FAX: 610-646-0509

Registration

I will attend the seminar in:

- ☐ Pasadena / Arcadia, CA — Hilton Garden Inn - Arcadia — 1 Dec 2009
- ☐ Irvine, CA - Hilton Hotel — Irvine / Orange County — 3 Dec 2009

☐ I will be attending along with the following person(s): _____

☐ Unfortunately I will not be able to attend, but please contact me. I am interested in the following applications:

_____

My contact information (please type or print):

Name: _____

Company/Institution: _____

Address: _____

City: _____

State/Province: _____

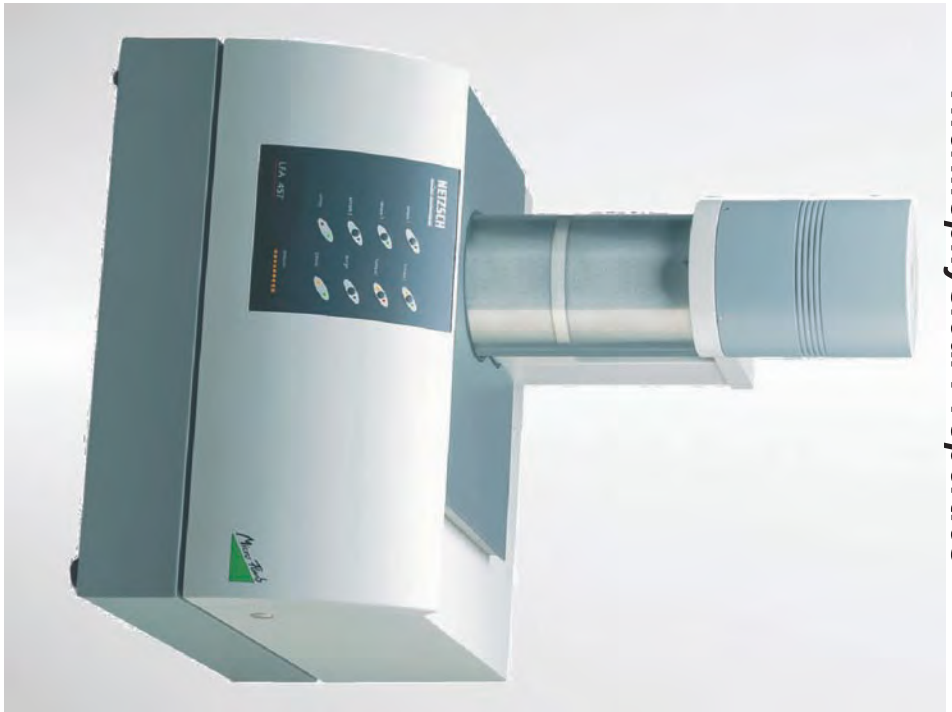
Zip Code/Post Code: _____

Phone: _____

Fax: _____

E-mail: _____

Method of Payment: ☐ PO ☐ Check ☐ Cash ☐ Visa ☐ MC ☐ AMEX



Leading Thermal Analysis

2009 Technical Seminar Series

- *Material Characterization*
- *Material Development*
- *Process/Property Optimization*
- *Heat Transfer*
- *Thermophysical Properties*

NETZSCH

How do the thermophysical properties of metals and ceramics evolve during sintering?

What toxic gases are released during the processing of my material?

How can I quantify the gases evolved from my material?

Is the thermal conductivity of my electronic components high enough to allow efficient cooling?

How does the degree of cure and decomposition affect my material properties?

How do I tailor the material properties to meet the needs of a specific application?

What changes occur in the thermophysical properties during melting and solidification?

How can I quantify the contact resistance between my components?

Seminar Goals

Knowledge of the thermally-induced behavior of materials is critical in almost every aspect of research, development, design and production. The data acquired using advanced thermal analysis and thermophysical properties instrumentation are key to the understanding of this behavior. These data are even more powerful when cross-correlated with data obtained using other measurement methods. The goals of our seminar are to help attendees gain an in-depth understanding of these measurement methods and how to utilize such data to characterize their own materials.

Because of their technical, non-commercial content, our seminars have become very highly regarded. We hope that you will be able to attend one of these seminars to learn more about material characterization.

PRELIMINARY PROGRAM

8:30 a.m. - 9:00 a.m.	Arrival & Continental Breakfast
9:00 a.m. - 9:30 a.m.	Welcome & Overview of the NETZSCH Program w. Introduction to Adiabatic Reaction Calorimetry for Thermal Hazards / Safety Assessment
9:30 a.m. - 10:15 a.m.	Thermal Diffusivity/Thermal Conductivity & Specific Heat using the Flash Diffusivity Method - Measurement Theory & Instrumentation
10:15 a.m. - 10:45 a.m.	DSC and Specific Heat – Measurement Theory & Instrumentation
10:45 a.m. - 11:00 a.m.	**BREAK**
11:00 a.m. - 11:45 a.m.	Material Characterization using Thermal Analysis / Thermophysical Properties Instrumentation
11:45 a.m. - 12:15 p.m.	Steady State Thermal Conductivity Methods - Measurement Theory & Instrumentation
12:15 p.m. - 1:15 p.m.	**LUNCH** (complimentary)
1:15 p.m. - 1:45 p.m.	Coupled Thermal Analysis/Evolved Gas Analysis, Basic Theory & Technical Solutions
1:45 p.m. - 2:15 p.m	Characterization of Polymer Decomposition Products via TG-FTIR using Spectral Libraries
2:15 p.m. - 2:45 p.m	Thermal Expansion – Measurement Theory & Instrument
2:45 p.m. - 3:00 p.m.	**BREAK**
3:00 p.m. - 3:30 p.m.	Thermal Analysis of Small Particles
3:30 p.m. - 4:00 p.m.	High-temperature Thermal Analysis Applications - DSC & Dilatometry
4:00 p.m. - 4:15 p.m.	Wrap-up and Final Discussions

Presented by:

NETZSCH Instruments N.A. LLC
www.e-Thermal.com

For more information contact:

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Fax: 610-646-0509
E-mailo: Isabel.Day-Jones@netzsch.com

Date	***Location***
1 Dec 2009	Pasadena / Arcadia, CA Hilton Garden Inn - Arcadia
3 Dec 2009	Irvine, CA - Hilton Hotel Irvine / Orange County

Advanced Registration Fee: $45
On-site Registration Fee: $95

Registration fee includes class notes, breakfast and lunch. Please note that there is a limited number of seats available. Reservations will be made on a first come-first served basis, so register soon to be sure you don't miss out on this opportunity.

We look forward to welcoming you to our seminar!