

Studies of the Orientational Disorder at the Isotropic to Smectic-F Interface

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Density studies on the isotropic to smectic-F transition in higher homologues of *N*-(*p*-alkoxybenzylidene)-*p*-*n*-decylanilines (*n*O.10) mesomorphic compounds with *n* = 13, 14 and 15 and corresponding studies on thermal expansion coefficient maxima confirm the first order nature of this transition. The density shows strong pretransitional fluctuations, which are estimated by α_{eff} in the vicinity of the mesomorphic fluctuation dominated non-linear region (FDNLR) of this phase transition. The growth of the density fluctuations across this transition is discussed in the light of data on the same transition in other compounds.

Key words: Orientational Order; Density; Smectic-F.