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Twist Defect in an Imprinted Cholesteric Elastomer[1] PAOLA CASTRO-GARAY, Departamento de Investigación en Física, Universidad de Sonora, Hermosillo, México, JUAN ADRIAN REYES, Departamento de Física Química, Instituto de Física, Universidad Nacional Autonóma de México, D.F, México, ADALBERTO CORELLA-MADUEÑO, Departamento de Física, Universidad de Sonora, Hermosillo, Son., México — We have found that a chiral twist defect inserted in a cholesteric elastomer gives rise to circularly polarized localized modes of both handedness. This defect enhances the resonance mode amplitude whose handedness is opposite to the cholesteric helix for high cross-linked density. Complementarily, for low cross-linked density, the circular polarization opposite to helix cholesteric of the elastomer is decoupled with the defect mode so that the resonance mode disappears . Finally, the resonance mode of the circularly polarization of the same handedness to elastomer helix is maintained either, for high or low cross-linked density.

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