

# LACaMi

Analysis, characterization, and processing technical platform

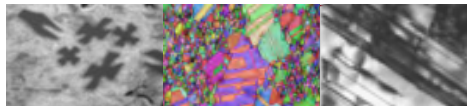
## WHAT WE OFFER : services and expertise

- Characterization / tests / analyses carried out by qualified UCLouvain members
- Chemical analysis of solid, liquid, gas in material and chemical process
- Analysis of fracture mechanisms
- Processing of metallic materials, ranging from casting, atomization, 3D printing, heat treatments
- From nm to mm characterization thanks to microscopy and tomography



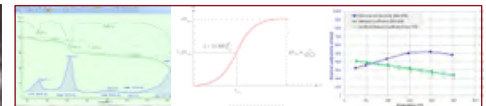
### Chemical analysis

- Infrared carbon/sulfur analyzer sylab 1600 F
- Inductively Coupled Plasma ICP/OES Agilent 5100
- Zeiss Ultra 55 SEM with Bruker EDS chemical analyzer
- Gas/liquid chromatography



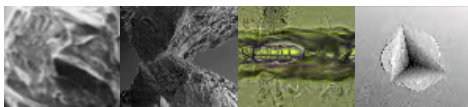
### Metallography analysis

- Zeiss Ultra 55 SEM
- Zeiss Supra 55 SEM with EBSD
- Philips CM30 TEM
- Bruker XRD D8 Advanced and Discover
- Light microscopy



### Thermal properties measurements

- Netzsch STA449F3 DSC/ATG 1600°C
- Netzsch SBA458 Seebeck coefficient and electrical conductivity measurements
- Netzsch LFA467 thermal conductivity - thermal diffusivity measurements
- Dilatometry



### Micromechanical analysis

- Zeiss Ultra/Supra 55 SEM
- EBSD camera and *in-operando* mechanical testing machines
- Micro indenter EMCO Durascan 70G5
- Nano indenter Agilent G200
- Bruker UTM3 tribometer



### Metal processing

- 2kg/20 kg casting furnaces
- Hot/cold rolling
- Arcast 80g/200g arc melting furnaces
- Arcast Powder atomiser
- Metal 3D printing
- Electro Spark Deposition ESD
- Quenching and deformation dilatometer

## CONTACT

Platform manager

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### Investment in progress

- X ray tomography
- Optical 3D microscope
- Specimen preparation

Picture credits : Yvan Flamant - Aurore Delsoir

[www.uclouvain.be/lacami](http://www.uclouvain.be/lacami)

(1) Metallic powder atomization – Arcast – (2) Inductively Coupled Plasma Optical Emission Spectroscopy - ICP/OES - Agilent 5100 – (3) Scanning Electronic Microscope (SEM) - Zeiss Ultra 55 – (4) 3D metal printing - 3D system PROX200 3D printer - (5) X-Ray Diffraction – (6) X-Ray Diffraction – Bruker D8 Advanced