

# Liquid crystals, particle physics and cosmology

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## Abstract

Our aim is to present relatively exotic and difficult topics in physics in a simple and understandable (for non-specialists) way. For this purpose we rely on mathematical universalities that connect some completely different physical systems. On case of nematic liquid crystals, which are most known for their applicability in the display industry, we show basics of annihilation of particles with topological charges and the Kibble-Zurek mechanism. The latter mechanism was introduced to explain the evolution of the early universe after the Big-bang.

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