

Abstract Submitted
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Microwave metal-dielectric metamaterials with magnetic inclusions BRITTANY BATES, BRANDON ALLISON, Norfolk State Univ, NICOLE GREENE, Cornell Univ, NATALIA NOGINOVA, Norfolk State Univ — Use of natural magnetic materials as a constituent part of metamaterials is attractive as they provide a possibility to tune material parameters at microwave range and THz frequency with external magnetic fields. Metal-dielectric multilayers and wire arrays structures were fabricated using both ferromagnetic and nonmagnetic metals. These structures were studied in free space microwave propagation experiment. We show that a cube of such a metamaterial operates as a focusing lens and a polarizer with a possibility of tuning with external magnetic field.

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