



1 Flow test bench, PCM, water.

PCMs – ACTIVE AND PASSIVE THERMAL MANAGEMENT

The use of phase-change materials (PCMs) enables active and passive thermal management. To achieve this in specific applications, the major development step required is the integration of PCMs into components and systems.

Fraunhofer ICT has all the necessary interdisciplinary competences in the areas of:

- Material characterization and development
- Component and system engineering
- Construction of demonstrators
- Modeling and simulation

Areas of application

- Buildings
- Electronics
- Optical systems
- Energy converters
- Industrial processes

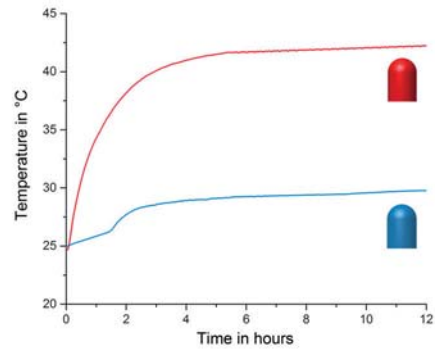
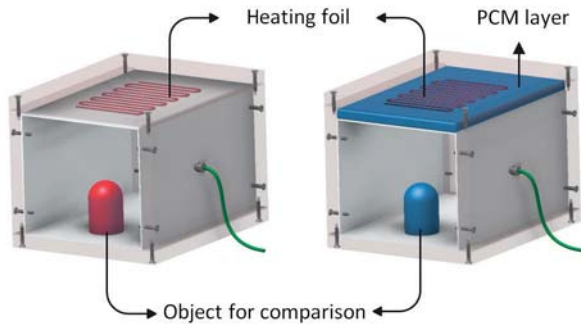
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Our service offer

We offer our project partners and customers comprehensive system analysis including material characterization, system design and system development. The requirements placed on the process components and safety devices also form part of our expertise.

Material

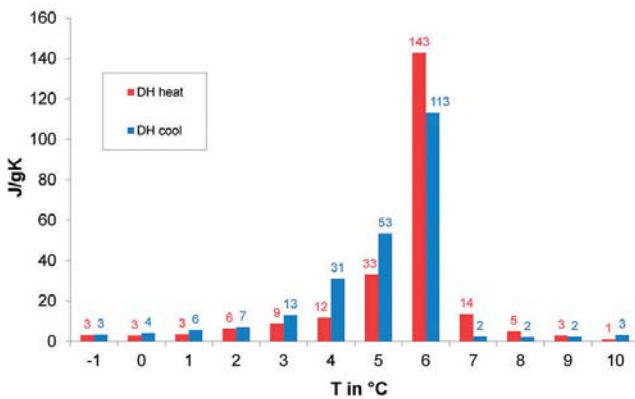
- Characterization
- Kinetic evaluation
- Modification / functionalization

System design

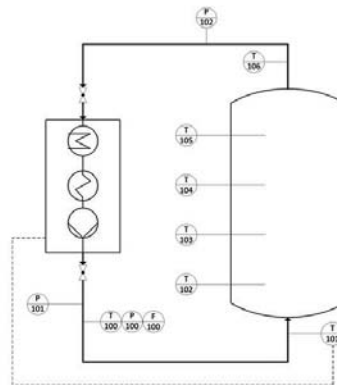
- Thermodynamic analysis
- Power dynamics
- Corrosion
- Safety

System development

- Construction
- Compatibility
- Manufacture
- Demonstrators
- Economic evaluation



Material characterization



System design



System development

Development stages of application-oriented systems.