

The Elastic Constants of Nematic *n*-Hexylcyanobiphenyl Determined with the Capacitance Method

G. Czechowski, S. Czerkas^a, and J. Jadżyn

Institute of Molecular Physics, Polish Academy of Sciences,
Smoluchowskiego 17, 60-179 Poznań, Poland

^a Universität Bielefeld, Fakultät für Physik D2, Universitätsstr. 25, 33501 Bielefeld, Germany

Reprint requests to Prof. J. J.; Fax: (61) 86-84-524; E-mail: jadzyn@ifmpan.poznan.pl

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The splay (K_{11}) and bend (K_{33}) elastic constants of *n*-hexylcyanobiphenyl (C_6H_{13} -Ph-Ph-C \equiv N) were determined from the voltage (U) dependence of the capacitance (C) of the planar nematic cell with a small molecular pretilt angle. The capacitance changes are due to distortion of the director \mathbf{n} driven by the applied electric field. K_{11} was obtained from the Freedericksz threshold voltage (U_{th}) and K_{33} from the $C(U)$ dependence above the threshold voltage by means of the method proposed by Gruler et al. and Uchida et al. The significance of the pretilt angle in the determination of K_{33} is discussed.

Key words: Elastic Constants; Nematic; *n*-Hexylcyanobiphenyl; Pretilt Angle.