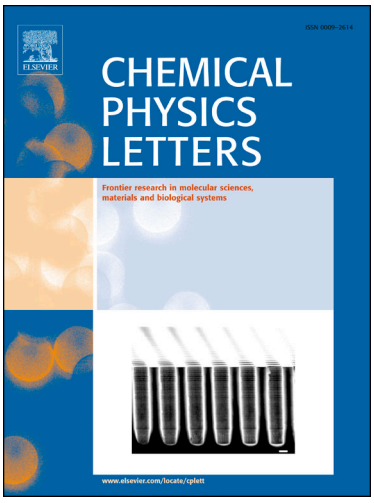

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A.V. Zakharov, P.V. Maslennikov

PII: S0009-2614(17)30615-2
DOI: http://dx.doi.org/10.1016/j.cplett.2017.06.058
Reference: CPLETT 34920

To appear in: *Chemical Physics Letters*

Received Date: 2 May 2017
Accepted Date: 29 June 2017

Please cite this article as: A.V. Zakharov, P.V. Maslennikov, Field-induced stress response of nematics encapsulated in microsized volumes, *Chemical Physics Letters* (2017), doi: http://dx.doi.org/10.1016/j.cplett.2017.06.058

Field-induced stress response of nematics encapsulated in microsized volumes

A. V. Zakharov*

Saint Petersburg Institute for Machine Sciences,

The Russian Academy of Sciences, Saint Petersburg 199178, Russia.

P. V. Maslennikov†

Immanuel Kant Baltic Federal University,

Kaliningrad 236040, Str. Universitetskaya 2, Russia.

(Dated: June 27, 2017)

Abstract

The peculiarities in the dynamics of the director reorientation in confined nematic liquid crystals (LCs) under the influence of a strong electric field **E** have been investigated theoretically based on the hydrodynamic theory including the director motion with appropriate boundary and initial conditions. Analysis of the numerical results for the turn-on process, when a strong electric field **E** is suddenly applied in the positive sense, provides an evidence for the appearance of the spatially periodic patterns in confined LC film.

PACS numbers: 61.30.Cz, 65.40.De

*author to whom correspondence should be addressed. Email address:alexandre.zakharov@yahoo.ca; www.ipme.ru

†Email address:pashamaslennikov@mail.ru