Abstract Submitted
for the MAR12 Meeting of
The American Physical Society

Preparation and Characterization of C-16 and C-10 Fluorescent Dipyrrinone Liquid Crystal Langmuir-Blodgett Films GIOVANNI DELUCA[1], ALEXANDER CARROLL[2], CHANDRA PRAYAGA[3], AARON WADE[4], Physics Department, University of West Florida, CHRISTOPHER HEATH[5], AMY RENAUD[6], MICHAEL HUGGINS[7], Chemistry Department, University of West Florida — A new C-16 and C-10 Fluorescent Dipyrrinone Liquid Crystal has been synthesized by the University of West Florida's Chemistry department. The liquid crystals have amphiphilic properties with their dipyrrinone polar heads and long hydrocarbon nonpolar tails. This led to the preparation and characterization of their Langmuir and Langmuir-Blodgett Film, using a Nima Langmuir-Blodgett Trough. The influence of the length of the hydrocarbon tail on the behavior of the pressure-area isotherm of the Langmuir film is studied. There is considerable difference in the behavior of the C-16 and C-10 Fluorescent Dipyrrinone Liquid Crystal Films prepared. Ellipsometric characterization of the films, using an ellipsometer built by the Physics department, is used to further study the Liquid Crystal films.

[1]Undergraduate student
[2]Undergraduate student
[3]Faculty mentor
[4]Faculty mentor
[5]Undergraduate student
[6]Undergraduate student
[7]Faculty mentor

Giovanni DeLuca
Physics Department, University of West Florida

Date submitted: 23 Nov 2011 Electronic form version 1.4