

## Press Release

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### **TG + FT-IR – more than just the sum of its parts**

#### **15 years of successful cooperation in the field of material characterization between Netzsch Analyzing & Testing and Bruker Optics**

For 15 years, Netzsch Analyzing & Testing and Bruker Optics have been providing their customers an optimal combination of two analysis techniques. According to the motto „TG plus FTIR – More than just the sum of its parts!“ – the coupling of thermogravimetry (TG) and Fourier-Transform infrared spectroscopy provides its users a significant additional benefit and a comprehensive gain in information. While thermogravimetry yields information regarding characteristics and thermal stability of materials, FT-IR spectroscopy is an established method for indentifying substances and quantifying sample components. So the combination of both techniques opens up new possibilities for analyzing macroscopic material characteristics on molecular level.

The Netzsch/Bruker-TG-FTIR-coupling has been developed by engineers of both companies. The main goal of this close cooperation has been to find an optimal combination of the two analysis systems with regard to capacity and ease-of-use of the complete system.

With the TG-FTIR coupling, both companies provide their customers a unique system for analyzing important material properties. In the field of polymer manufacturing and processing, for example, additives can be identified and even quantified. Moreover, the coupling technique gives a valuable insight into the aging and decomposition processes, even in interaction with different atmospheres. The identification and quantification of solvent residues as well as the determination of the storage stability of formulations are by now routine methods in the pharmaceutical industry, but only the TG-FTIR coupling is capable of yielding these measurement results with only one single experiment. The number of possible fields of application is immense because the combination of thermal and molecular- spectroscopic analyses is capable of revealing fundamental chemical and physical properties of a huge number of materials.

Over the years, both companies have been constantly improving this TG-FTIR coupling technique to offer the best possible solution for the individual analytical questions of their customers. Besides the optimal combination of both analysis techniques, companies also focus on a competent customer service. For this reason,

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supporting customers on application matters, offering training courses and organizing information events will be an integral part of this successful cooperation also in the future.

### About Netzsch - Analyzing & Testing

NETZSCH is a business unit of the NETZSCH group with more than 2200 employees worldwide. The enterprise is headquartered in the Bavarian town of Selb, Germany. The Netzsch business unit Analyzing & Testing offers a complete range of thermoanalytical

instruments for research and quality control in the field of polymer manufacturing and processing, in the chemical industry, in the inorganic building materials industry and in the field of environmental analysis.

Instruments for determining thermophysical properties (e.g. thermal conductivity) of solids, melts and liquids as well as adiabatic reaction calorimeters complete the NETZSCH product line. NETZSCH stands for technologically high-quality products which can meet nearly all demands regarding performance, versatility and fields of use. Moreover, NETZSCH has a well-developed global service and support network. All this makes NETZSCH one of the world's technology leaders in the field of material characterization. For more information visit the website [www.netzsch-thermal-analysis.com](http://www.netzsch-thermal-analysis.com).

### About Bruker Optics

Bruker Optics is the leading manufacturer and worldwide supplier of FT-IR, FT-NIR, Raman and TD-NMR spectrometer systems. Our products and services support our industrial and academic customers in solving various kinds of analytical problems. Our analysis systems ensure a reliable incoming goods inspection and product quality monitoring. In field of process control, our instruments are essential components for monitoring and optimizing industrial processes. In the industrial sector, our robust analyzers are used for on-site analyses in the product release process. For environmental analysis as well as security and safety issues, our portable instruments identify unknown substances - at any place and in all weathers.

In the R&D sector, our spectrometer systems are used for material characterization, structure determination and understanding chemical processes. Our global distribution and service network is well-developed, so we can ensure a competent consulting service and quick support on site.

We constantly improve our products and services to offer our customers also in the future the most innovative analysis systems as well as comprehensive and satisfying service. Bruker Optics is part of the Bruker Corporation (NASDAQ:BRKR) Bruker

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Analyzing & Testing  
Business Unit

Optics has R&D and manufacturing centers in Ettlingen, Germany and The Woodlands, USA. For more information visit the website [www.brukeroptics.com](http://www.brukeroptics.com).