



SINTEF

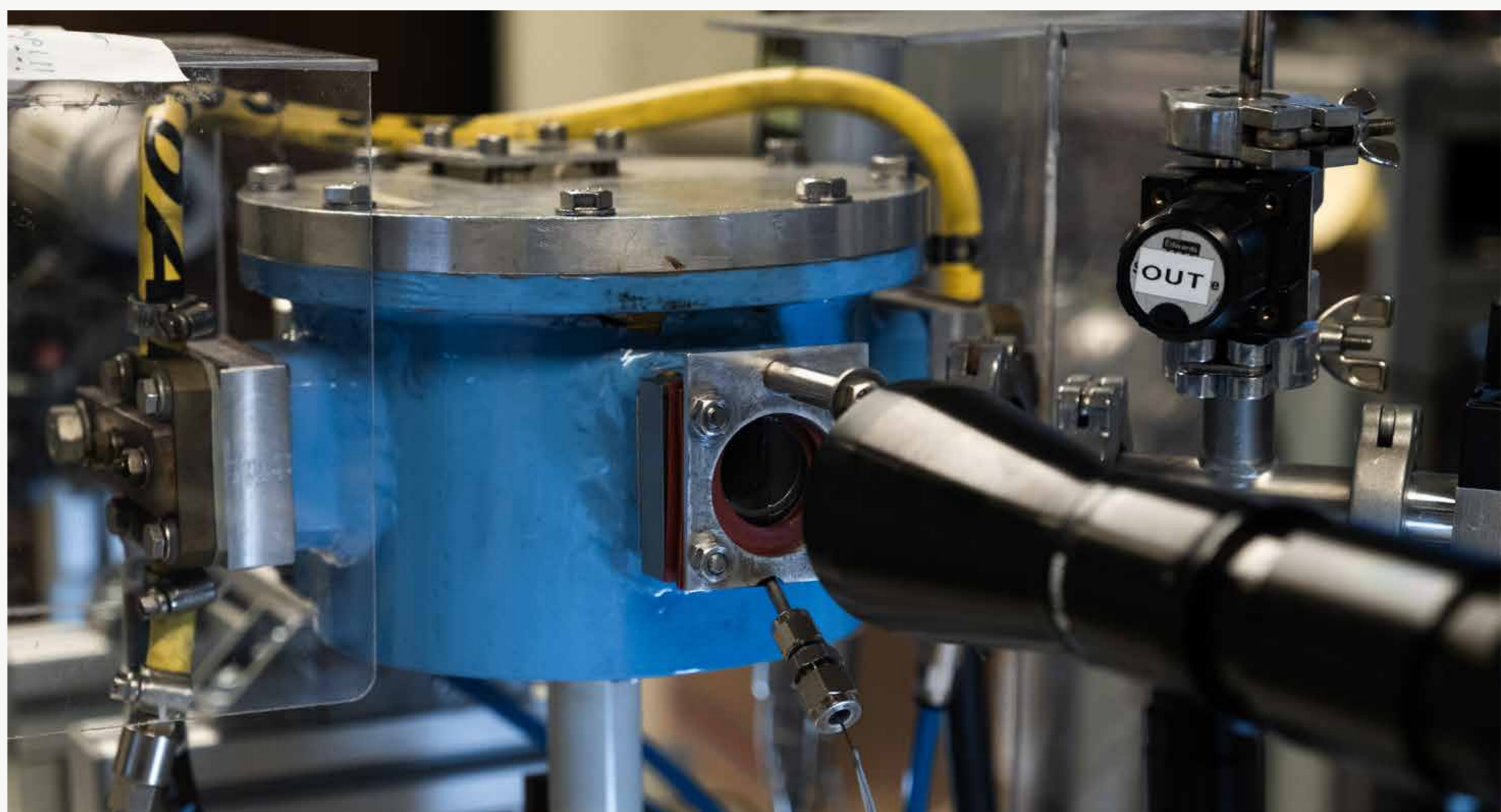
Wetting Laboratory

Overview

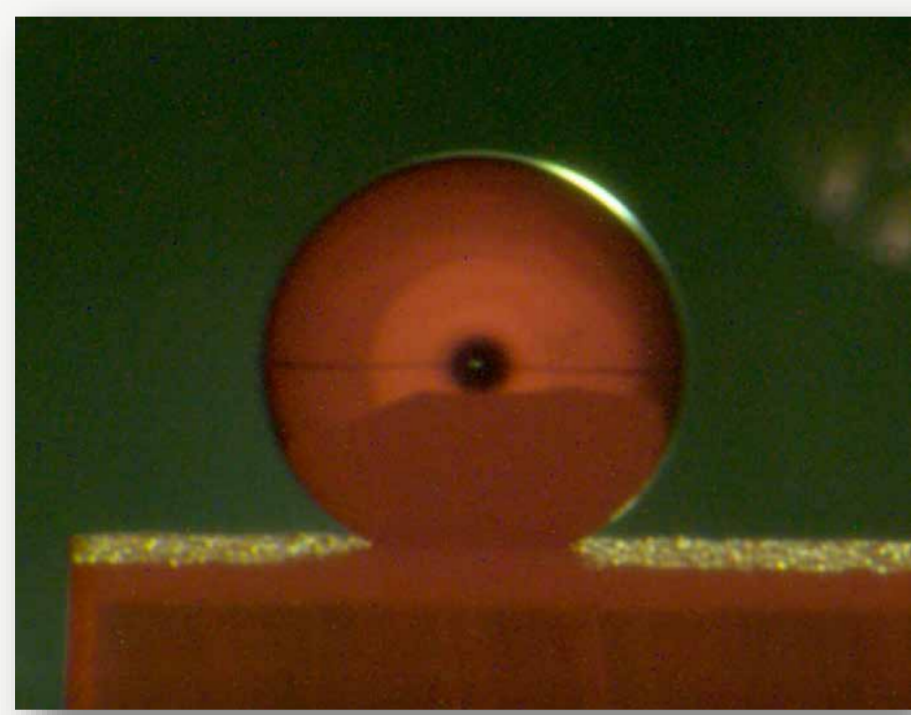
The sessile drop furnace is specialized to study high temperature behaviour of materials based on visual observation in various reducing and inert atmospheres and in vacuum. High-resolution pictures will be captured in real-time at high temperatures