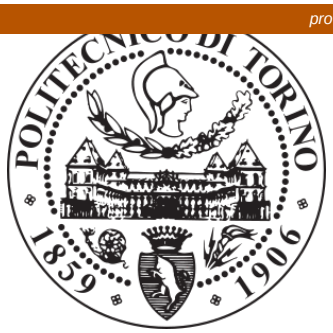

Hybrid aligned nematics and second order elasticity

Hybrid Aligned Nematics and second order elasticity

A Sparavigna *et al* 1991 *Phys. Scr.* **43** 210-215 doi:10.1088/0031-8949/43/2/017

A Sparavigna[1], L Komitov[2] and A Strigazzi[1]

[1] Dipartimento di Fisica, Politecnico di Torino; C.I.S.M. and I.N.F.M., Unità di Torino; C.so Duca degli Abruzzi, 24 I-10129 Torino, Italy

[2] Physics Department, Chalmers University of Technology, S-41296 Gothenburg, Sweden

Abstract. The effect of the second order elasticity on the critical thickness of Hybrid Aligned Nematic cells possessing either weak planar or weak homeotropic anchoring has been analysed. It is found that the critical thickness of such cells is strictly dependent on the surface elastic constant K_{13} and on the second order bulk elastic constant K^*. Moreover, an experimental method for an indirect measurement of K_{13} and K^* is proposed.

Print publication: Issue 2 (1991)
Received 23 August 1989