

Polymer-dispersed Liquid Crystal Films for Storing Optical Holographic
Images

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Abstract

We have developed an economic liquid crystal-polymer dispersion material that can be used for storing optical holographic images. In this paper, we demonstrate the use of thin samples of this material for such an application. The obtained results show that the written gratings-holograms are permanent, but are electrically switchable. Furthermore, the diffraction efficiency is high and does not change significantly after many tests over a period of months. Thus, we believe this material is promising for practical uses.