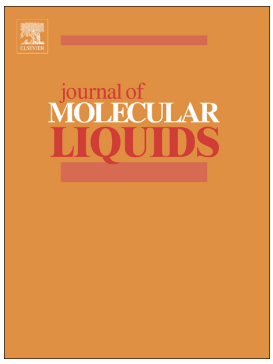

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P.V. Dolganov

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Response of structures formed by individual and self-organized inclusions to electric field in ferroelectric smectic nanofilms

P.V. Dolganov

Institute of Solid State Physics RAS, 142432 Chernogolovka, Moscow Region, Russia
pauldol@issp.ac.ru

We demonstrate manipulation of individual inclusions and self-organized structures of inclusions in smectic films. In polar Sm*C** freely suspended films electric field reversal leads to reorientation of smectic islands. We observed different behavior of self-organized chains from islands upon switching the direction of the electric field. Chains can reorient as a whole without decomposition. Upon a sharp change of the direction of the field chains can partially decompose and then form again with a modified sequence of inclusions in the chains.

Keywords: liquid crystals; self-organization; free-standing films; two-dimensional systems; ferroelectrics