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Controlling the location of defects in nematic shells

ALBERTO FERNANDEZ-NIEVES, Georgia Tech, TERESA LOPEZ-LEON, MAURIZIO NOBILI, CHRISTOPHE BLANC, University of Montpellier 2 — We study nematic shells with four $s=+1/2$ defects and vary the elastic constant anisotropy of the liquid crystal by approaching the nematic-to-smectic phase transition temperature. We find the defects ultimately arrange themselves along a great circle, consistent with recent expectations. Changing the elastic constant anisotropy provides an alternative route to changing the shell thickness inhomogeneity for controlling the defects location.

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