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Accession number:20113414251900
Title:Stacked-and-drawn metamaterials with magnetic resonances in the terahertz range
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Source title:Optics Express
Abbreviated source title:Opt. Express
Volume:19
Issue:17
Issue date:August 15, 2011
Publication year:2011
Pages:16480-16490
Language:English
E-ISSN:10944087
Document type:Journal article (JA)
Publisher:Optical Society of America, 2010 Massachusetts Avenue NW, Washington, DC 20036-1023, United States
Abstract:We present a novel method for producing drawn metamaterials containing slotted metallic cylinder resonators, possessing strong magnetic resonances in the terahertz range. The resulting structures are either spooled to produce a 2-dimensional metamaterial monolayer, or stacked to produce three-dimensional multi-layered metamaterials. We experimentally investigate the effects of the resonator size and number of metamaterial layers on transmittance, observing magnetic resonances between 0.1 and 0.4 THz, in good agreement with simulations. Such fibers promise future applications in mass-produced stacked or woven metamaterials.
Number of references:44