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Title:Composite metamaterials with tunable chiral properties at terahertz frequencies
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Abstract:We propose a three-dimensional chiral metamaterial consisting of arrays of multi-layered mutually twisted sandwich metallic spirals. Such structure exhibits a negative refractive index at terahertz frequencies for its chirality. The chirality with varied refractive index can be achieved and tuned by changing the configurations. The presented structure offers flexibility for investigating electromagnetic properties of chiral metamaterials in the terahertz regime, thus leading to a unique route toward terahertz device applications.
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