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Tiziana Giorgi* (tgiorgi@nmsu.edu). *Analysis of a one-dimensional Landau-de Gennes model for bent-core liquid crystals.*

We consider an energy functional used in the physics literature to model the switching mechanism seen in a columnar phase of bent-core molecule liquid crystals. In this phase, it is possible to reorient the spontaneous polarization by applying an electric field, the reorientation can be achieved by either a rotation around the smectic cone or the molecular axis, or a combination of both. Building on previous results, we derive the closed form of the Γ -limit in the large column regime. (Received September 16, 2016)