

Supporting Information

Oxygen-Modulated Photoresponse in Nickel Oxide Thin Films for Wide Band Gap Photodetector Application

Swati Suman^a, Anupama Behra^a, and Parasuraman Swaminathan^{a,b*}

^aElectronic Materials and Thin Films Lab, Department of Metallurgical and Materials Engineering, Indian Institute of Technology (IIT) Madras, Chennai, India

^bCentre of Excellence in Ceramics Technologies for Futuristic Mobility, Indian Institute of Technology (IIT) Madras, Chennai, India

*Corresponding author: swamnthn@iitm.ac.in

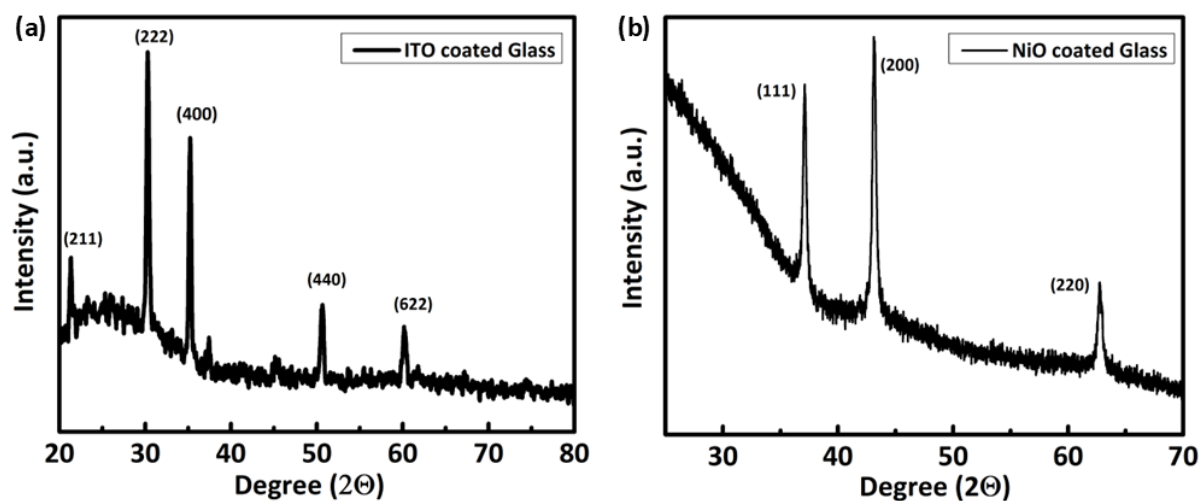


Fig. S1. The XRD pattern of bare ITO film on glass (a) and bare NiO on glass (b) has been shown.

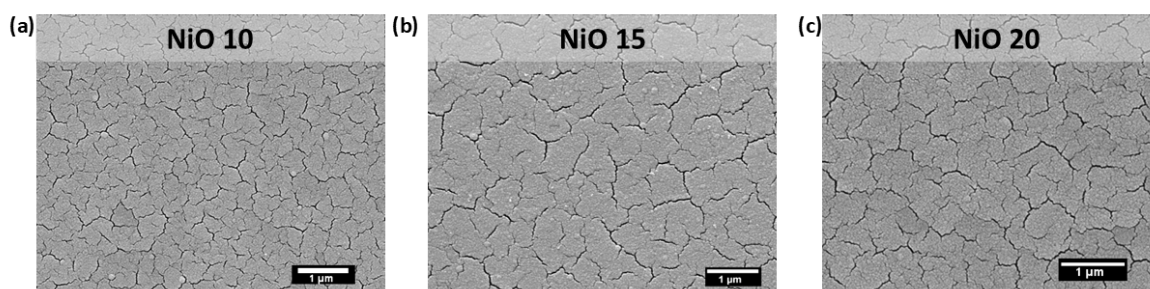


Fig. S2. The SEM images of NiO film for all three ratios (a)NiO10 (b)NiO15 and (c)NiO 20 have been shown.

