

Abstract Submitted
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Elastically tuned defect mode in cholesteric elastomers JUAN ADRIAN REYES, LAURA OLIVIA PALOMARES, Instituto de Fisica Universidad Nacional Autonoma de Mexico — We consider an axially elongated cholesteric elastomer having a twist defect. We show that its localized mode can be mechanically tuned, and the scaling of the inverse relative line width can be largely enhanced when the values of the deformation and shape anisotropy are near the pseudo isotropic curve. This choice causes a tremendous variation in the behavior of the photon dwell time in the defect mode, which then grows linearly versus the sample thickness. The shift of the defect wavelength, the reflection band width, and the angle between the electric and magnetic fields are also calculated.

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