Inbjudan till kostnadsfritt seminarium med workshop 23 november 2022:
Mätning av värmeledningsförmåga – med gratis provning av eget material

Simplifying thermal conductivity on enhanced materials

With multiple techniques for thermal conductivity testing available, selecting the correct tool is critical in order to obtain valid and accurate data. No single method is appropriate for all possible samples and applications.

Material scientists and engineers working in thermal conductivity improvement and thermal management must therefore develop an understanding of the strengths and weaknesses of the available test methods to select one appropriate to the application.

This seminar addresses the importance of method selection in thermal conductivity characterization.

Thermal conductivity testing in the early days of materials science was dominated by steady-state techniques – which could give highly accurate test data, but typically involved large samples, long test times, extensive requirements for sample preparation and equipment operation, and a high degree of user expertise necessary to generate consistent test results.

The first transient techniques, developed in the early 20th century, exploited simple test geometries of a line heat source in an infinite medium to keep the data analysis and validation simple in the era before modern computers.

Once modern computers became a mainstay of research facilities, there was a significant increase of new transient methodologies which employed more complex geometries and data analysis to enable easier sample preparation and equipment operation.

These new methodologies offer unique strengths and weaknesses but generally offer faster test times, simpler operation, and easier test setup at the expense of more extensive computation and data analysis which can in some cases be automated. While the new variety offers many more options to the researcher for quickly getting good quality data – many options can lead to confusion in what the strengths and weaknesses of available methods are and how to choose the best method for the situation.

This seminar will survey available test methods and focus on contact-based transient methods for their greater versatility and ability to generate better representative data. It will compare commonly available transient contact methods for different applications of study, including the Modified Transient Plane Source technique, the traditional FLEX Transient Plane Source “hot disc” technique, and the Transient Line Source “needle probe” technique.

Appropriate applications for each method will be detailed, and recent research from international institutions pushing the boundaries of thermal conductivity will be highlighted, demonstrating the power of the different methods when used properly for an appropriate sample.

Tid: **Onsdag 23 november 2022**
10:00–10:30 Fika (även 15:00–15:30)
10:30–12:00 Föredrag
12:00–13:00 Vi bjuder på lunch
13:00–15:00 Workshop med praktiska mätningar.
Gratis provning av eget material ingår.

Föreläsare: Ana Paula de Castilho, C-Therm Technologies Ltd.
Föreläsning och workshop hålls på engelska.

Plats: Elastocon, Tvinnargatan 25, Brämhult/Borås, Sverige

OBS! Begränsat antal platser.
Anmälan senast 16 november till: info@elastocon.se

Passa på att även titta på våra övriga **instrument för materialprovning**, samt vår **provnings-** och **kalibreringsverksamhet**.

C-THERM TECHNOLOGIES Ltd.

C-Therm Technologies grundades 2007 i Kanada och tillhandahåller sensorlösningar för forskning och utveckling, tillverkning och kvalitetskontroll.

Värmekonduktivitetsmätaren Trident är senaste generationens instrument för mätning av värmeledningsförmåga, med möjlighet att koppla upp till tre sensorer för olika mätmetoder, enligt ASTM D7984, D5334, D5930 och ISO 22007-2.

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