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Synthesis and Mesomorphic Properties of 3, 5-disubstituted -4,5-dihydroisoxazole Derivatives

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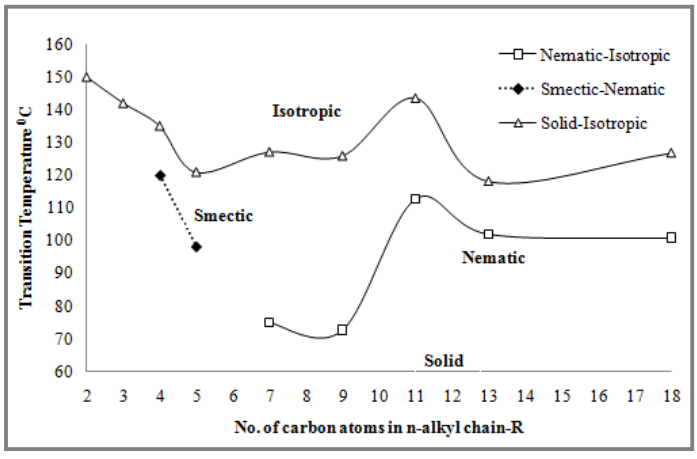
ABSTRACT

It reported that the synthesis and evaluation of thermal behavior of a new homologous series of 4,5-dihydroisoxazole based liquid crystalline compounds. The flexibility in these systems is provided by attaching straight chain saturated aliphatic carboxylic acids, RCOOH ($R=C_nH_{2n+1}$) where, n=2-5, 7, 9, 11, 13, 17. The synthesized compounds were analyzed on the basis of mass, IR and NMR spectroscopy. The melting points, transition temperatures and mesophase morphologies were determined mainly by polarizing optical microscopy (POM) in conjunction with a hot stage and by differential scanning calorimetry (DSC).

Graphical Abstract



Plot of transition temperature against the number of carbon atoms in the n-alkoxy chains for **3(a-i)**

Keywords: Mesophases, Heterocycles, Enantiotropy, Chalcone.