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Title:A realistic design of three-dimensional full cloak at terahertz frequencies
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Abstract:This paper presents a realistic design of a three-dimensional invisibility full cloak device at Terahertz frequency, consisting of radially arranged polymer slabs covered with III-V semiconductor materials featuring Drude-like resonance. By applying high order optical transformation, it is possible to constrain the semiconductor layer of constant thickness for the convenience in practical fabrication. The anisotropic and spatially variant material constants are realized by adjusting the filling ratio of the polymer slabs. Such a structure can be readily fabricated using high-aspect ratio three-dimensional microfabrication of polymeric slabs in combine with conformal deposition of the semiconductor cladding layer. © 2012 American Institute of Physics.
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