Abstract Submitted
for the OSS16 Meeting of
The American Physical Society

Structural and Optical Properties of UV Irradiation – Assisted Annealed Al:ZnO Thin Films ANTHONY COLOSIMO, Department of Physics and Astronomy, Bowling Green State University, Bowling Green Ohio, 43403, DAVID WINARSKI, Center for Photochemical Sciences, Bowling Green State University, Bowling Green Ohio, 43403, SUNIL THAPA, Bowling Green State University, FARIDA SELIM[1], Department of Physics and Astronomy, Bowling Green State University, Bowling Green Ohio, 43403, SELIMLAB TEAM — Transparent Al:ZnO thin films, prepared by the sol – gel method and deposited on quartz substrates, underwent an irradiation – assisted annealing process involving irradiation at different wavelengths within the near UV range from laser and LED sources. Irradiation – assisted processes are often used in materials synthesis and characterization for various purposes, and the effect of the near UV irradiation during low annealing temperatures on the formation and conductivity Al:ZnO thin films isthe primaryfocus of this study. The UV irradiation was implemented over a range of annealing temperatures from 100°Cto 300°C, and these films were then studied by X – ray diffraction, scanning electron microscopy, photoluminescence measurements and other spectral analysis.

[1]corresponding author

Anthony Colosimo
Department of Physics and Astronomy, Bowling Green State University, Bowling Green Ohio, 43403

Date submitted: 18 Mar 2016 Electronic form version 1.4