

Dielectric Properties of 4-methoxy-4'-cyanobiphenyl (1 OCB) in the Supercooled Isotropic and Nematic Phases

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Dielectric studies of 4-methoxy-4'-cyanobiphenyl (1 OCB) in the supercooled isotropic and nematic phases were performed with the aid of three set-ups covering the frequency range 10 kHz – 5 GHz. In the static measurements the nematic phase could be supercooled down to 25 K below the clearing point, whereas in the dynamic studies a 12 K range was covered in a single run. The relaxation times and activation enthalpies characterising the molecular rotations around the principal inertia moment axes were determined. The predictions of theories based on the assumption of the rod-like molecules are well applicable to the dielectric data obtained.

Key words: Liquid Crystal; Nematic; Dielectric Properties; 1 OCB.