to evaluate the wetting, softening, melting, volume change, reduction, gas production, foaming, and kinetics, etc.

Capabilities

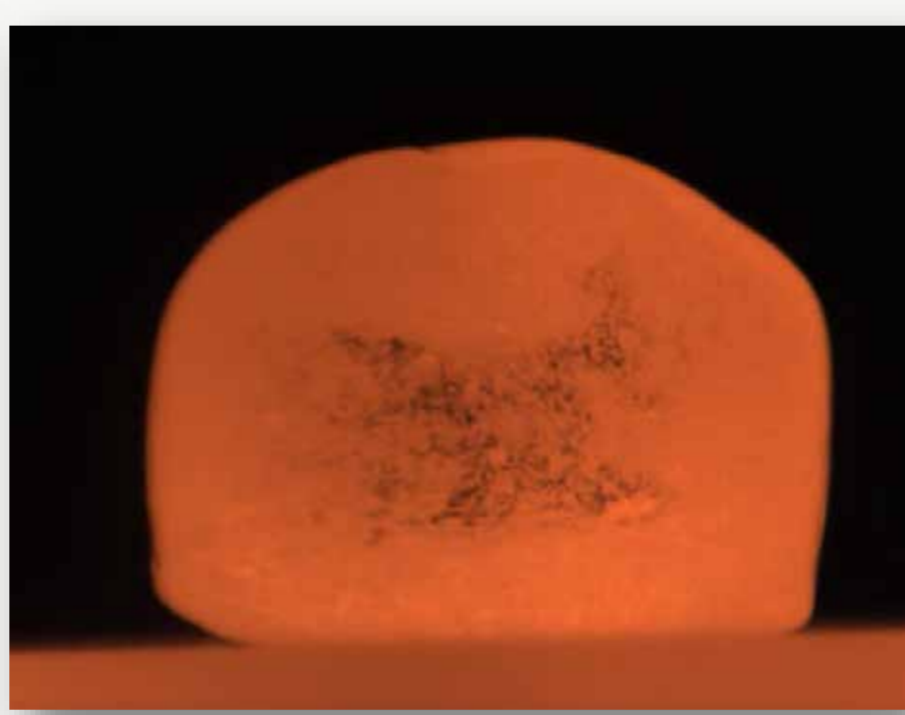
- Millimetre scale samples: 4 mm sample and 10 mm substrate
- Fast heating with graphite heating element: 3 min to 900 °C
- Atmosphere: high vacuum 10E-5mbar, CO, H₂, Ar, N₂...
- Heating up to 2000 °C



