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Title

Terahertz Time-Domain Spectroscopy of Gases, Liquids, and Solids

Source

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Abstract

The techniques and methods employed in the spectroscopic characterization of gases, liquids, and solids in the terahertz frequency range are reviewed. Terahertz time-domain spectroscopy is applied to address a broadband frequency range between 100 GHz and 5 THz with a sub-10 GHz frequency resolution. The unique spectral absorption features measured can be efficiently used in material identification and sensing. Possibilities and limitations of fundamental and industrial applications are discussed.