

Abstract Submitted
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Electric Field Response of Electroclinic Liquid Crystal Elastomers BANAHALLI RATNA, Naval Research Laboratory, CHRISTOPHER SPILLMANN, JAWAD NACIRI — Supramolecular ordered assemblies such as liquid crystal elastomers provide an excellent framework for incorporating anisotropy as well as functionalities in materials that respond to external stimuli. Electroclinic Liquid Crystal Elastomers (ELCEs) are of particular interest due to their ability to exhibit linear actuation under an applied voltage. The crosslinked elastomer network consists of chiral liquid crystal mesogens attached to a polymer backbone and exhibiting a chiral smectic A phase with large field induced tilt angle. The response of these materials to electric field and their mechanical properties will be discussed.

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