
THERMAL CONDUCTIVITY WORKSHOP

In the frame of the IEA ECES Annex 29 and SHC Task 42



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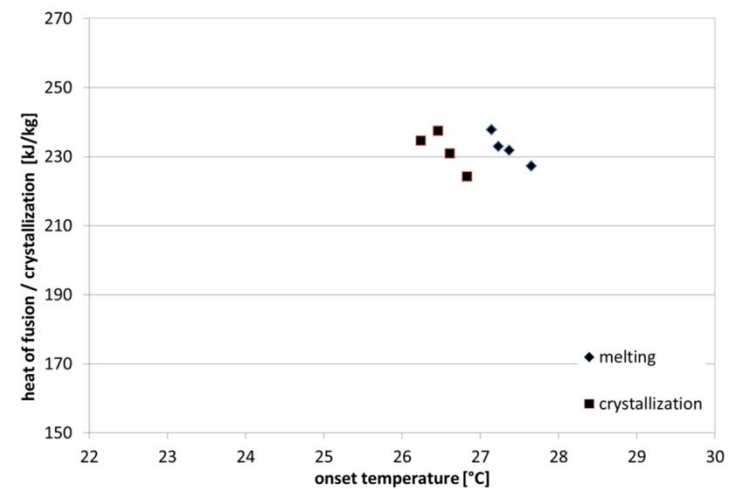
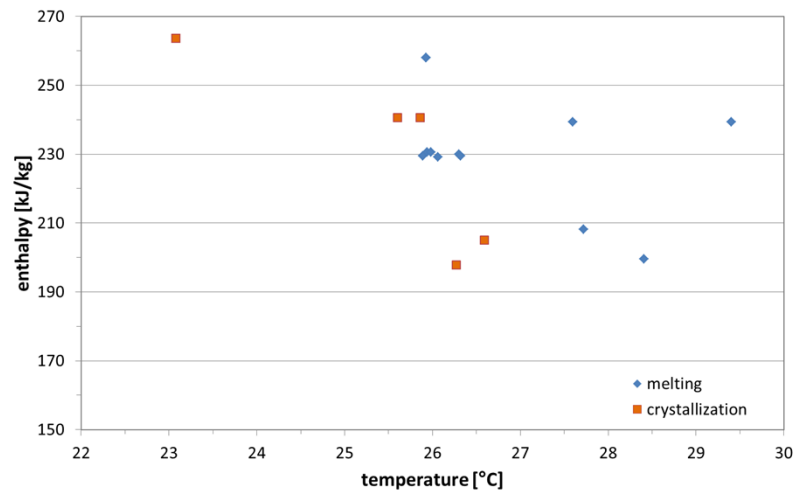
Würzburg, Deutschland

November 11th / 12th , 2015

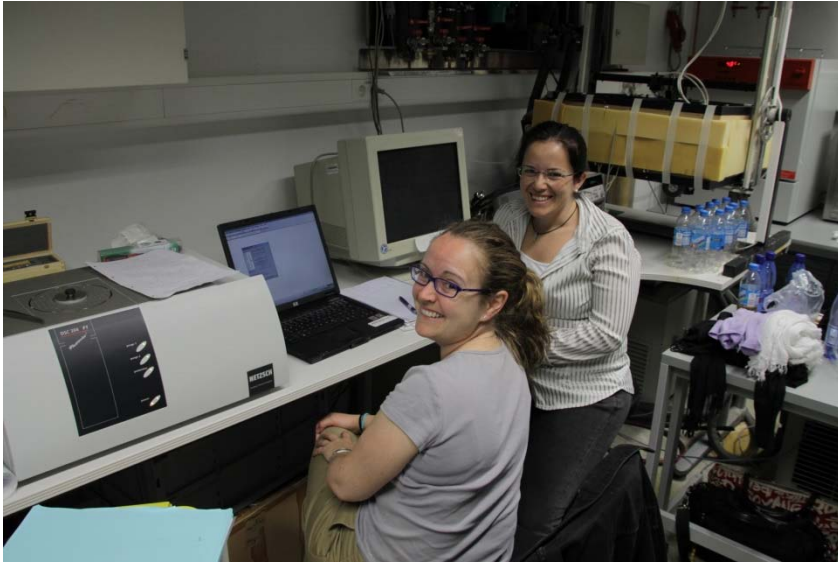
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Workshops so far

- Workshop DSC 2011 May 23th – 27th , Freiburg ISE
- 2. Workshop DSC 2012 May 14th, Lleida, GREA
- 3. Workshop DSC 2014 September 24th - 26th, Freiburg ISE

