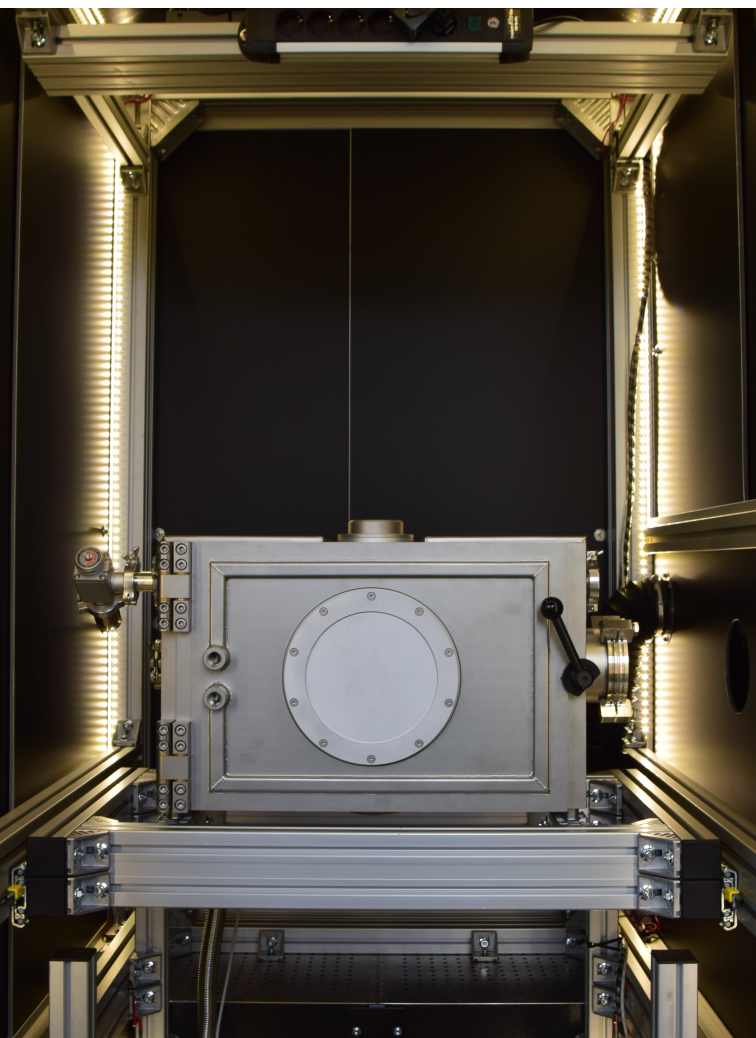
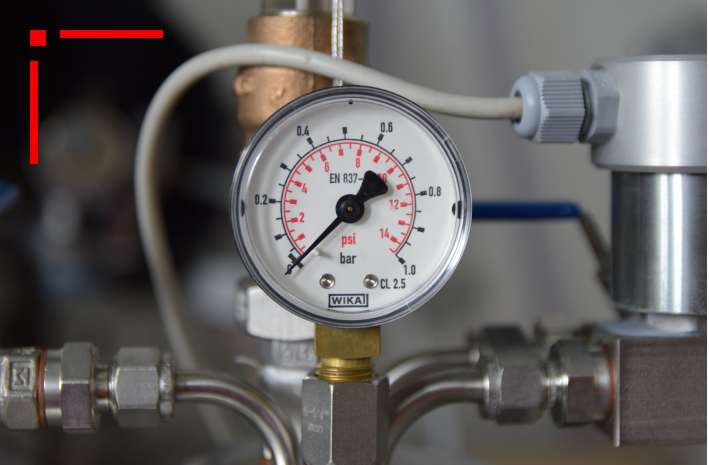




SENSORS FOR ENERGY AND HYDROGEN TECHNOLOGY | SET





PROFILE

Die Arbeitsgruppe Advanced Thermal Management besitzt ein vertieftes Verständnis in den Bereichen der hochgenauen sowie rückführbaren thermischen und infrarot-optischen Modellierung, Charakterisierung und Materialentwicklung. Dies bildet die notwendige Grundlage für ein innovatives und effizientes thermisches Management von Prozessen und Produkten zur Erhöhung von Energie- und Klimaeffizienz.

