

Abstract Submitted
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Coalescence Dynamics Analysis Of Islands In Smectic A Freely Suspended Films¹ ZOOM NGUYEN, University of Colorado, Boulder, CHEOL PARK, JOSEPH MACLENNAN, MATTHEW GLASER, NOEL CLARK — We explore the coalescence dynamics of circular islands in smectic A freely suspended liquid crystal films. The process typically has two distinct stages. First, when the islands make contact initially, the thinner island wraps around the thicker one. These dynamics are fast and determined by the line tensions of the islands and by the film's viscosity. Then the region that used to be the thicker island expands and eventually covers the whole merged island. This process which is dependent on the permeation between layers in addition to the line tension and viscosity, is much slower. The shapes of the islands are extracted from high speed camera images and compared with model calculations.

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