

Uniqueness of weak solutions to the 2D Ericksen-Leslie system

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In this talk, we will present the uniqueness of weak solutions to the Cauchy problem to the Ericksen-Leslie system of liquid crystal models in \mathbb{R}^2 , with both general Leslie stress tensors and general Oseen-Frank density. The main idea is to perform suitable energy estimates at the level one order lower than the natural basic energy estimates for the Ericksen-Leslie system.