

Fraunhofer ISE Facilities, Equipment and Resources available for PIRE

- ColSim, a thermal simulation tool for applications developed and written at Fraunhofer ISE
- Phase Change slurry thermal-mechanical stability test facility
- Various differential scanning calorimeter
 - DSC (Q200, TA Instruments)
 - Micro-DSC III from Setaram for phase change property measurement
 - Temperature range -90 – 700 °C
- Determination of flow behavior and viscosities
 - Rotational rheometers
 - A rotational rheometer (Anton Paar, MCR 502)
 - Temperature range -50 – 600°C
- Stability of PCMs and PCM-compounds
 - Thermal and mechanical cycling
- Characterization and testing of PCMs under application conditions
 - Various test facilities for slurries, and PCM-compounds
- Surface tension measurement for liquids
- Particle size distribution
 - Laser diffractometers (Beckman Coulter, LS13320)
 - Size range 10 nm – 2 mm
- Thermal expansion of solids
 - Thermal-Mechanical Analyses
 - Temperature range -50 – 600°C
- Thermal conductivity
 - Laser Flash, Thermal Hot Bridge and Hot wire
 - Temperature range – 90 – 550°C
- Separation stability of suspensions and emulsions
 - LumiFuge
 - Temperature range 0 – 90°C
- Various Microscopes: Light Microscopes, Laser Microscope, SEM