



## SEMINAIRE ISMO

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### Reaction dynamics in the gas phase

I will report on spectroscopy and dynamics of excited states of aromatic molecules studied by ion and electron imaging techniques using laser photons.

The first part of my talk will deal with photodissociation of N-methylpyrrole. Experiments were carried out at LENS (European Laboratory for Non-linear Spectroscopy, Firenze, Italy), using Single Field ion Slice Imaging. Inspired by previous results published by other groups by photon excitation with excimer lasers @5.1 eV and @6.4 eV, we have tried to fill this energy gap in order to provide a unique theoretical framework for the photodissociation of this molecule. [1]

In the second part, I will illustrate my work at the Laboratoire Francis Perrin (CEA Saclay, France). I will discuss the photochromism of a diarylethene, presenting time resolved photoelectron spectra of this molecule, both isolated and deposited on Ar clusters. Effects on relaxation pathways due to microsolvation will also be outlined.

[1] *G. Piani*, L. Rubio Lago, M. A. Collier, Th. N. Kitsopoulos, M. Becucci, "New Insights on the photodissociation of *N*-Methylpyrrole: The Role of Stereoelectronic Effects", *J. Phys. Chem. A* 113 (2009), 14554

**Attention !  
Jour  
inhabituel**

**Jeudi 28 février 2013 à 11h**  
**Bât. 351 – Bibliothèque (2<sup>ème</sup> étage)**  
**Université Paris-Sud 91405 ORSAY Cedex**