

Abstract Submitted
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ZnO Doped by Neutron Transmutation BRYAN SMITH, FARIDA SELIM, Bowling Green State University — Neutron transmutation doping has been shown to be an effective method to produce Cu dopants on Zn sites in ZnO single crystals (F. A. Selim et al., Applied Physics Letters 99, 202109, 2011). These Cu dopants lie 160 meV below the conduction band minimum acting as deep acceptors and dramatically modify the electrical properties of the samples. In this work we investigate the change in optical properties due to Cu doping and neutron irradiation. Measurements are performed before and after annealing to distinguish between the effect of radiation damage and Cu doping. Funding was provided by the National Science Foundation (DMR1359).

Bryan Smith
Bowling Green State University

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