

Abstract Submitted
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Nematic Order on Foams BRYAN CHEN, RANDALL KAMIEN, University of Pennsylvania — We investigate the competition between nematic order and area minimization in nematic foams, in particular, how the structure is affected by the bending of the nematic director, and whether these systems will continue to obey Plateau's laws. We study the minimum energy configurations of the director field on a one parameter family of perturbed Reuleaux tetrahedra with special attention to the location of topological defects. We determine the energy distribution at the Plateau borders versus the film surface and relate the change in structure to changes in elastic constants and surface tension.

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