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标题: Fuel Property Determination of Biodiesel-Diesel Blends By Terahertz Spectrum
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摘要: The frequency-dependent absorption characteristics of biodiesel and its blends with conventional diesel fuel have been researched in the spectral range of 0.2-1.5 THz by the terahertz time-domain spectroscopy (THz-TDS). The absorption coefficient presented a regular increasing with biodiesel content. A nonlinear multivariate model that correlating cetane number and solidifying point of bio-diesel blends with absorption coefficient has been established, making the quantitative analysis of fuel properties simple. The results made the cetane number and solidifying point prediction possible by THz-TDS technology and indicated a bright future in practical application.
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