

Abstract Submitted  
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**Flexo-Electro-Optical Properties of Fullerene-C(Buckyballs) Suspended in 4'-Pentyl-4-Biphenyl (5CB)** JONATHAN FOUST, ANGELO VISCO, RIZWAN MAHMOOD, Slippery Rock Univ — We have investigated electro optical properties of a widely studied liquid crystal (5CB) when fullerene C-60 (buckyballs) is suspended in various concentrations as a function of temperature. Under a polarizing microscope, we have observed disclination (defect) points at the sites of buckyballs suggesting a strong interaction between the two components. The data indicate a shift in the transition temperature and sudden decrease in dielectric anisotropy ( $\Delta\epsilon$ ) at some critical concentration ( $\sim 0.15$  wt. %) of fullerene. A sudden increase was also observed upon increasing the concentration of buckyballs that remains constant within the experimental uncertainty. **Keywords:** buckyballs, fullerene, liquid crystal, dielectric anisotropy **Acknowledgements:** RM acknowledges the financial support of the Grant Office, Slippery Rock University.

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