>> Innovative sensor technology
for energy revolution <<

SERVICES

Development and optimization of optical sensor technology

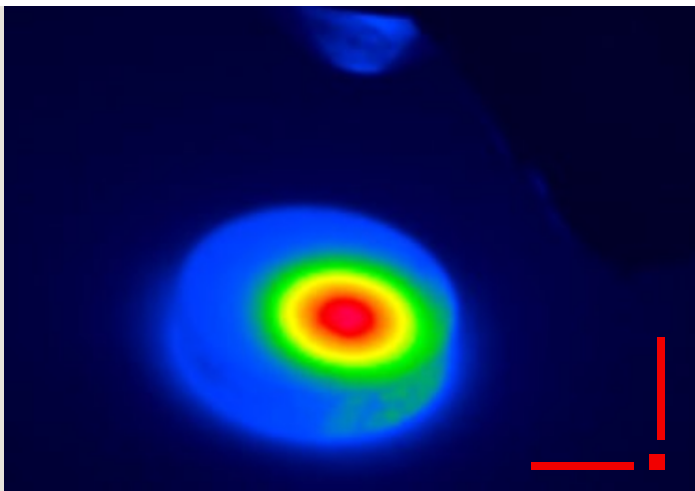
- For the measurement of temperature
- For the measurement of specific heat capacity
- For the measurement of thermal diffusivity
- For material characterisation
- For in-situ process control
(e.g. gas turbines, additive manufacturing)
- For thermal micro characterisation with sub- μm resolution

Measurement and parameters range

- Wavelength from 0,2 μm - 25 μm
- Temperature from 220 K - 3200 K
- Spatial resolution < 1 μm
- Temporal resolution up to MHz range

Modelling and simulation

- Simulation of heat transport and radiative transfer

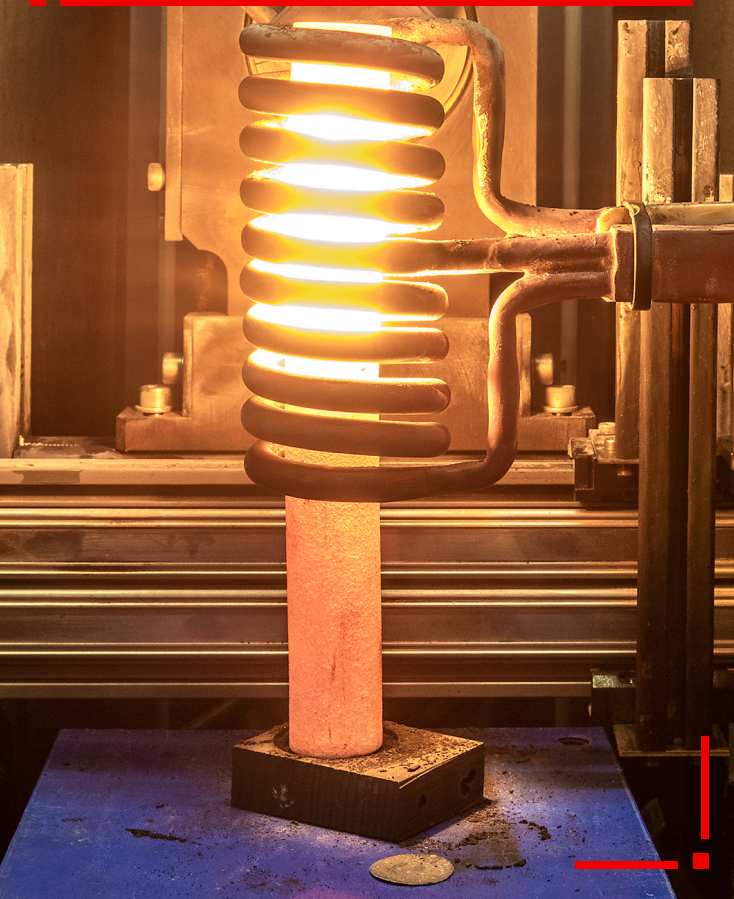


Thermal management of processes and products

- Analysis and improvement of thermal processes and manufacturing procedures in order to increase energy and resource efficiency
- Non-contact measurement methods for thermal process control and adjustment, in particular for energy conversion and laser-based additive manufacturing

ABOUT US

The Center for Applied Energy Research e.V. (CAE) is a non-profit research institute and aims with its research and development activities to transfer ideas into practice in cooperation with commercial enterprises and other research partners and thus to make the greatest possible contribution to a sustainable, CO₂ emission-free and economical energy system. The CAE acts as a bridge between basic research and market-oriented development.



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