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Title:A wideband and dual-resonant terahertz metamaterial using a modified SRR structure
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Abstract:We present the desgin, fabrication and measurment of a dual-resonant broadband terahertz (THz) matamterial based on a modified split-ring resonator (MSRR) structure. The proposed MSRR is constructed by connecting the inner split ring with the outer split ring of adjacent cell. Transmission and reflection characteristics of the proposed structure are simulated using Ansoft HFSS, and the permittivities show negative values in 0.492-0.693 THz and 0.727-0.811 THz bands. The designed sample is fabricated on a gallium arsenide layer, and experiments are performed in Terahertz Time-Domain Spectroscopy. Measured transmission characteristics agree well with the simulations.
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