High-pressure DTA Studies of the Phase Behaviors of 4-*n*-butyl-thiocyanobiphenyl (4TCB) and 4-*n*-pentyl-4′-*n*-phenyl-cyanocyclohexane (5HCP)

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DTA measurements of 4-*n*-butyl-thiocyanobiphenyl (4TCB) and *p*-cyano-*p*′-pentylphenyl-cyclohexane (5HCP) have been performed in the temperature range 220 K – 390 K and pressures up to 400 MPa. For 4TCP a transition from a crystalline to a liquid crystal phase (probably smectic E) could be detected at higher pressures > 90 MPa. The pressure dependence of the transition temperature has been established. At pressures lower than 88.7 MPa no transition of SmE into a crystal or into a glass has been found. For 5HCP only the melting curve was observed, in contrast to 5PCH, which displays a liquid crystalline nematic phase.

Key words: DTA; High Pressures; Phase Transitions; Liquid Crystals.