

Abstract Submitted
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Ground states of lyotropic chromonic liquid crystals in cylindrical capillaries¹ RUI CHANG, School of Chemical and Biological Engineering, Georgia Institute of Technology, KARTHIK NAYANI, JINXIN FU, School of Material Science and Engineering, Georgia Institute of Technology, ELSA REICHMANIS, School of Chemical and Biological Engineering, Georgia Institute of Technology, JUNG OK PARK, MOHAN SRINIVASARAO, School of Material Science and Engineering, Georgia Institute of Technology — We investigate the ground states of nematic lyotropic chromonic liquid crystals (LCLCs) confined in cylindrical capillaries. Two line defects with double helical configuration is observed for Sunset Yellow FCF with the homeotropic anchoring being obtained by parylene-N coating. The striking features of nematic-isotropic phase transition is also studied, in which we find a coexistence of double helix configuration and escape radial configuration mediated with point defects in biphasic temperature range. However with Disodium Cromoglycate (DSCG) we observe that the anchoring is planar anchoring in both parylene-N coated and uncoated borosilicate capillaries.

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