

513. Title:Double-T metamaterial for parallel and normal transverse electric incident waves

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Abstract:Electric and magnetic hybridized plasmonic modes are obtained by stacking two T-shaped resonators. We show that head-to-toe configuration leads to inverse the hybridization. The frequency shift between the resonances is finely controlled by adjusting the gap between the two resonators. A negative refractive index close to -1 is numerically and experimentally demonstrated at 4.3 GHz for TE waves. This left-handed behavior is similar for parallel and normal TE incident wave vectors. The proposed double-T unit cell is well adapted for developing terahertz and IR metamaterials.