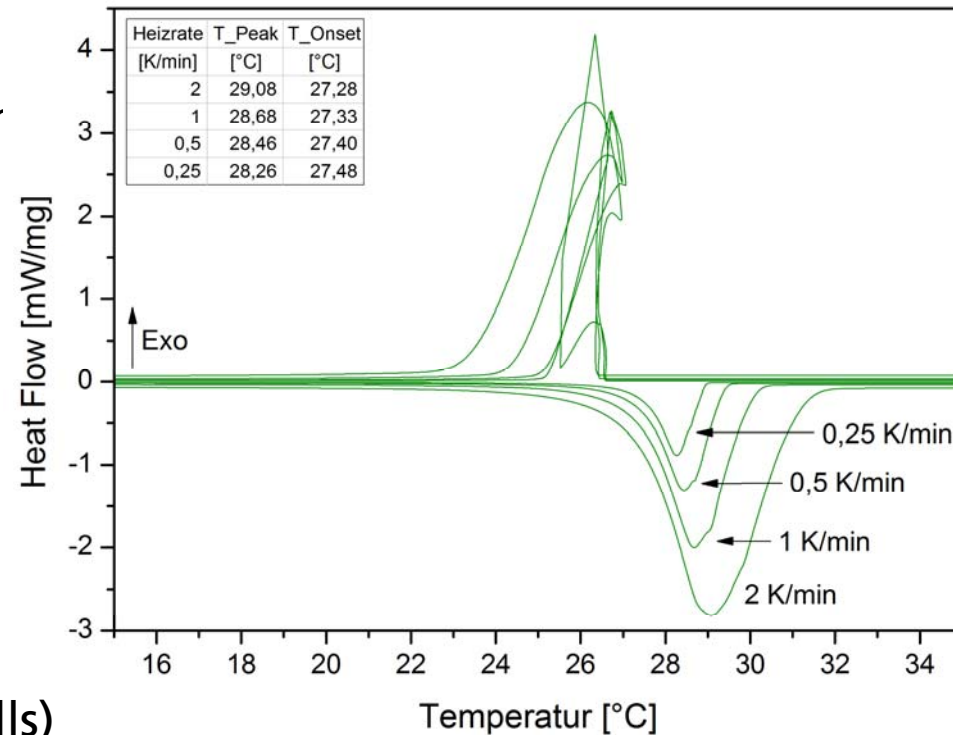


➔ Procedure for the characterization of Phase Change Materials via DSC devices

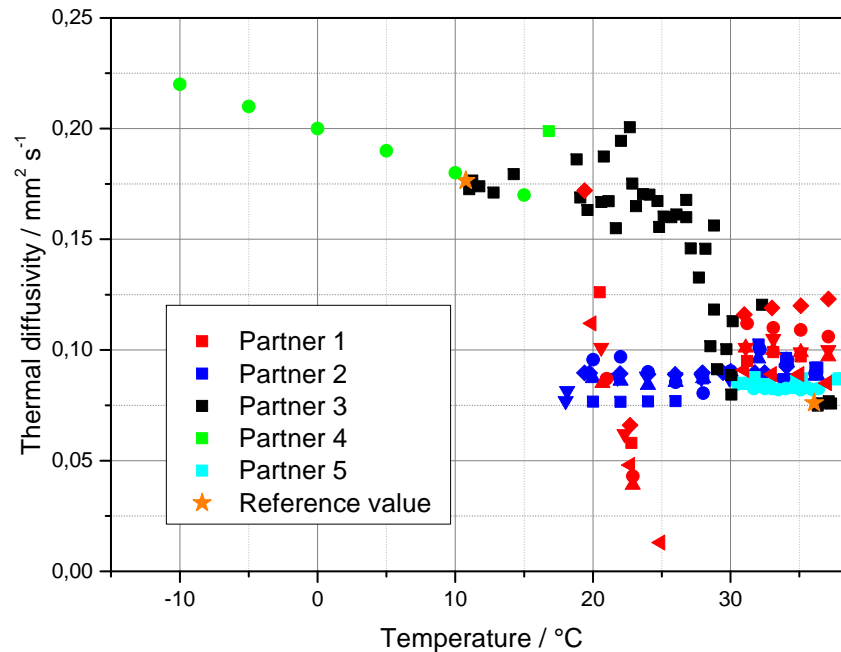


Challenges Phase Change Materials

- Solid – liquid phase transition
- Melting and crystallization rate
- Thermal conductivity determination
 - Liquid
 - Solid
 - Phase transition zone
- Different materials
 - Paraffin (oil, creep up walls)
 - Salt hydrate (water evaporation)
 - Salt (high phase transition temperatures)
- Phase transition: -50 up to 600°C or higher



What's the target?



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- Is it possible to determine the thermal conductivity of PCMs?
- What are the technologies (measurement principles) applicable for this materials?
- What are the obstacles, problems and challenges for these measurements?
- How can we match results measured by using different devices?
- Do we need a procedure for the measurement of PCMs?

Thank You Very Much to the ZAE-Bayern for hosting this Workshop

Thanks to all attendees for participation

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