

209

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Title:Experimental demonstration of terahertz metamaterial absorbers with a broad and flat high absorption band

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Abstract:We present the design, numerical simulations and experimental measurements of terahertz metamaterial absorbers with a broad and flat absorption top over a wide incidence angle range for either transverse electric or transverse magnetic polarization depending on the incident direction. The metamaterial absorber unit cell consists of two sets of structures resonating at different but close frequencies. The overall absorption spectrum is the superposition of individual components and becomes flat at the top over a significant bandwidth. The experimental results are in excellent agreement with numerical simulations. © 2012 Optical Society of America.

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