

**PARTIAL REGULARITY OF THE LANDAU-DE GENNES
ENERGY MODEL FOR LIQUID CRYSTALS**

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Abstract

In this paper, we study partial regularity of minimizers for the Landau-de Gennes energy functional, which can describes phase transitions of liquid crystals. We establish the interior partial regularity results: After removing some relatively closed set, whose 1-dimensional Hausdorff measure equals to zero, the minimizers are analytic.