GEMaC
Groupe d'Étude
de la Matière Condensée

FOURIER TRANSFORM INFRARED SPECTROSCOPY

A Bomem DA8 interferometer is used either for transmission or emission (photoluminescence) measurements.

The spectral range in wavenumber is 25.000 – 10 cm-1, depending on the optical elements (source, beamsplitter and detector), and the resolution can reach 0.02 cm-1, in the best case.

The transmission measurements can be achieved at low temperature in the range 5 – 300 K. For infrared photoluminescence, the exciting source is a YAG: Nd laser at 1.06 µm, the measurements are carried out in a helium bath cryostat in the range 2 – 300 K. The wavelength range can spread from the visible up to 12 µm (800 cm-1). It is also possible to perform micro-PL measurements, using Cassegrain infrared mirror microscope objectives.



Bomem DA8 interferometer