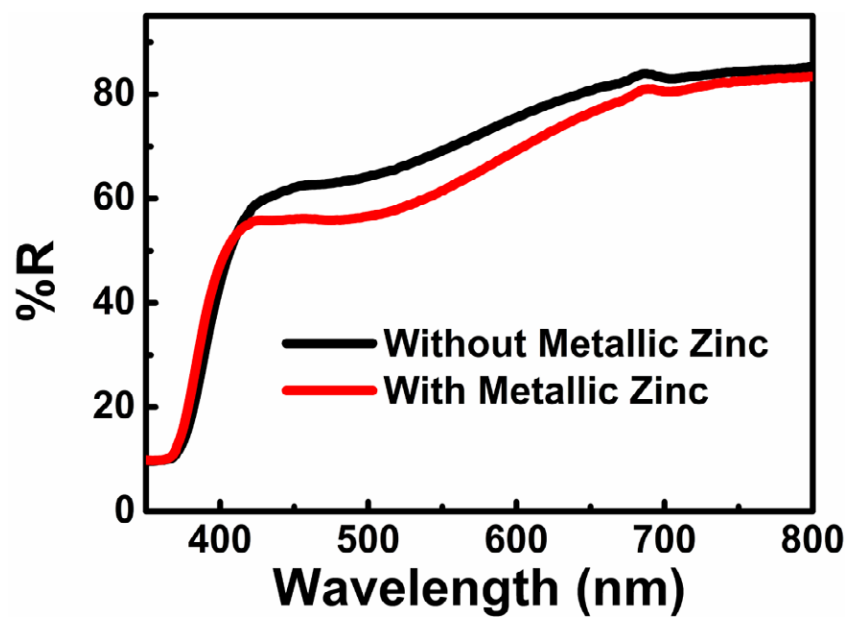


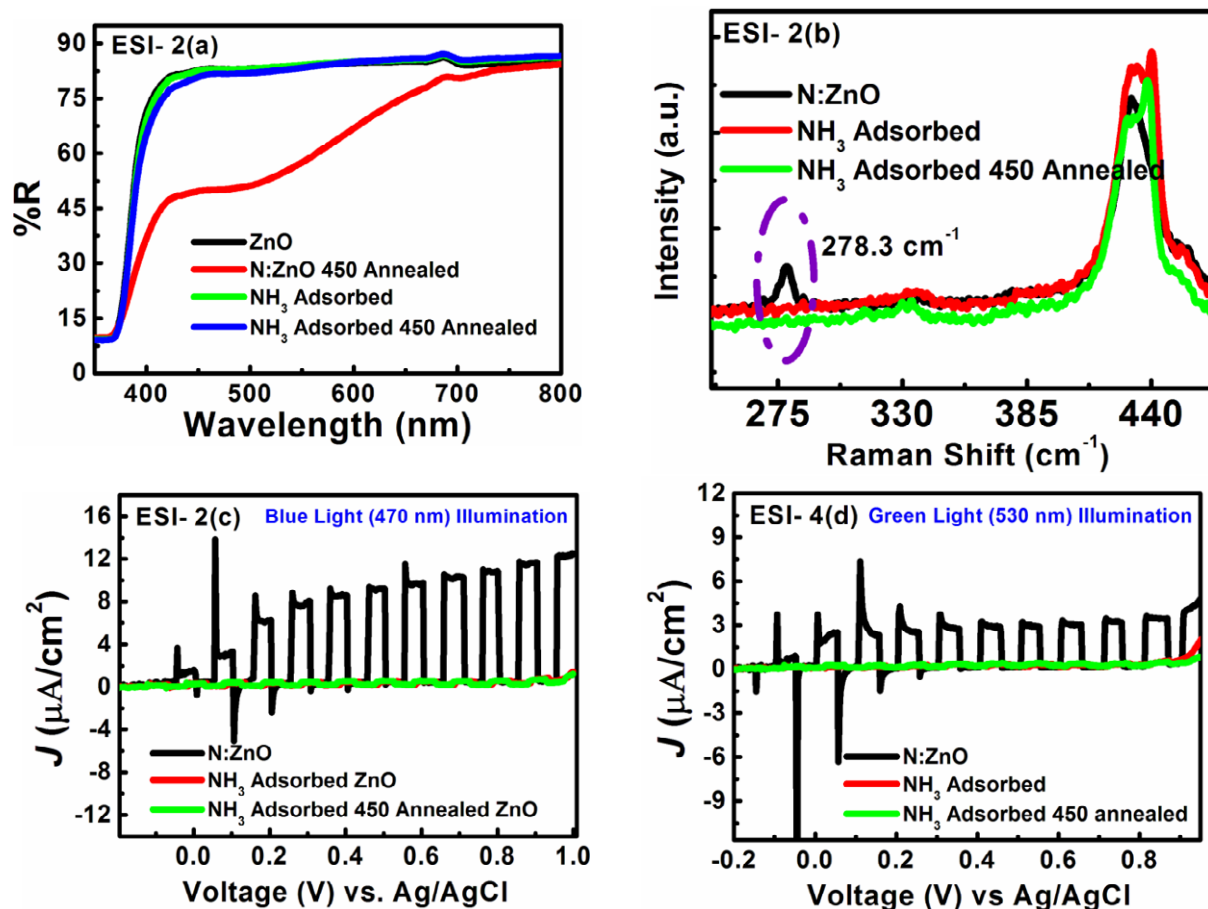
Electronic Supplementary Information (ESI):

