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Daniel Phillips* (phillips@math.purdue.edu) and **Patricia Bauman**. *Modeling and stability for bent-core liquid crystal fibers.*

We consider drawn fibers formed from cylindrical, smectic layers of banana-shaped liquid crystal molecules. The molecular shape induces both a spontaneous polarization and a distinctive effect on layer density. These features lead to a model that predicts stable fiber formation. We analyze solutions from this model and their electro-magnetic properties.

This is joint work with P.Bauman (Received July 31, 2007)