



## NONSYMMETRIC PRESSURE TENSORS AND THE SPIN EQUATION

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**Abstract.** In this paper we are concerned with the dynamics of liquid crystals with a non-symmetric part of the pressure tensor. The non-symmetric form we have already treated in the paper [2]. Here we are dealing with the fact that the liquid crystal is embedded in a fluid with non-symmetric velocity gradient. This has the effect that the molecules are turned by the antisymmetric part  $(Dv)^A$ , and this in addition to the movement induced by the director  $d$ . Therefore there are two reasons for the general dynamics, one reason from the outside behaviour of the velocity  $v$  and another reason is by the near neighbour behaviour done by the form of the molecules, caused by the director  $d$ . Hence we are able to combine the model of Grad and the theory of Ericksen & Leslie. We think that this paper gives the framework for other treatments of a system of spin equations.

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Communicated by Editors; Received .May 9, 2023

Mathematics Subject Classification 2020: 35Q35, 35Q79, 76A15

Physics and Astronomy Classification Scheme 2010: 02.30.Jr, 05.70.-a, 47.57.Lj, 65.40.Gr

Keywords: Liquid Crystals, Partial differential equations, Thermodynamics, Entropy principle