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Abstract:We investigate the electromagnetic characteristics of fractal split-ring resonators (SRRs) in the terahertz region by applying the fractal structure of a Koch curve to the SRRs in order to modify the electromagnetic response. The resonant frequency of the SRRs decreases as the fractal level of the Koch curve increases, indicating the possibility of fabricating metamaterials with extremely small unit cell sizes comparable to the wavelength of the electromagnetic waves at the operating frequency. © 2012 The Japan Society of Applied Physics.
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