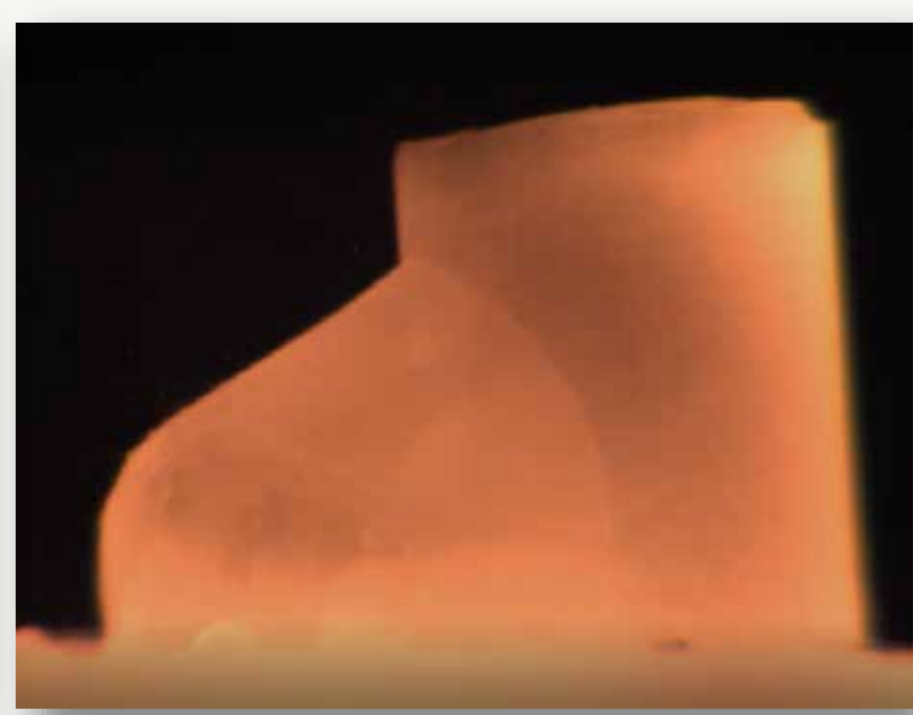
Wetting of liquid - solid



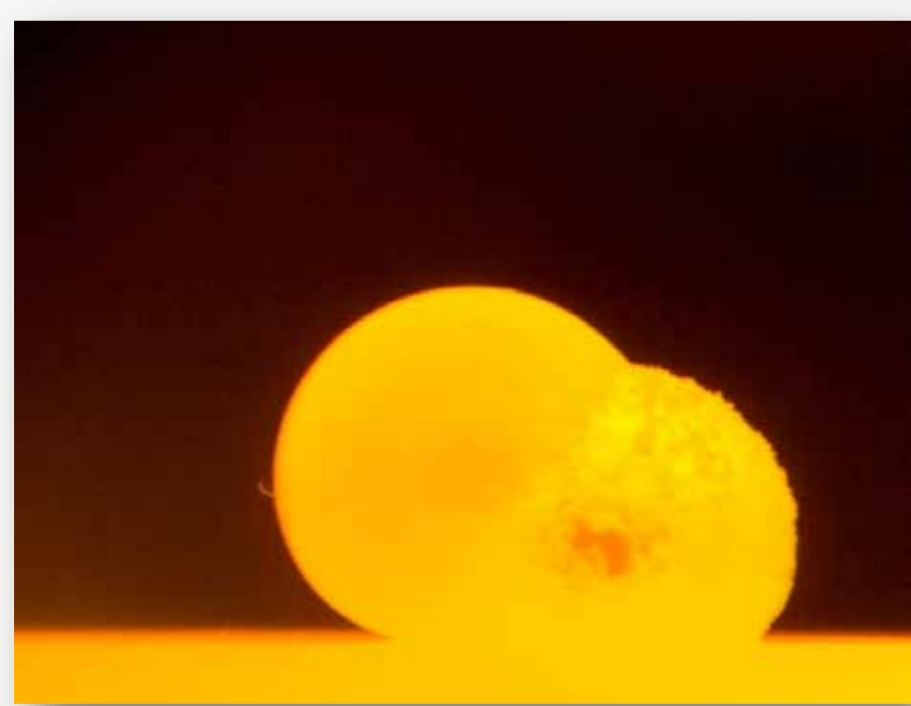
Softening and melting



Reaction kinetics



Two liquids wetting



Slag reduction with carbon materials



Volume change

