

Induced smectic-G Phase through Intermolecular Hydrogen Bonding, Part XV:

Thermal and Phase Behaviour of *p*-hydroxybenzylidene-*p*-*n*-alkylanilines : *p*-*n*-alkoxybenzoic Acids

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Two novel series of liquid crystalline compounds involving intermolecular hydrogen bonding between mesogenic *p*-*n*-alkoxybenzoic acids (*n*ABA) (where *n* denotes the alkoxy carbon number varying from propyl- to decyl- and dodecyl-) and *p*-hydroxybenzylidene-*p*-*n*-alkylanilines (HB*m*A) (where *m* represents the alkyl carbon numbers 4 and 9) were synthesized. The thermal and phase behaviour of these materials has been studied by thermal microscopy (TM) and differential scanning calorimetry (DSC). A detailed IR spectral investigation in solid and solution states confirms the formation of H-bonding between –OH and –COOH groups of HB*m*A and *n*ABA, respectively. Comparative thermal analyses of both free *p*-*n* alkoxybenzoic acids and H-bonded complexes and their analogues series imply the induction of smectic-G phase in all the complexes.

Key words: Smectic-G; H-bonding; HB*m*A; *n*ABA