

Abstract Submitted
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Switchable Diffraction Gratings Holographically Formed in Polymer-Dispersed Liquid Crystal Cells using He-Ne Laser ROBERT RAMSEY, SURESH SHARMA, University of Texas at Arlington — We report on the holographic formation of switchable diffractive transmission gratings in polymer-dispersed liquid crystal cells by using the 632.8 nm wavelength of He-Ne laser. We present results for the micro-structure, diffraction efficiency and switching characteristics for gratings utilizing E8 liquid crystal along with monomers having varying values of functionality and chemical makeup. For monomers having high values of functionality we note a large increase in diffraction efficiency up to 67% while at the same time an increase in the switching fields required to have a switchable grating are 8 MV/m.

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