

THE STUDY OF PHASE TRANSITION FOR NEW BANANA-SHAPED LIQUID
CRYSTALS

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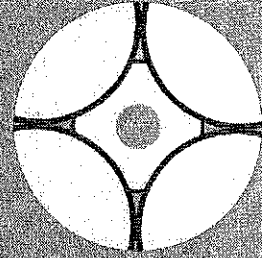
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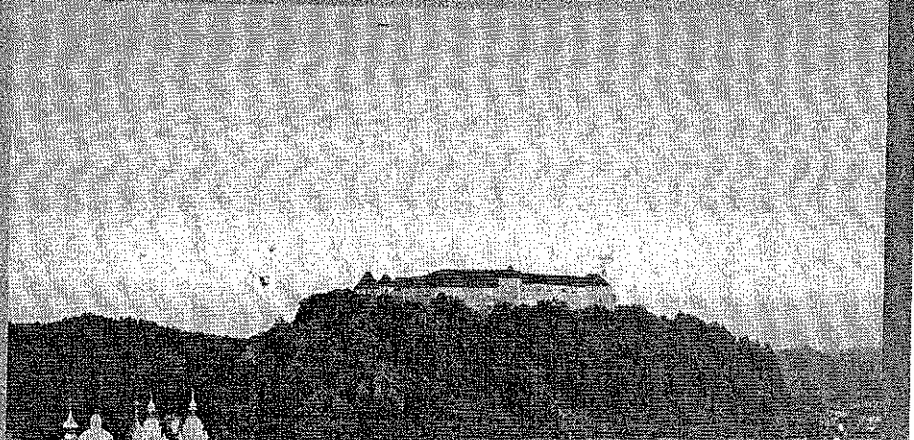
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We have studied the electro-optical characteristics to look for molecular structure by using several different techniques for new banana-shaped liquid crystals. Based on the similarities to recently observed fluoro-containing materials (switching involves layer structure rearrangement, increasing threshold with increasing temperatures) for one of our samples attached hydrogen on a benzene ring (HC), we assume that the phase C has a triclinic symmetry corresponding to the double tilted SmCG phase. The observation that the polarization peak appears at lower fields ($E_0 \sim 15V/\mu m$) than the amplitude of the threshold (E_{th}) can be explained assuming a field induced SmCG - SmCP (or SmAP) transition at E_{th} . Based on the textures, the mesophase of other samples attached chlorine and fluorine (CC and FC, respectively) seem to be a tilted columnar phase. We are in progress to finalize the molecular structures by x-ray measurements.



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July 4 - 9, 2004
Ljubljana, Slovenia



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