Study of Azo Dye-*n*TPEB Mixtures in the Nematic and Smectic B Phases by Means of Polarized Light Absorption

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The influence of the dichroic azo dye on the phase transition temperatures of the mesogenic homologous series of 1-[4-*n*-alkyl-biphenyl]-2-[4-isothio-cyanatophenyl] ethane (*n*TPEB) for $n = 2$ - 10 has been examined. For the dye-*n*TPEB mixtures the polarized absorption spectra as a function of temperature have been recorded. From these spectra the order parameter of the dye dissolved in the liquid crystalline hosts in the whole region of the nematic phase has been determined. The order parameter has revealed the odd-even alternation, similarly as the clearing temperature. In the smectic B phase the mosaic texture has been observed and conclusions concerning structural form of this phase have been drawn.

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