

Synthesis and mesogenic properties of mono and binuclear complexes derived from salicylidene Schiff bases

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Abstract

The synthesis of new mono and binuclear complexes derived from Schiff bases viz., N(4-alkyloxysalicylidene)-4'-n-alkylanilines and N(4-alkyloxysalicylidene)-4'-(2-methylbutyl)aminocinnamates are carried out and their liquid crystalline properties have been investigated. The mono nuclear complexes exhibit smectic A, smectic C and smectic E phases, while the binuclear complexes exhibit viscous liquid crystalline smectic A phase. The isotropic-liquid crystalline transition temperatures of the binuclear complexes in general are found to be lower than their corresponding mononuclear homologues. It was found that the mono nuclear complexes exhibit sharp liquid crystalline-isotropic transition temperatures while the binuclear complexes melts over a temperature range. These interesting results shall be presented.

