

Dielectric Properties of Strongly Polar Nematogens

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Results of the static and dynamic dielectric investigations of four liquid crystalline compounds consisting of two or three phenyl rings with *n*-alkoxy and cyano terminals, carboxylic bridging groups, and fluoro lateral substituents in pure state and in the solution of low polar liquid crystalline medium, are presented. These compounds form the nematic phase being a monotropic one in the case of two ring compounds. The dielectric parameters are analyzed in relation to the dipolar structures of the molecules. The dielectric properties of pure substances are strongly influenced by conductivity and dimerization effects, while extracted from the data for solutions are consisted well with the structures. In the nematic phase the compounds exhibit a crossover of the principal permittivity components among the kilo and megahertz frequency range.

Key words: Liquid Crystals; Nematic Phase; Dielectric Properties; Dipolar Structure.