

Optical Spectroscopy

About us

Optical spectroscopy of solids group in Institut Pascal, we are studying the light-matter interaction in semiconductors and materials for optics.

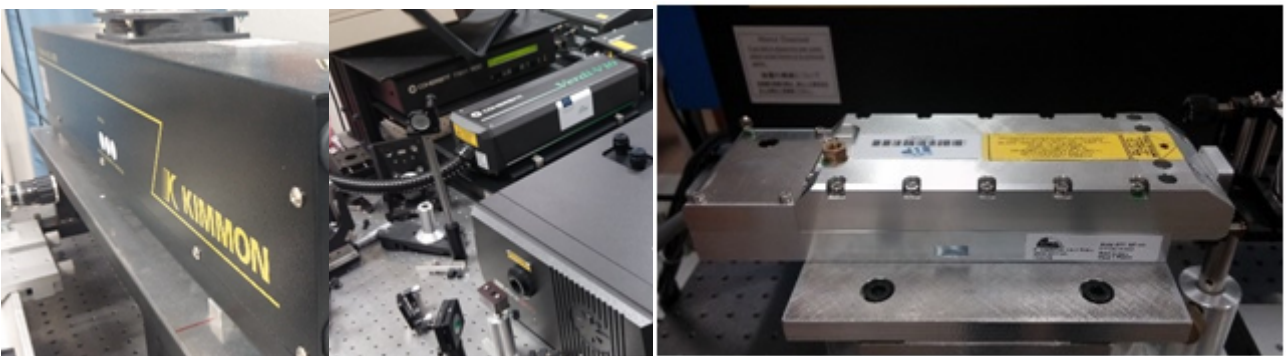
Our services

Specific studies of optical properties of solids materials.

Technologies, Equipments

Laser sources

- Femtoseconde laser with tunable wavelength [233, 333], [350, 500] et [700, 1000] nm, the pulse duration is 150 fs with a repetition rate of 76 MHz.
- Laser the fourth harmonic of YAG 266 nm cw
- Laser helium-cadium (HeCd) 325 nm cw
- Laser qswitch the fourth harmonic of YAG (266 nm), pulse duration : 400 ps with a repetition rate of 21 kHz



Cryostation Montana

The cryostation (Montana) is a closed cycle optical cryostat which could performed

measurements from 4 to 300 K. The sample sizes could varies from few millimeter to 2 cm. Two nanopositionners allow translation of 6 mm horizontally and 12 mm vertically with a minimal step of few ten nanometers.

Detection

- A CCD camera working in the 200-800 nm range is coupled with a 1 m focal monochromator with a spectral resolution of 30 pm.
- A germanium detector working at the nitrogen temperature in the 1000-1500 nm range is coupled to a 64 cm focal monochromator.
- A streak camera could performed temporal measurements from 1 ps to 1 ms.



OPTICAL SPECTROSCOPY

Physico-chemical analysis

(<https://sites.google.com/view/opticalspectroscopyofsolids/home>)

[Website\(https://sites.google.com/view/opticalspectroscopyofsolids/home\)](https://sites.google.com/view/opticalspectroscopyofsolids/home)

Contacts

Scientific leaders

[Pierre Disseix](mailto:Pierre%2EDISSEIX%40uca%2Efr?Subject=&body=)(mailto:Pierre%2EDISSEIX%40uca%2Efr?Subject=&body=)

Tel.: +33(0)4 73 40 73 43

[François Reveret](mailto:Francois%2EREVERET%40uca%2Efr?Subject=&body=)(mailto:Francois%2EREVERET%40uca%2Efr?Subject=&body=)

Tel.: +33(0)4 73 40 73 46

Address

Institut Pascal UMR 6602 CNRS/UCA
Campus Universitaire des Cézeaux
4 Avenue Blaise Pascal
TSA 60026
63178 AUBIERE CEDEX, France

Partner laboratory



(<http://www.institutpascal.uca.fr/index.php/en/>)

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