Electronic Supplementary Material (ESI) for New Journal of Chemistry.

Indium Doped ZnO Nanorods for Chemiresistive NO_2 Gas Sensor

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Supporting Information:

Fig. A) XPS spectrum of undoped ZnO and IZO-2 samples

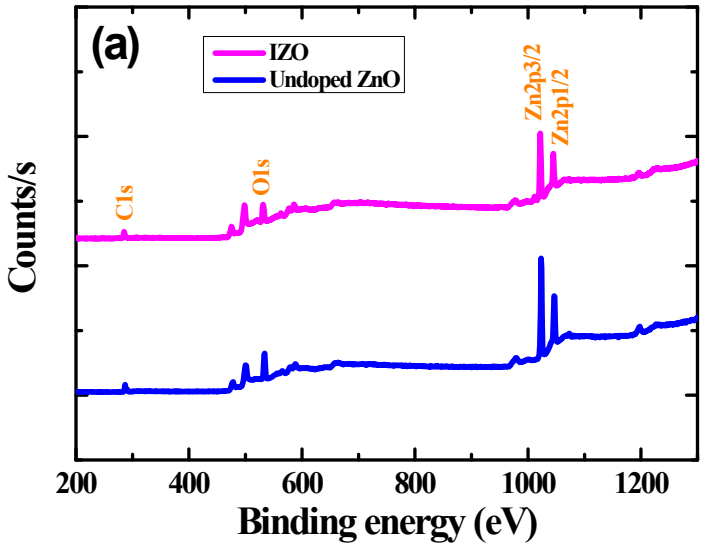

Fig. AS1) Full Spectrum of undoped ZnO and IZO-2

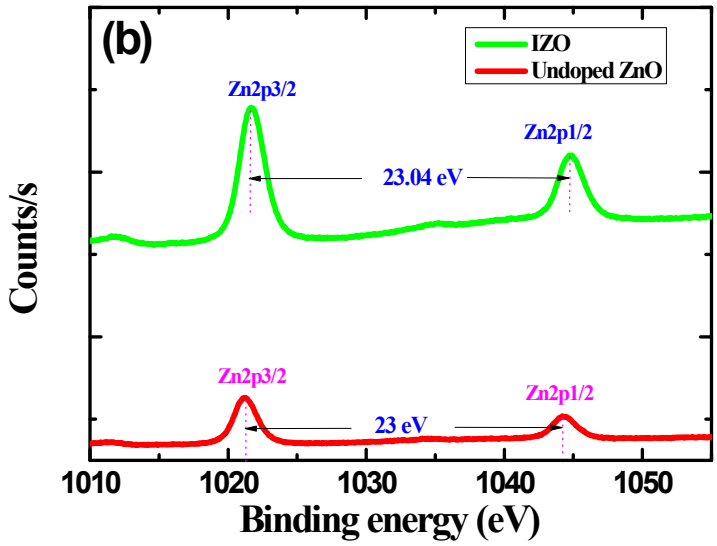

Fig. AS2) Zn Spectrum of undoped ZnO and IZO-2

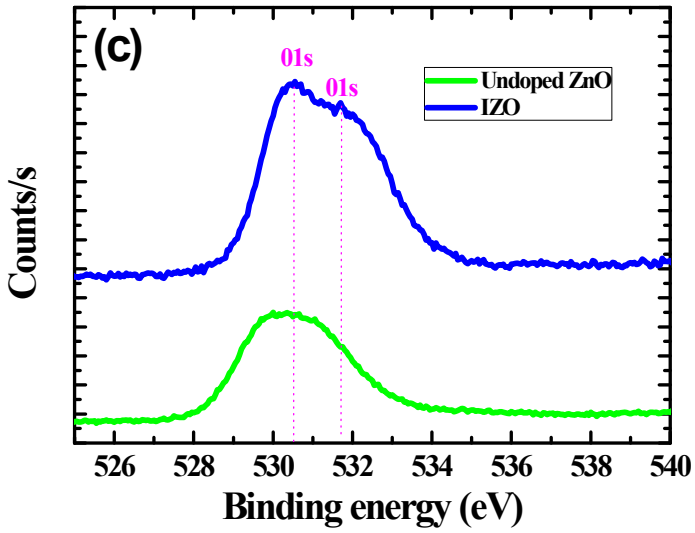

