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Title:	Electric-field-induced patterns in a hockey-stick nematic
Authors:	Kaur, Supreet (/jspui/browse?type=author&value=Kaur%2C+Supreet) Mohiuddin, Golam (/jspui/browse?type=author&value=Mohiuddin%2C+Golam) Pal, Santanu Kumar (/jspui/browse?type=author&value=Pal%2C+Santanu+Kumar)
Keywords:	Electric-field-induced hockey-stick nematic
Issue Date:	2022
Publisher:	Elsevier
Citation:	Journal of Molecular Liquids, 366(1), 120239.
Abstract:	The response to applied electric field of a newly synthesized hockey-stick nematic 8-F-OH has been studied. Unusual pattern forming scenarios were found, which show rich variety as a function of frequency, temperature and initial director alignment. The behavior has been compared with those, observed in calamitic and bent-core nematics. Experiments show that contrary to calamitic nematics, here the elastically strongly deformed layers due to Fréedericksz transition play a decisive role in the formation of regular patterns. This is attributed to the cybotactic nematic phase with polar smectic clusters, where flexoelectricity might also have influence. Static and dynamic behaviors of the patterns have been characterized and an application idea is formulated.
Description:	Only IISER Mohali authors are available in the record.
URI:	<a href="https://doi.org/10.1016/j.molliq.2022.120239">https://doi.org/10.1016/j.molliq.2022.120239</a> ( <a href="https://doi.org/10.1016/j.molliq.2022.120239">https://doi.org/10.1016/j.molliq.2022.120239</a> ) <a href="http://hdl.handle.net/123456789/5054">http://hdl.handle.net/123456789/5054</a> ( <a href="http://hdl.handle.net/123456789/5054">http://hdl.handle.net/123456789/5054</a> )
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