



**Synthesis, characterization and liquid crystals properties for N, N'-
(3,3'-dimethylbiphenyl-4,4'-diyl) dialkanamide**

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ABSTRACT

Homologous series of amide compounds were synthesized. Their structures were elucidated using spectroscopic techniques such as FT- IR (Infrared), ¹H-NMR. Mesomorphic properties and phase transitions were studied using polarized hot stage optical microscopy and differential scanning calorimetry (DSC), and are discussed as a function of the number of carbon atoms in the amide chain. It has been found that four compounds in the series are pure nematic mesophase.

Keywords: O-Tolidine amide, Nematic, Liquid Crystals, Mesophase.
