300. Title:Recent progress in electromagnetic metamaterial devices for Terahertz applications
Authors:Tao, Hu (1); Padilla, Willie J. (2); Zhang, Xin (1); Averitt, Richard D. (3)
Source title:IEEE Journal on Selected Topics in Quantum Electronics
Volume:17
Issue:1
Issue date:January-February 2011
Publication year:2011
Pages:92-101
Language:English
Document type:Journal article (JA)
Abstract:Recent advances in metamaterials (MMs) research have highlighted the possibility to create novel devices with unique electromagnetic (EM) functionality. Indeed, the power of MMs lies in the fact that it is possible to construct materials with a user-designed EM response at a precisely controlled target frequency. This is especially important for the technologically relevant terahertz (THz) frequency regime with a view toward creating new component technologies to manipulate radiation in this hard to access wavelength range. Considerable progress has been made in the design, fabrication, and characterization of MMs at THz frequencies. This article reviews the latest trends in THz MM research.