

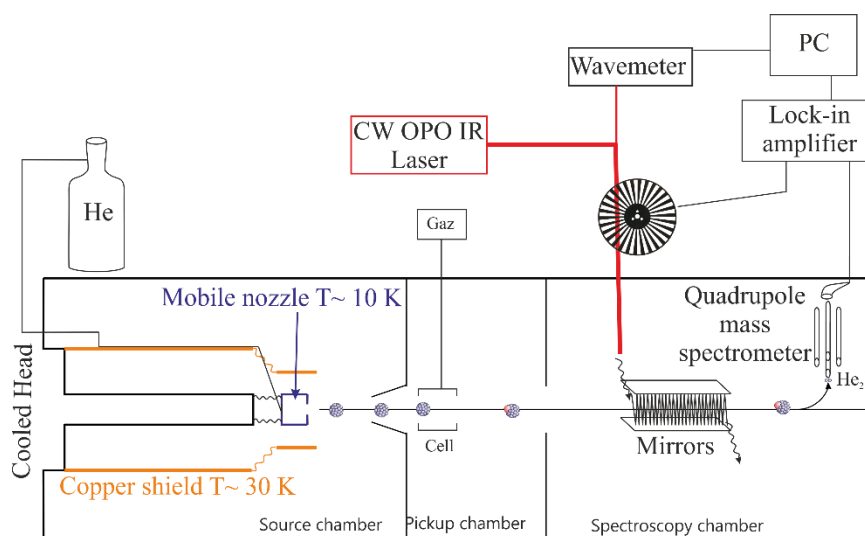
# Infrared spectroscopy at very low temperature

Location: CEA Saclay

Researcher in charge of the Trainees: Dr. Marc Briant

Maximum number of Trainees: 3

Experiment:



The “GOUTTELIUM” experiment is designed to obtain structural information of floppy complexes formed by several molecules linked by weak chemical bonds. These pieces of information are obtained by infrared spectroscopy of helium clusters doped with the molecules of interest. Helium clusters are used in this experiment in order to form the floppy complexes in a controlled way that is to say in a way where the stoichiometry can be controlled. Moreover, helium clusters are superfluid and low interactions occur with the complexes then the IR spectroscopy is almost the one of the gas phase.

Schedule expected:

The Trainees will participate to the generation of the clusters and the acquisition of an infrared spectrum of a model molecule. They will proceed to the data treatment and to the interpretation of the infrared spectrum.

References:

[1].M. Briant, E. Mengesha, P. de Pujo, M. A. Gaveau, B. Soep, J. M. Mestdagh, L. Poisson, *PCCP* **18**, 16414 (2016).