

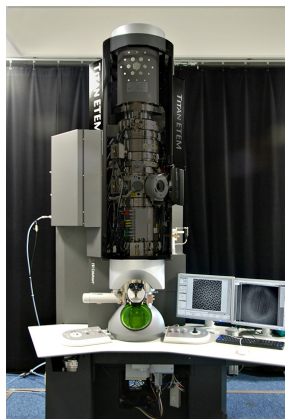
## Research Facilities

Group Leader: LORENTZ Chantal

Research equipments dedicated to the characterization of catalytic materials are regrouped in a technical platform. A group of fifteen engineers, are in charge of this large instrumental park as well as of the development of techniques for the characterization of divided solids especially under reactive conditions.

The equipments are open to the research teams of IRCELYON and carry out work for outside laboratories and industries in the form of collaboration or service agreements

More Info: [http://www.ircelyon.univ-lyon1.fr/en/plateforme\\_scientifique](http://www.ircelyon.univ-lyon1.fr/en/plateforme_scientifique)



Environmental TEM FEI Titan  
(Centre Lyonnais des Microscopies)

### Electron Microscopy

AOUINE Mimoun

Study of chemical and structural composition of nanomaterials with high interest for the cutting edge of catalytic application.

- TEM Jeol 2010
- Environmental Scanning Electron Microscope (CLYM)
- Last Generation of Environmental FEI ETEM (CLYM)



### XRD Powder Analysis

BOSSELET Françoise

Phase identification, crystalline size determination, mesoporous materials characterization, temperature studies under controlled atmosphere.

- D8 Advance Bruker



### Chemical and Textural Analysis

MASCUNAN Pascale

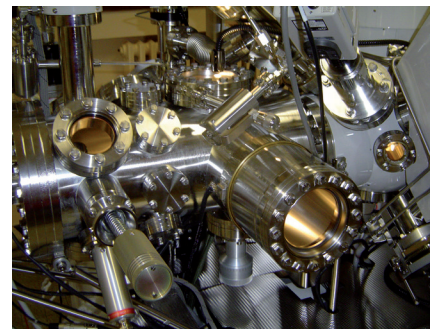
Chemical determination of metallic element.

- ICP-OES ACTIVA Jobin Yvon
- X-ray fluorescence Panalytical

Specific area and porosities of solids, dispersion of the metallic phase by chemisorption.

- ASAP 2020 - 3 Flex Micromeritics

## Research Facilities



### Surface Analysis

CARDENAS Luis

Chemical state and electronic properties by XPS and UPS, studies of segregation phenomena and top layer surface with a higher surface-sensitivity by LEIS.

- Axis Ultra DLD Kratos
- Reactor chamber coupled to the UHV experimental set up

### Raman Spectroscopy

CARDENAS Luis

Monitoring of catalyst preparation, mapping of solids at the micron scale, in-situ studies and operando experiments.

- LabRam HR Spectrometer Horiba



### Solid State and Liquid NMR

LORENTZ Chantal

Structural characterizations, quantitative or qualitative compositions, molecular dynamics, reaction kinetics analysis by high resolution NMR.

- Avance III 400 spectrometer Bruker

Catalyst composition, solid State NMR characterizations of inorganic or organic materials.

- Avance III 500WB spectrometer Bruker

### Thermal Analysis

JOUGUET Bernadette

Thermal behaviour of solids, both mineral and organics.

- TG-DTA-MS Setaram
- TGA Mettler Toledo

