

## X-RAY PLATFORM

X-Ray analysis technics for any type of materials' characterization

### SCIENTIFIC EXPERTISE

- Core chemistry
- Physical chemistry
- Nano-sciences and bio-nano sciences
- Environmental sciences
- Metallurgy and building materials (glass, cement, concrete, clay, etc.)

### APPLICATIONS

- Wide range of materials : metal, oxide, composite, colloids or biomaterial evaluation
- State of sample : solid, liquid, powder, gel/colloid, thin layer
- Numerous type of tests : structural and composition, even mechanical and thermal in situ analyses
- Complementary of EDX/SEM/TEM/XPS

### TRACK RECORD

- Vallourec
- Nanobiotix
- Unither

### PUBLICATIONS

J. Fouineau & al. *J. Nanopart.*, 17 :438 (2015)

T. Gaudisson & al. *J. Magn. & Magn. Mater*, 387, 90-95 (2015)

I. Zelano & al. *App. Geochem.* (2015)

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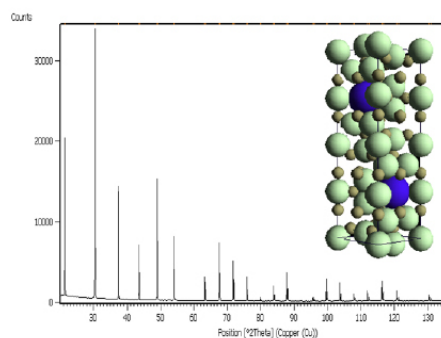
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- X-Ray ■ Crystallography ■ Phase Identification ■ Nanosciences ■ Bio-nanoscience ■ Diffraction ■ Scattering ■ Fluorescence

### SERVICE DESCRIPTION

Structural and microstructural analysis of materials are mandatory in very diverse industrials sectors (construction, steel, food, cosmetic, medical devices, etc.). The identification of new materials, the composition optimization, the product development as well as routine production check-up will require deep material analysis, specific know how and high technology equipment.

The X-ray platform from Diderot university's chemical department has extensive knowledge in X-Ray analysis technique: diffraction, scattering and fluorescence. It offers the ability to characterize any type of materials such as composite materials, thin layers, ceramic, metals or minerals under different forms such as powder, Gel, liquids. The X-ray platform will allow to rapidly obtain quality measurements and specific expertise in materials used in a wide range of economic sectors.



Example of a mesh and diffractogram

### OFFER

- Qualitative phase Identification and quantitative phase analysis
- Domain's size evaluation for nanomaterials by diffraction and scattering – SAXS
- Crystal default identification
- Crystallographic orientation determination
- In situ analysis (under constraints : mechanical, temperature, etc.)
- Trainings (theoretical and technical)
- Structure refinement