

## Nematic Boojum Structure

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Using the Landau-de Gennes phenomenological approach, we study the fine biaxial core structure of a boojum residing on the surface of a nematic liquid crystal phase. The core is formed by a negatively uniaxial finger, surrounded by a shell with maximal biaxiality. The characteristic finger's length and the shell's width are comparable to the biaxial correlation length. The finger tip is melted for topological reasons. Upon decreasing the surface anchoring strength below a critical value, the finger gradually leaves the bulk and it is expelled through the surface. We show that the core structure could be amplified to macroscopic sizes with an external magnetic field in case of liquid crystal exhibiting negative field anisotropy.