

438

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Title:Terahertz chiral metamaterials with giant and dynamically tunable optical activity

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Abstract:We demonstrated giant optical activity using a chiral metamaterial composed of an array of conjugated bilayer metal structures. The chiral metamaterials were further integrated with photoactive inclusions to accomplish a wide tuning range of the optical activity through illumination with near-infrared light. The strong chirality observed in our metamaterials results in a negative refractive index, which can also be well controlled by the near-infrared optical excitation.

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Inspec controlled terms:chirality - lighting - metamaterials - optical rotation - refractive index - terahertz materials

Uncontrolled terms:terahertz chiral metamaterials - giant optical activity - conjugated bilayer metal structures - photoactive inclusions - illumination - near-infrared light - negative refractive index - near-infrared optical excitation

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