

Abstract Submitted  
for the MAR07 Meeting of  
The American Physical Society

**Nondestructive Memory Elements Based on Polymeric Langmuir-Blodgett Thin Films**<sup>1</sup> T.J. REECE, S. DUCHARME, Department of Physics and Astronomy, Nebraska Center for Materials and Nanoscience, University of Nebraska at Lincoln — Ferroelectric field effect transistors (FeFETs) have attracted much attention recently because of their low power consumption and fast nondestructive readout. Among the ferroelectric thin films used in FET devices; the ferroelectric copolymer of polyvinylidene fluoride, PVDF ( $C_2H_2F_2$ ), with trifluoroethylene, TrFE ( $C_2HF_3$ ), has distinct advantages, including low dielectric constant, low processing temperature, low cost and compatibility with organic semiconductors. By employing the Langmuir-Blodgett technique, we are able to deposit films as thin as 1.8 nm. We discuss the characterization, modeling and fabrication of metal-ferroelectric-insulator-semiconductor (MFIS) structures incorporating these films.

<sup>1</sup>This work is supported by the National Science Foundation.

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Date submitted: 02 Dec 2006

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