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Title:Resonant filtering characteristic of symmetrical complementary metamaterial at terahertz frequencies

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Abstract:An equivalent circuit model was used to analyze a symmetrical complementary metamaterial for resonant filtering characteristic at terahertz frequencies. Using terahertz time-domain spectroscopy system, we examined the transmittance spectra for the metamaterial structure. The experimental results validate those of the theoretical predictions. The structure could lead to be a terahertz wave bandpass filter with a narrow transmission bandwidth centered at 2.01 THz and very sharp edges.

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