ESI-1: Diffused Reflectance Spectrum of N:ZnO synthesized in presence and absence of metallic zinc powder

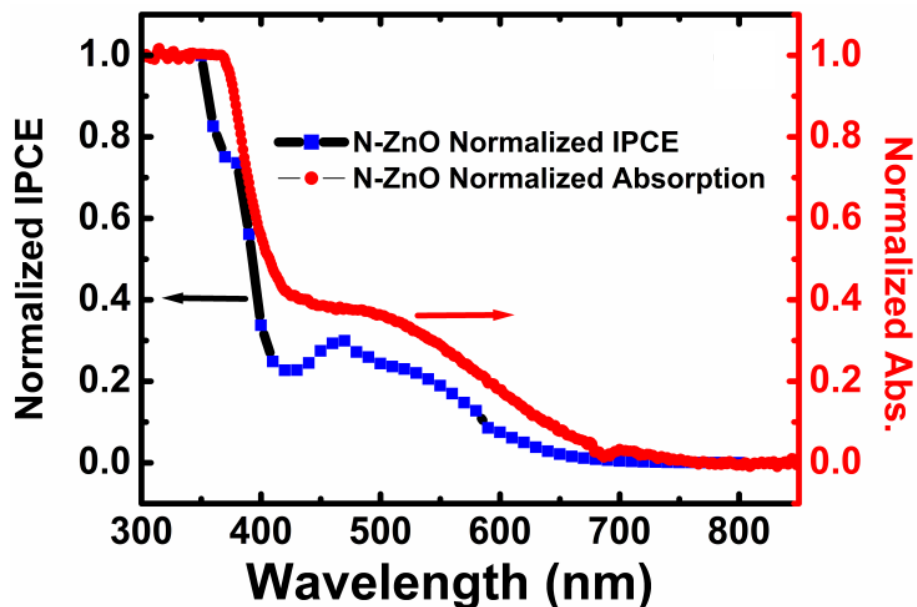


ESI-2: Surface Treatment of undoped ZnO with aqueous Ammonia Solution

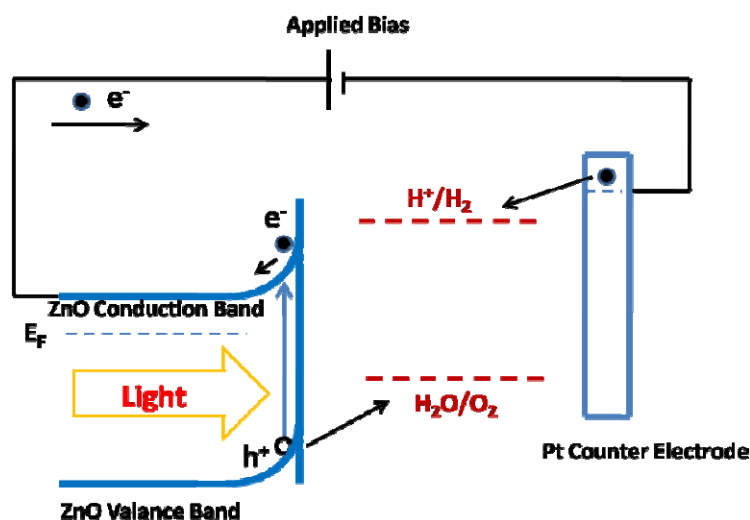
We carried out adsorption experiments with ammonia solution as it was the source of nitrogen in our case. For this pure ZnO was stirred in aqueous ammonia (6mL 25% ammonia in 10 mL water) for 30 min and then washed followed by drying at room temperature. In another set the as dried powder was annealed at 400°C. The DRS [ESI-4(a)], Raman spectra [ESI-4(b)] and PEC [ESI-4(c) and 9(d)] measurements were carried out for NH₃ adsorbed, NH₃ adsorbed 400 annealed and N:ZnO samples. Even in this case NH₃ surface treatment failed to show Nitrogen doping related feature at 278.3 cm⁻¹. No enhancement in visible (blue and green) light photo-response was observed for NH₃ surface treated ZnO. Thus we could rule out the possibility of Nitrogen doping only by ammonia surface adsorption.



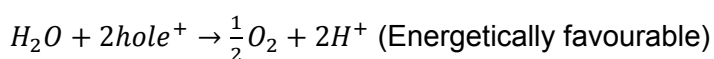
ESI-3: IPCE (Normalized to IPCE at 350nm) vs Absorption (Normalized to absorption at 350nm) curve to elucidate correlation between absorption curve and photocurrent generation capability.



ESI-4: Photo-electrochemical reaction in ZnO with aqueous electrolyte



At anode:



At cathode:

