Abstracts

FDTD modeling of an artificially synthesized absorbing medium

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In this letter we investigate an artificially synthesized absorbing medium by using the finite-difference time-domain (FDTD) and waveguide simulation techniques. The artificial medium comprises a doubly periodic array of lossy electrical and magnetic media (i.e., an /spl epsi/-only and /spl mu/-only checkerboard) and we compute its reflection coefficient for normal and oblique angles of incidence. It is demonstrated that, if properly designed, the reflection characteristics of the checkerboard are far superior to those of a uniform material of the same thickness with /spl epsi/=/spl mu/.

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