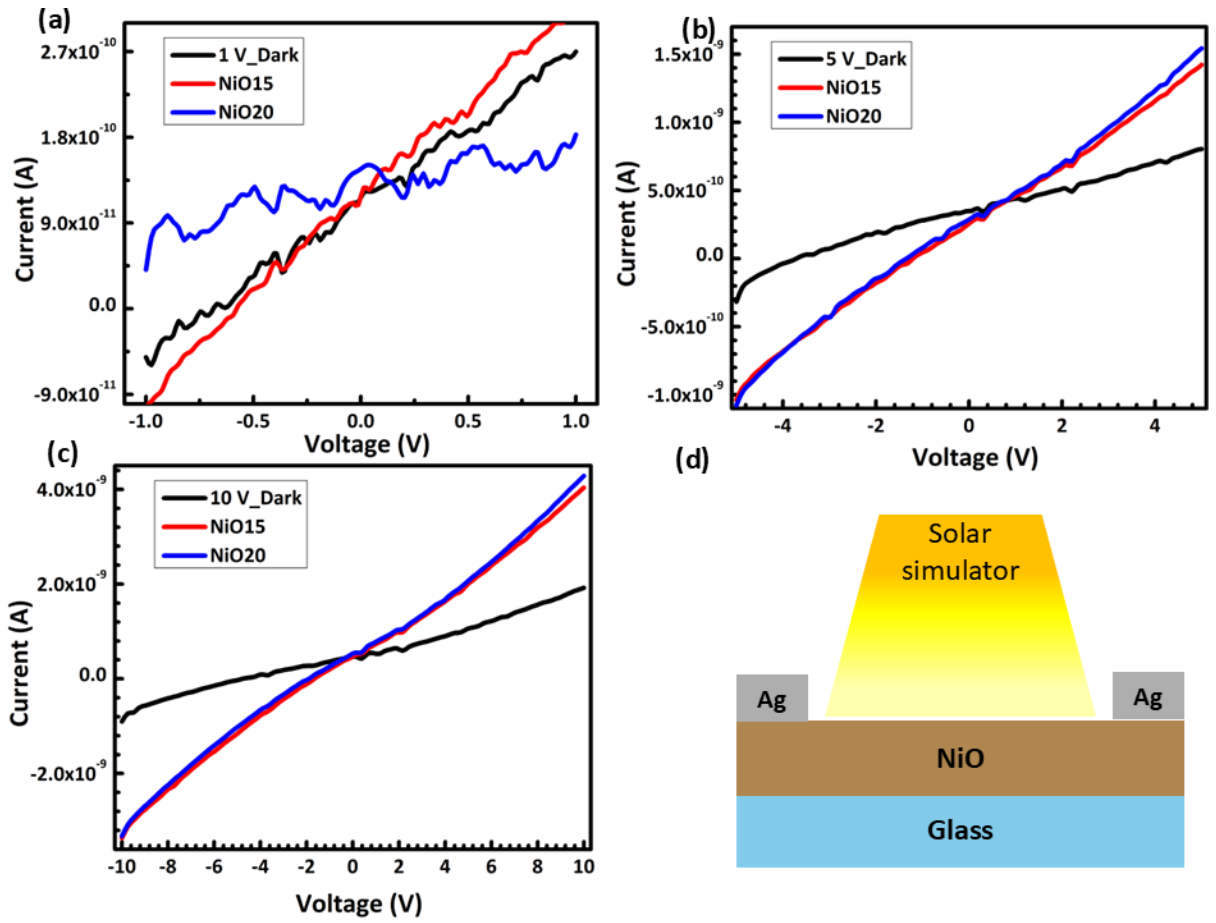


Fig. S3. The current-voltage characteristics of NiO10, NiO15, and NiO20 are analysed at (a) 1V, (b) 5 V, (c) 10 V, and (d) device cross-sectional view.

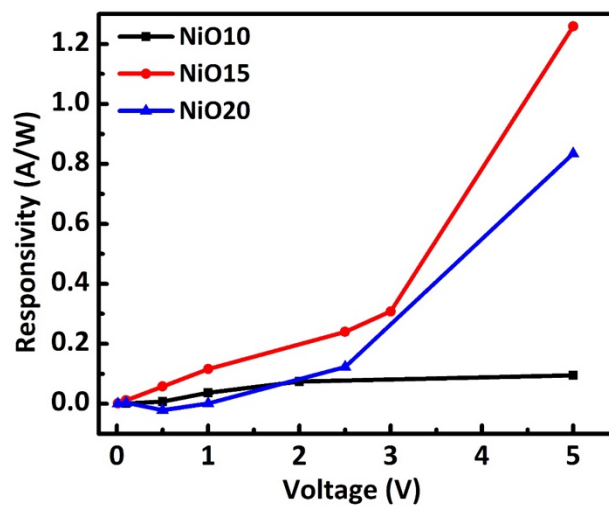


Fig. S4. The responsivity of NiO10, NiO15, and NiO20 is calculated and represented at different bias voltages.