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Title

Broadband terahertz characterization of the refractive index and absorption of some important polymeric and organic electro-optic materials

Source

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Abstract

We report broad bandwidth, 0.1-10 THz time-domain spectroscopy of linear and electro-optic polymers. The common THz optical component materials high-density polyethylene, polytetrafluoroethylene, polyimide (Kapton), and polyethylene cyclic olefin copolymer (Topas) were evaluated for broadband THz applications. Host polymers polymethyl methacrylate, polystyrene, and two types of amorphous polycarbonate were also examined for suitability as host for several important chromophores in guest-host electro-optic polymer composites for use as broadband THz emitters and sensors. (23 References).