

## Our services

Characterization of porous and/or divided solids  
Measurement of specific surface areas and pore size distribution  
Gas phase adsorption



### YOUR NEEDS

- Determination of a specific surface area
- Measurement of the adsorption capacity of a solid with respect to a gas or vapour under precise conditions of temperature and pressure
- Measurement of the total porosity of a solid and its open/closed fraction
- Determination of the pore size distribution (from 0.3 nm to 150  $\mu\text{m}$ )
- Measurement of the amount of moisture or organic vapour that a sample can fix under given conditions

### OUR SOLUTIONS

- Automatic adsorption units for permanent gases ( $\text{N}_2$ ,  $\text{CO}_2$ , Ar, Kr,  $\text{H}_2$ , depending on the expected surface area and the narrowness of the pores), for condensable vapours (alone or in competition two by two), depending on the temperature (from  $-250$  to  $+500^\circ\text{C}$ ), secondary vacuum up to 200 bars
- Dynamic adsorption apparatus on columns with online product analysis
- Mercury porosimetry (4000 bars)
- Helium or air pycnometry for powders, solids or foamed materials

### KEYWORDS

Porous Solids, (Nano)powders and Nanoparticles, Nanoporosity, Mesoporosity and Macroporosity, (Nano)carbons, Activated Carbons, Oxides, Adsorbents and Adsorption, Catalysts

### RELATED SKILLS

- Determining an average (nano)particle size from specific surface area and skeletal density measurements
- Measuring the bulk density of a powder or solid of any geometry
- Determining the state of dispersion of metallic nanoparticles on a substrate
- Knowing the retention capacities of porous solids subjected to a flow of pollutants in the gaseous phase
- Measuring the mechanical properties of porous solids
- Structural and microstructural characterization:
  - X-ray diffraction
  - Electron microscopy

### OUR REFERENCES

**TRB** LIGHTWEIGHT  
STRUCTURES



**SILVATEAM**



**Depestele**  
Teillage  
Vandecandelaere



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