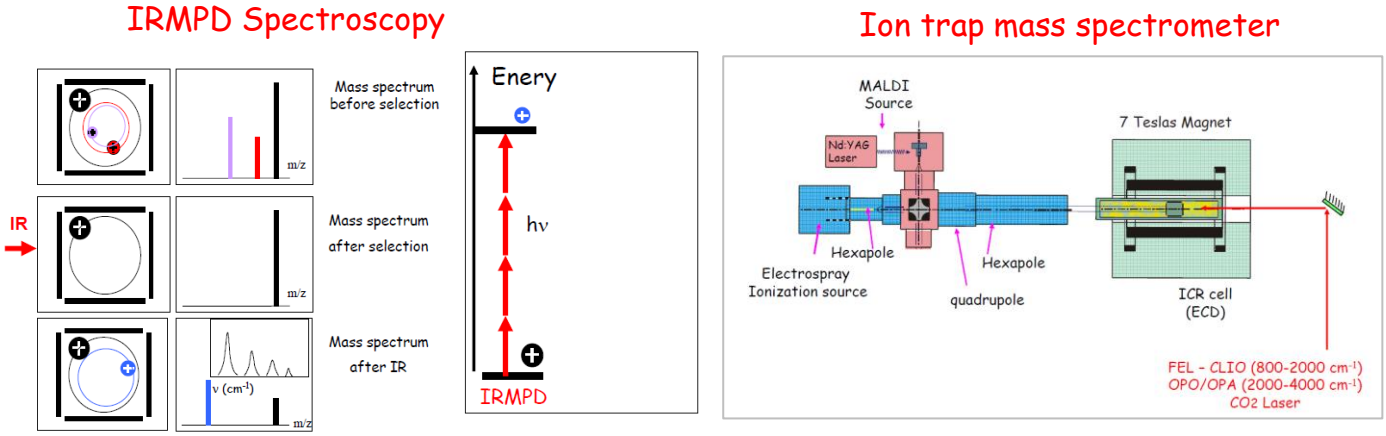
Mass-resolved IRMPD spectroscopy of gas phase ions

Location: Laboratory of Physical Chemistry, Bat. 200, UPSUD, Orsay

Researcher in charge of the Trainees: D. Scuderi, P. Maître

Maximum number of Trainees: 3

Experiment:



The CLIO I experiment is designed to elucidate the structure of gas phase mass-selected ions. A modified ion trap, equipped with an electrospray source, is coupled to the Free Electron laser CLIO (Centre Laser Infrarouge d'Orsay) or to an OPO/OPA to record, through an MS^2 experiment, the IR spectrum of the mass selected ions in the 500-3800 cm^{-1} energy range.

Schedule expected:

The Trainees will participate to the measurement of the IRMPD spectrum of a model molecule. They will proceed to the data treatment and to the interpretation of the experimental results.

References:

[1] J. M. Bakker, T. Besson, J. Lemaire, D. Scuderi and P. Maitre "Gas-Phase structure of a π -allyl-Palladium complex: Efficient infrared spectroscopy in a 7 T Fourier Transform Mass Spectrometer" *Journal of Physical Chemistry A*, **2007**, 111, 13415-13424.

[2] L. Mac Aleese, A. Simon, T. B. McMahon, J. M. Ortega, D. Scuderi, J. Lemaire and P. Maitre " Mid-IR spectroscopy of protonated leucine methyl esther performed with an FT-ICR or an Paul Type ion-trap". *International Journal of Mass Spectrometry*, **2006**, 249, 14-20.