

Abstract Submitted
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Interaction of discotics and nanoparticles¹ LUZ J. MARTINEZ-MIRANDA, University of Maryland, College Park, MD, EDUARDO A. SOTO-BUSTAMANTE, Universidad de Chile, Santiago, Chile — We mixed a discotic, and 5 nm nanoparticles of ZnO up to a percentage weight of 30 – 35%, by heating them together, past the isotropic transition temperature. At that point, we mixed them together, and allowed them to cool to room temperature. We then prepared a sample for Xray study, by taking a small amount of the crystallites formed and placing them in a glass slide. We prepared a sample of the pure discotic to compare to the mixture. We found that the addition of the nanoparticle results in an enhancement of the axis in the direction parallel to the glass slide, with an intensity approximately six times that of the discotic alone and a correlation length approximately 1.3 times better. The role of the nanoparticle is very similar to the alignment role of a flat surface observed on discotics.

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