhanced electric fields produced by resonant surface plasmons on structured nano arrays. Such structures have recently been used to produce high order harmonics from an oscillator output¹. Initial results are presented displaying localised nanoplasmonic field enhancement from Ag surfaces, and 'hot electron' dynamics of the Fermi electron population in gold.

[1] Nature **453**, 757-760 (5 June 2008)