

Microscopy and Dynamic Responses in Ferrosmectics

Praveen Malik

*Liquid Crystal Lab, Department of Physics, DR B R Ambedkar National Institute of Technology Jalandhar, Punjab, 144011, INDIA
E-mail: malikp@nitj.ac.in*

Abstract—*Ferroelectric liquid crystals (FLCs) are a special class of liquid crystals (LCs) materials in which LC molecules exhibits in the form of layers. These materials has shown a great scientific interest due to their unique physical properties. FLCs material are useful in fast respond display devices. In the present work, magnetic nanoparticles are dispersed into ferroelectric liquid crystal (FLC) mixture and studied for their texture and switching and polarization mechanism. Results show that dispersion of magnetic nanoparticle has some considerable effect on textures, switching time and other physical characteristics.*

Keywords: *ferroelectric liquid crystal, nanoparticles, polarization, response time, textures.*