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Title:Feature extraction without phase error for THz reflective spectroscopy

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Abstract:We propose two methods for avoiding misplacement phase error in terahertz reflection time-domain spectroscopy (THz-RTDS). The absorption signatures of the materials are extracted directly from the second-order derivative of the phase of the sample beam or the first derivative of the relative reflectance with respect to frequency. The techniques provide straightforward and fast solutions to solve the phase-retrieval problem in RTDS.

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