

Abstract Submitted
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Reconfigurable Terahertz Metamaterials¹ H. TAO, A.C. STRIKWERDA, K. FAN, Boston University, W.J. PADILLA, Boston College, X. ZHANG, R.D. AVERITT, Boston University — We have fabricated arrays of gold split ring resonators on 400 nm thick silicon nitride films where each individual unit cell is a free-standing cantilever. The fabricated metamaterials are resonant at terahertz frequencies. Through temperature tuning, the orientation of the SRRs can be precisely controlled. This, in turn, provides direct control of the electromagnetic response enabling independent access and tuning of the electric and magnetic properties. Such adaptive structures serve as the starting point for the development of a host of new functional electromagnetic devices which take advantage of designed and tunable anisotropy [1].

[1] H. Tao, et al., Phys. Rev. Lett. **103**, 147401 (2009).

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