Fig. AS3) O spectrum of undoped ZnO and IZO-2

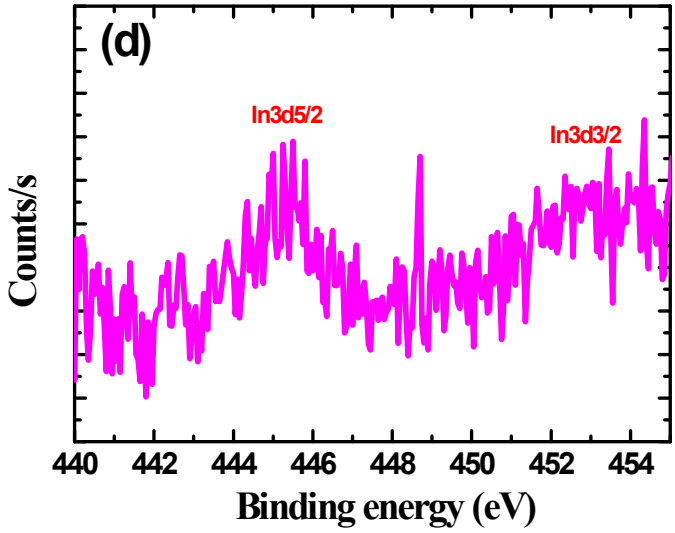

Fig. AS4) In spectrum of IZO-2

Fig. B) EDAX Spectra of undoped ZnO and IZO samples

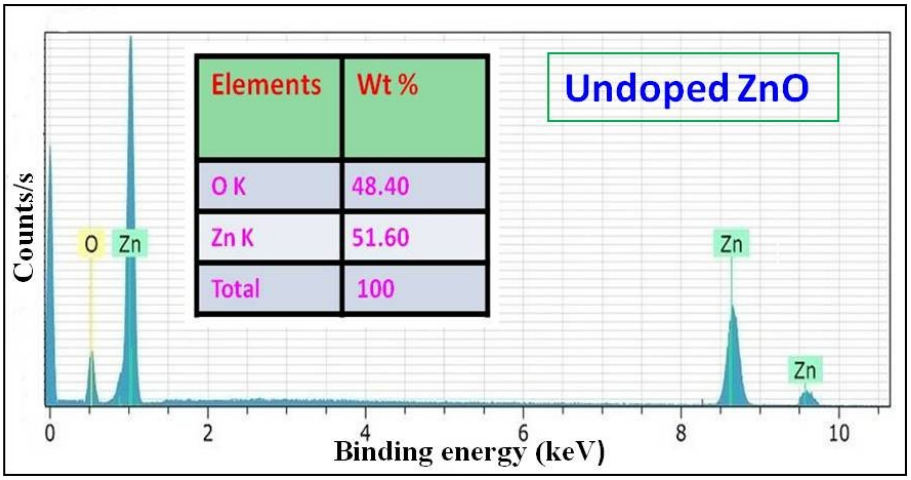

Fig. BS1) EDAX spectra of Undoped ZnO

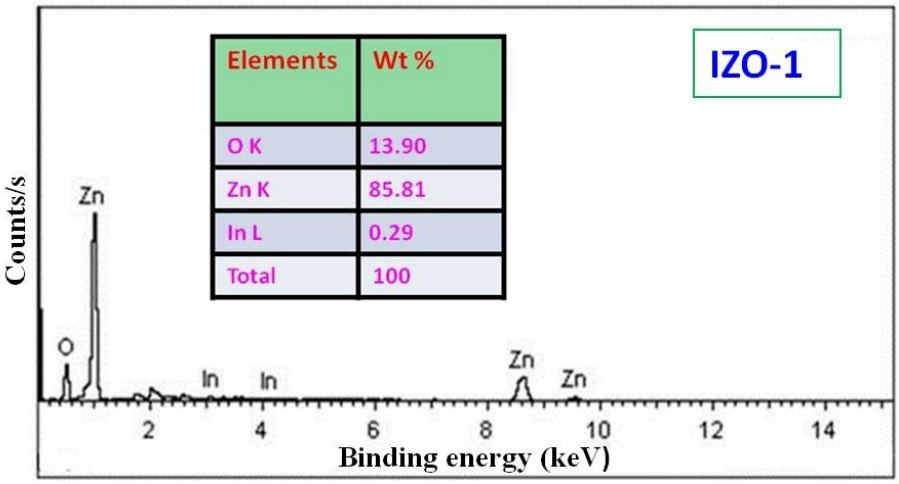

Fig. BS2) EDAX spectra of IZO-1

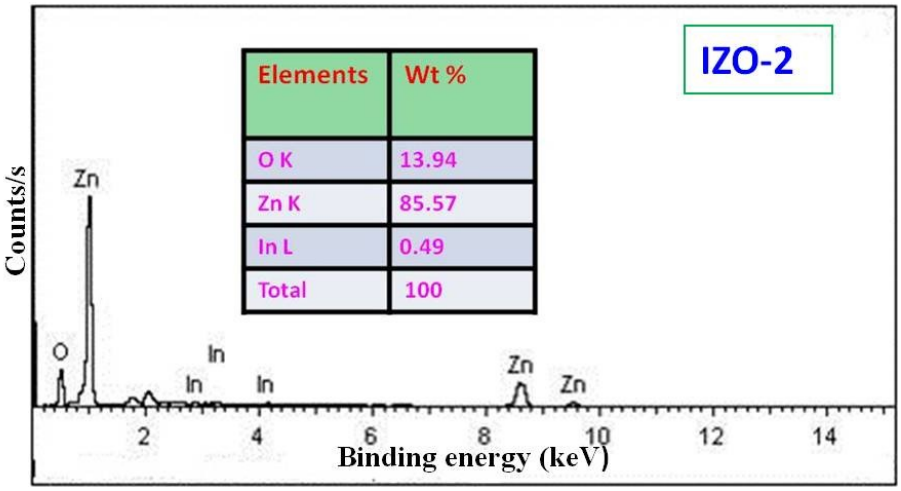

Fig. BS3) EDAX spectra of IZO-2

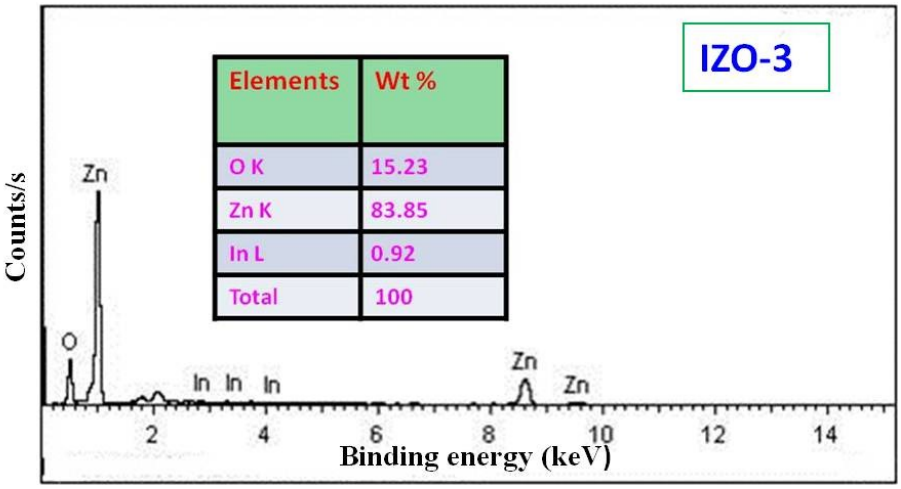

Fig. BS4) EDAX spectra of IZO-3

C) Activation Energy:

The electrical characteristics of undoped ZnO and IZO samples were carried out by two probe resistivity measurements and analysis used to calculate the activation energy. The variation of electrical resistivity (ρ) as a function of an inverse of temperature in the temperature range of 318-528 K was studied and shown in Fig. 8. The activation energy is the thermal energy required to transfer the charges (electrons or holes) from the valence to the conduction band of the semiconductor.