Abstract Submitted for the MAR07 Meeting of The American Physical Society

**P-type Doping and Electroluminescence in ZnO Thin Films**<sup>1</sup> DAVID NORTON, HYUN-SIK KIM, JEAN-MARIE ERIE, PATRICK SADIK, STEPHEN PEARTON, University of Florida, Dept. of Materials Science and Engr., Gainesville, FL, FAN REN, University of Florida, Dept. of Chemical Engr., Gainesville, FL — As a direct bandgap material with emission in the ultraviolet, ZnO is being actively pursued in the areas of ultraviolet light emitting diodes and laser diodes. The critical issues in developing such optoelectronic devices include p-type doping, minority carrier injection, and defects. In this talk, the focus will be doping and transport properties of phosphorus-doped ZnO films and heterostructures, including Hall measurement characterization.

<sup>1</sup>This work is supported by the National Science Foundation (DMR-029086), the Department of Energy (DE-FC26-04NT42271), and the Air Force Office of Scientific Research (030967).

David Norton University of Florida, Dept. of Materials Science and Engr., Gainesville, FL

Date submitted: 20 Nov 2006

Electronic form version 1.4