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Laser Induced Fluorescence Spectroscopy of a Langmuir Monolayer of C-16 Fluorescent Dipyrrinone Liquid Crystal CHRISTIAN STRUEBING[1], GIOVANNI DELUCA[2], CHANDRA PRAYAGA, AARON WADE, University of West Florida Physics Department, MICHAEL HUGGINS, AMY RENAUD[3], REBECCA CHANDLER[4], University of West Florida Chemistry Department — A C-16 Fluorescent Dipyrrinone Liquid Crystal synthesized by the Chemistry department, University of West Florida, has been prepared in a Langmuir monolayer using a Nima Langmuir-Blodgett Trough. DeLuca et al. [1] studied how the length of the hydrocarbon tail influences the behavior of the pressure-area isotherm of the Langmuir film. The C-16 Fluorescent Dipyrrinone Liquid Crystal film produced a stable film at 20 mN/m and a stable, optical quality film at 40 mN/m. We present a study of the fluorescence properties of the C-16 fluorescent dipyrrinone liquid crystal film. Once the monolayer is compressed the sample is excited using a 410 nm wavelength laser and the fluorescence is measured using an Oriel MS260i 1/4 m Spectrograph.

[1] Deluca, Giovanni; Carroll, Alexander; Prayaga, Chandra; Wade, Aaron; Heath, Christopher; Renaud, Amy; Huggins, Michael. "Preparation and Characterization of C-16 and C-10 Fluorescent Dipyrrinone Liquid Crystal Langmuir-Blodgett Films." American Physical Society, APS March Meeting 2012, 02/2012.

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