

Abstract Submitted
for the MAR05 Meeting of
The American Physical Society

Copper-Phthalocyanine Field-Effect Transistor with a Low Driving Voltage TETSUJI OKUDA, SUSUMU SHINTOH, NORIO TERADA, Kagoshima University — Copper-phthalocyanine-thin-film metal-insulator-semiconductor field-effect transistors operating with a low driving voltage have been fabricated by using a $\text{PbZr}_{0.5}\text{Ti}_{0.5}\text{O}_3$ film as a high permittivity insulator layer ($\epsilon=500$). A field-effect mobility of about $0.017 \text{ cm}^2/\text{Vs}$ and an ON/OFF ratio of more than 10^3 were obtained at gate voltage of - 2V and drain-source voltage of - 1V. This demonstrates operation of a p-type copper-phthalocyanine transistor with a driving voltage low enough for actual device applications.

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Date submitted: 29 Nov 2004

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