

## Formulation and Synthesis Laboratory



The formulation and synthesis lab allows the development of high performance materials to fulfill each industrial requirement. Processing is achieved from chemical precursors or raw materials in order to obtain custom features: granulometry, purity, morphology, functional surfaces.

### OUR SERVICES

- Solid state synthesis
- Soft chemical synthesis
- Sol-gel
- Core-shell production
- Nanopowders production
- Powder functionalization
- Powder dispersion in liquid media
- Dry powder blending
- Material characterizations
- R&D, up-scaling

### OUR MEANS

- Kilns for solid state synthesis (1200 °C, Vol. 180 L)
- Kilns for solid state synthesis (1300 °C, 13-40 L)
- Inert atmosphere kiln (2000 °C, Vol. 200 L)
- Soft chemical synthesis reactor (15 L vessel, controlled pH and Temp.)
- Centrifuges (Vol. 0.5-18 L, 3500 rpm)
- Climatic conditions chamber (T. max. 95 °C, Hyg. Max. 98 %)
- Glove boxes (dry air or inert gas)
- Thinky mixer (2000 rpm)
- Turbula mixer (67 rpm)

### SOME EXAMPLES

- Controlled size silica spheres
- Rare earth nanopowders
- Accurate solid solution composition materials
- Catalysts
- Calcium phosphate powders (HA/TCP)
- Functionalization ...

1. Biomedical powder synthesis
2. 15 liters synthesis reactor
3. Silica microspheres
4. Rare earth nano-crystallites

