

Abstract Submitted
for the OSS19 Meeting of
The American Physical Society

Characterization of Ultraviolet ZnO Photodetector SAGE EDWARDS, TOM ODER, Youngstown State University — An ultraviolet photodetector was fabricated based on zinc oxide semiconductor films. A pair of ohmic contact metals, comprising of Ti and Au was deposited by magnetron sputter deposition followed by annealing at 200 °C in oxygen for 60 seconds. The gap between the two ohmic contact strips was 0.8 mm. Characterization of the sensor's photoresponsivity was implemented by focusing an incident broadband beam of light from a lamp into a monochromator. The light from the monochromator was then focused to the sample which formed part of a balanced Whetstone bridge circuit. The photodetector was found to have a steep responsivity from around 380 nm, which is in the UV range. Significant persistent photoconductivity was also observed during photoresponsivity measurements.

Sage Edwards
Youngstown State University

Date submitted: 10 Mar 2019

Electronic form version 1.4