

ACOUSTIC INVESTIGATION OF RELAXATION PROPERTIES OF NEMATIC LIQUID CRYSTALS

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The investigation of nematic liquid crystals dynamic state in rotational and conic magnetic fields has been made by the acoustic method. It is shown that the results of hydrodynamic theory can be used to describe the variation of sound attenuation with time. The experimental data obtained are in agreement with theoretical simulation of nematic behavior in conic and rotational magnetic fields. The pressure and temperature dependence of the time of orientation relaxation may be explained in framework of the free volume theory.