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Nematic liquid crystal bridges SUSANNAH DOSS, PERRY ELLIS, Georgia Institute of Technology, JAYALAKSHMI VALLAMKONDU, National Institute of Technology, Warangal (India), EDWARD DANEMILLER, MARK VERNON, ALBERTO FERNANDEZ-NIEVES, Georgia Institute of Technology — We study the effects of confining a nematic liquid crystal between two parallel glass plates with homeotropic boundary conditions for the director at all bounding surfaces. We find that the free surface of the nematic bridge is a surface of constant mean curvature. In addition, by changing the distance between the plates and the contact angle with the glass plates, we transition between loops and hedgehogs that can be either radial or hyperbolic.

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