

HORIZONTALLY PLASMON HYBRIDIZATION ON SYMMETRIC-BREAKING METAMATERIALS

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TÓM TẮT:

In this report, we present a study on the fundamental negative-permeability metamaterials, named as the cut-wire-pair structure. The physics of the cut-wire-pair metamaterial is interpreted using the electromagnetic analog of molecular-orbital theory. It is shown that a symmetric-breaking cut-wire-pair metamaterial is horizontally plasmon-hybridized, leading to an additional magnetic resonance beyond the conventional one. The transmission spectra and the induced energy distributions are performed to demonstrate our prediction