Supporting Information

**Role of Pd nanoparticles on gas sensing behaviour of Pd@In$_2$O$_3$ yolk-shell nanoreactors**

Prabhakar Rai$^a$*, Ji-Wook Yoon$^b$, Chang Hoon Kwak$^b$, Jong-Heun Lee$^b$*

$^a$Department of Chemical Engineering, Indian Institute of Technology Kanpur, Kanpur 208016, India

$^b$Department of Materials Science and Engineering, Korea University, Anam-Dong 5-1, Seoul 136-713, South Korea

*Corresponding author; Email: prkrai@iitk.ac.in, jongheun@korea.ac.kr

**Figure S1** Long term stability test of Pd@In$_2$O$_3$ yolk NPs based sensor for 5 ppm of ethanol at 350°C in dry air.

![Graph showing the long term stability test](image-url)
Figure S2 Response of Pd@In$_2$O$_3$ yolk-shell NPs in (a) dry and (b) RH 80% at 350°C (E: EtOH, C: CO, H: H$_2$, F: HCHO, A: NH$_3$, N: NO$_2$, T: TMA, X: XYL).