



Instituto de Estructura de la Materia

Ciclo de Seminarios 2008-2009

Seminario del Departamento de Espectroscopía Vibracional y Procesos Multifotónicos

Dr. Luis Rubio Lago

JAE-Doc Unidad Asociada

Dep. Química Física I, Fac. de C.C. Químicas, UCM - IEM

Slice imaging of the photodissociation of three relevant molecular systems: Xe-Pyrrole, Acetaldehyde and Methyl Iodide. Clusters, Roaming and Conical Intersections

The photodissociation of three relevant molecular systems – Xe-Py cluster, acetaldehyde and methyl iodide – have been studied using a combination of the *slice imaging* technique with REMPI detection of the photoproducts. The *slice imaging* technique represents the highest development in Ion Imaging, and allows high resolution measurement of the speed and angular distributions of the photofragments produced in a photodissociation process without employing artificial inversion methods. The relevance of the Xe-Py cluster lies in the effect that clustering has on the potential surfaces of the bare pyrrole and thus, on its photostability. The photodissociation of the acetaldehyde is the second example of non-traditional transition state photodissociation dynamics ever reported, after its homologous, the formaldehyde. Finally, the photodissociation of methyl iodide is an archetype of how far we can go when high level theory can be performed to explain high level experiment studies.

Jueves, 21 de Mayo de 2009, 12:00 horas.

Sala de Conferencias. Centro de Física “Miguel A. Catalán”.

Serrano, 121. 28006 Madrid.