

Static and Dynamic Dielectric Properties of Mesogenic *n*-Nonyloxycyanobiphenyl (9OCB)

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The dielectric properties of *n*-nonyloxycyanobiphenyl in the isotropic (I), nematic (N) and smectic A (S_A) phases were investigated. The dielectric relaxation spectra, recorded in the frequency range 50 kHz – 100 MHz, were analyzed with use of the Cole-Cole equation. An anomalous temperature behavior of the static permittivity, the rotational diffusion exponent and the activation energy of mesogenic molecules rotating around their short axis, observed in the vicinity of the phase transitions, are discussed.

Key words: *n*-Nonyloxycyanobiphenyl; 9OCB; Dielectric Properties; Relaxation; Anomalous Rotational Diffusion Exponent; Activation Energy.