TIZIANA GIORGI, New Mexico State University

Switching mechanism in the $B_{1RevTilted}$ phase of bent-core liquid crystals

The $B_{1\mathrm{RevTilted}}$ is a uniformly smectic tilted columnar phase in which the macroscopic polarization can be reorientated via electric fields. To study the effects of the various physical parameters on the reorientation mechanism, we consider a local, and a non-local Landau-de Gennes type energy functional, both used in the physics literature. For the case of large columnar samples, we show that the energies give the same qualitative behavior, with a primary role played by the coefficients of the terms that describe the interaction between polarization and nematic vectors.