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Title:Terahertz time-domain spectroscopy of Clenbuterol hydrochloride

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Abstract:The terahertz spectra of Clenbuterol hydrochloride in the range of 0.2 to 2.6 THz were obtained by THz time-domain spectroscopy, the absorption and refraction spectra of Clenbuterol hydrochloride was got meanwhile. The structure and vibrational frequencies of Clenbuterol molecule, Clenbuterol hydrochloride molecule and Clenbuterol hydrochloride crystal in the THz range were simulated. Based on the difference between experimental and theoretical results, the origin of the vibrational frequencies was analyzed. This study demonstrated the feasibility of time-domain terahertz spectroscopy for the identification of Clenbuterol hydrochloride and provides a new way for the detection of Clenbuterol hydrochloride.

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