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Title:Polarization-independent metamaterial absorber for terahertz frequency

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Abstract:We present the design, fabrication, as well as the characterization of the large incident angle and polarization independent terahertz (THz) metamaterial absorber. The designed absorber consists of metallic cross structure and a metallic ground plane separated with a dielectric as a spacer, this structure shows a strong resonance at terahertz frequency. The influences of the structural parameters (including period, cross width and spacer thickness) on the absorption are discussed. An optimized structure is fabricated and characterized, and a good agreement between simulation and experimental result is obtained. The metamaterial absorbers are potential candidates as absorbing elements for terahertz imaging and other fields of terahertz technology. © Springer Science+Business Media, LLC 2012.

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