

Bayerisches Zentrum für
Angewandte Energieforschung e.V.

Task 42 / Annex 24 – Thermal conductivity Ringtest 1 – Current state

H. Mehling, M. Brütting

MIT SONNE UND VERSTAND.

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Thermal conductivity

Contributors - overview



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Participants	contact	instrumentation
ISE	Stefan Gschwander, stefan.gschwander@ise.fraunhofer.de Laura Vorbeck, Laura.Vorbeck@ise.fraunhofer.de	hot-wire, laser-flash
ZAE (Würzburg)	Harald Mehling, Harald.mehling@zae-bayern.de Michael Brütting, Michael.Bruetting@zae-bayern.de	GHP, rod instrument, hot-wire
Uni Zaragoza	Monica Delgado, monica@unizar.es	laser-flash
CERTES- UPEG	Magali Fois, fois@u-pec.fr	DICO,
AIT Austrian Institute of Technology	Wolfgang Hohenauer, wolfgang.hohenauer@ait.ac.at Daniel Lager, daniel.lager@ait.ac.at	laser-flash, transient hot bridge
Uni Bayreuth	Andreas König-Haagen, andreas.koenig-haagen@uni-bayreuth.de	laser-flash
Uni D'Artois	Laurent Zalewski, laurent.zalewski@univ-artois.fr	

Thermal conductivity

Ringtest 1 -Information



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All institutes have signed for the paraffin sample. It is also the easiest to handle and measure. **We will start with the paraffin, and use the octadecane.** This has the advantage that $h(T)$ curves are already available. For sample material, please contact Stefan Gschwander.

According to the $h(T)$ curves, the melting / crystallization range is 26°C to 29°C. We should **target measurement points at 20°C to 36°C in 2°C steps, as far as possible.** Within the melting range, serious problems are expected and probably no evaluation is possible.

Due to the variety of measurement methods **we start with no defined procedure regarding measurement and preparation.**

The measurements should be done on **3 samples, 1 run each at least**

The data presentation should be **$\lambda(T)$ in W/mK, with error bars for T and λ**