

Abstract Submitted
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Organic Photovoltaic Devices with Ga-doped ZnO₂ electrode M. S. SON, Department of Physics, J. OWEN, Department of Nano-Science and Technology Graduate Program, K. -H. YOO, Department of Physics, B. D. AHN, S. Y. LEE, Department of Electronic and Electrical Engineering, DEPARTMENT OF PHYSICS TEAM, DEPARTMENT OF ELECTRONIC AND ELECTRICAL ENGINEERING TEAM — We report two organic photovoltaic devices using a Ga-doped ZnO₂ (GZO) film as a transparent conducting electrode. In the first structure, the conventional In₂O₃:Sn (ITO) hole-collecting anode was replaced by GZO and an efficiency of 0.35 % was obtained. The second has the inverse structure where GZO was used as the electron-collecting cathode and gave a nonoptimized device efficiency of about 1.4 %. Furthermore, this inverse structure of GZO devices provides a passivation layer to protect the active layer from the atmosphere.

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