

Abstract Submitted
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Microwave propagation in chiral metamaterials AIDA PRYBYLSKI, Norfolk State Univ, LUIS YON, Granby High School, Norfolk, VA, NATALIA NOGINOVA, Norfolk State Univ — Chiral hyperbolic metamaterials are predicted to show interesting properties associated with possible topological photonic states in these materials, which present new opportunities for light control and manipulation. As prototypes, we consider two metal-dielectric systems designed for microwave range: a twisted wires array, where chirality is associated with shape of metal inclusions, and a rotated layer system, with parallel wires in each layer, and direction of the wires orientation rotated from layer to layer. Systems with different content of metal and layer-to-layer distance were fabricated and studied in the free space propagation experiment. The results were discussed in terms of effective media consideration.

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