

EFFECT OF BULK ORIENTATIONAL
ORDERING ON NEMATIC - LC POLYMER
INTERFACE

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Polarization microscopy and birefringence method are used to study the temperature stability of orientation of liquid crystal (LC) and liquid crystalline polymer (LCP) in 'LCP - LC - LCP' sandwiches. It is found that an orientation of the system disappears only after a thermal curing at temperatures where both components are isotropic. The result is explained by the presence of ordering in interfacial layers if at least one component is in the nematic phase. On the basis of the mean field theory, a simple theoretical model of two contacting nematics is proposed to show that ordering in the interfacial layer can be attributed to the anisotropic part of the interaction between LC and LCP molecules.