

## Our skills

### Handling samples in a controlled atmosphere



#### YOUR NEEDS

- Transfer samples sensitive to air or humidity
- Purifying, alloying or shaping of alkali metals, including lithium
- Safe handling of nanoparticles
- Conditioning of samples under vacuum or inert gas

#### OUR SOLUTIONS

- Provide our skills and resources available for controlled atmosphere work
- Work in oxygen and humidity free environments with glove boxes
- Carry out sample and material transfers in conditions of high-purity atmosphere
- Handle nanoparticles in a protected environment
- Synthesize and packaging a lithium graphite compound with negative electrode material of lithium ion batteries
- Fill transfer cells with liquid cesium for cesium atomic clock tubes
- Study Li-ion battery electrolytes in a controlled atmosphere

#### KEYWORDS

Controlled atmospheres, inert gases, vacuum, glove boxes, electrodes, alkali metals, lithium, carbonaceous materials, nanoparticles, glass, sealed ampoules, sealed specimen holders

#### RELATED SKILLS


- Chemical, structural and microstructural characterization of samples:
  - X-ray diffraction
  - Electron microscopy
  - Thermogravimetric analyses (TGA-MS)
  - Raman Spectroscopy


#### OUR REFERENCES



**RENAULT**


#### CONTACT

- Contact the research group:  
 [claire.herold@univ-lorraine.fr](mailto:claire.herold@univ-lorraine.fr)

 + 33 3 72 74 25 37

- Contact the Technology Transfer Office (TTO):

 [ijl-tto@univ-lorraine.fr](mailto:ijl-tto@univ-lorraine.fr)

 +33 3 72 74 26 04