

Abstract Submitted
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Optical Parameter Extraction of Nano-Layered Materials Using Terahertz Time-Domain Spectroscopy¹ FARAH VANDREVALA, ERIK EINARSSON, University at Buffalo — We report a data analysis technique for reflection-mode terahertz time-domain spectroscopy (THz-TDS) to extract the complex refractive index of nano-layered materials deposited on optically thick substrates. We measure the Fabry-Perot resonances occurring inside the substrate to determine the Fresnel coefficients at the interface of the material and the substrate. Based on these values, we extract the frequency-dependent optical parameters, including surface conductivity, of the nano-layered materials for frequencies up to 3 THz.

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