

Fourier Transform InfraRed Spectroscopy

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Fourier Transform Infrared Spectroscopy Latest News

Recently, a report explains how experts use the Fourier Transform Infrared Spectroscopy (FTIR) to analyse post-blast forensic investigations.

About Fourier Transform Infrared Spectroscopy

- It is also known as FTIR Analysis or FTIR Spectroscopy.
- It is a **powerful analytical tool** for identifying **chemical constituents** and elucidating compound structures in various real-world samples.
- It does this by analyzing the vibrational modes of molecular functional groups.
- **Working:** The FTIR analysis method uses **infrared light** to scan test samples and observe chemical properties.
- It gives information **about molecular vibrations**, provides identification of functional groups and also identifies chemical components, molecules and molecular segments.

- This technique is useful for analyzing the chemical composition of smaller particles, **typically 10 -50 microns**, as well as larger areas on the surface.
- It is a technique used to obtain **an infrared spectrum** of absorption or emission of **a solid, liquid or gas**.

Applications of Fourier Transform Infrared Spectroscopy

- **Industries:** It is an established technique for quality control when evaluating industrially manufactured material.
- **Environment:** It is used for monitoring **air quality, testing water quality**, and analyzing soil to address environmental and health concerns caused by increasing pollution levels.
- **Chemical Field:** It is used to **identify organic**, polymeric, and, in some cases, **inorganic materials**.

Source: **TH**

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