Abstract Submitted
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Effect of Concentration Variations on the Interaction of a Sm-A Liquid Crystal and a Nanoparticle[1] LUZ J. MARTINEZ-MIRANDA, University of Maryland, College Park, LYNN K. KURIHARA, Navy Research Lab, Washington, DC, RAHINA S. RABIU[2], University of Maryland and Norfolk State University — We have observed the evolution of the interaction between a Sm-A Liquid Crystal (8CB) and a nanoparticle as the concentration of the nanoparticle is reduced from 30% wt to 0.1%wt. We have observed that a linear structure is observed as the concentration of the particle falls below 15% wt. There is a difference between the functionalization compounds as observed in the study of the 30% wt mixtures. In addition, we have observed that the influence of the nanoparticle in the ordering or disordering of the liquid crystal can be quantified through the integrated intensity of the x-ray signal.

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