Support Information

PdO/SnO_2 Heterostructure for Low-Temperature Detection of CO with Fast Response and Recovery

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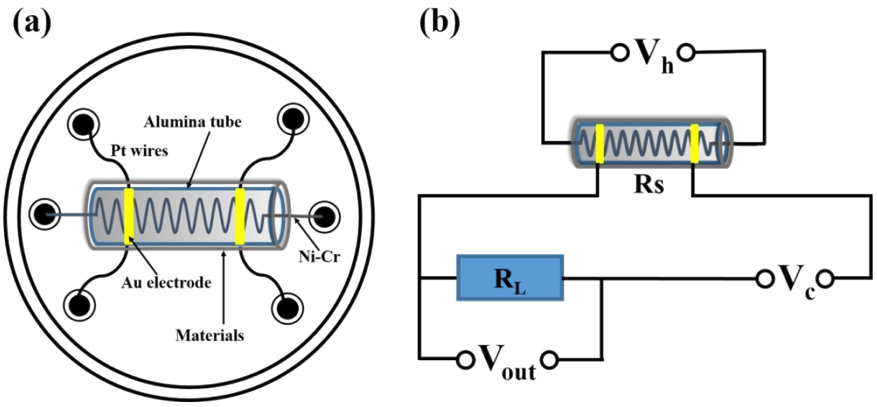

Figure S1. (a) Schematic of the heating and measurement setup for gas sensor; (b) Schematic of the electric circuit for the gas sensing measurement.

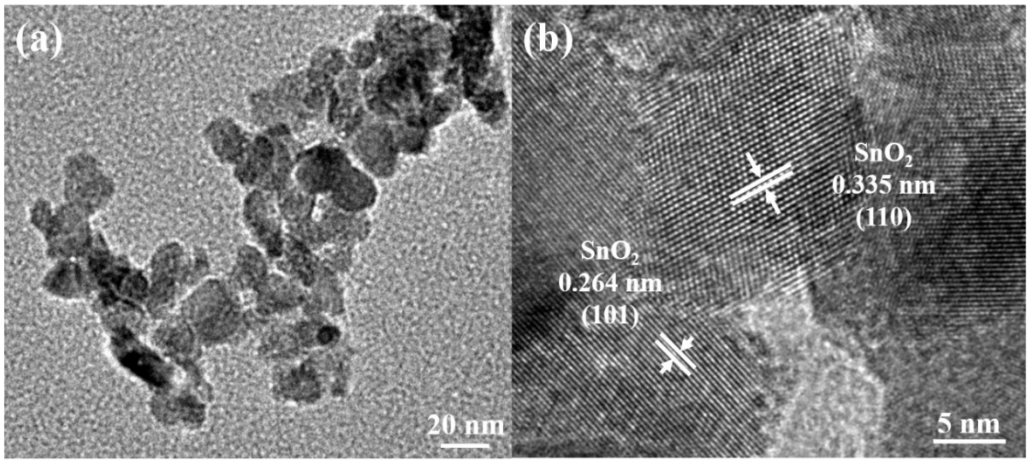

Figure S2. (a-b) TEM of SnO_2

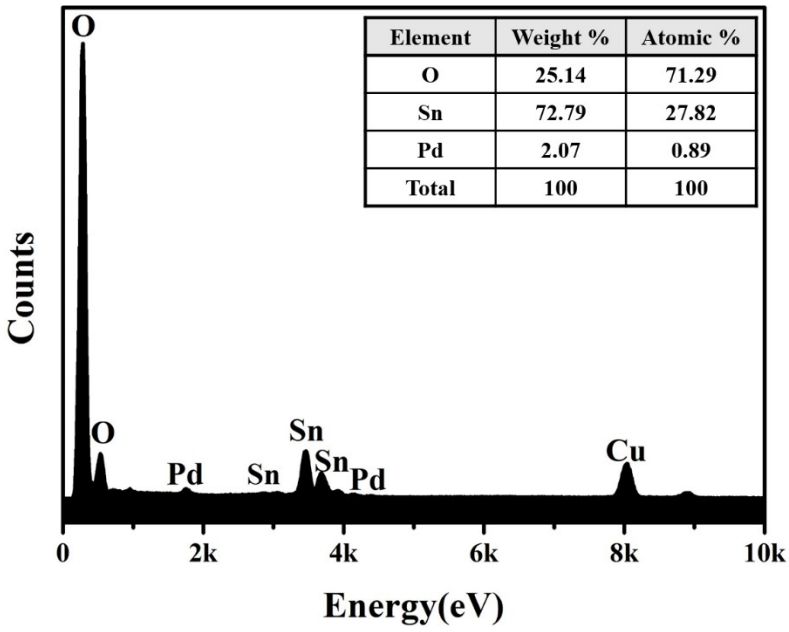

Figure S3. The EDS spectra of PdO/SnO_2.

Table S1 Baselinne resistance and Response resistance of PdO/SnO_2 and SnO_2.

	Pd/SnO_2		SnO_2	
T (℃)	Baseline Resistance (KΩ)	Response Resistance (KΩ)	Baseline Resistance (KΩ)	Response Resistance (KΩ)
80	78046.48	26343.59	561.429	502.821
100	18723.87	3504.374	20.931	20.849
160	6062.147	1508.151	5.112	4.827
200	3235.493	1168.257	6.252	5.627
240	2337.784	1126.302	5.301	4.65
260	2765.060	1238.138	4.787	3.757
300	3995.005	1836.075	5.105	3.660
340	3531.038	1717.391	6.831	3.812

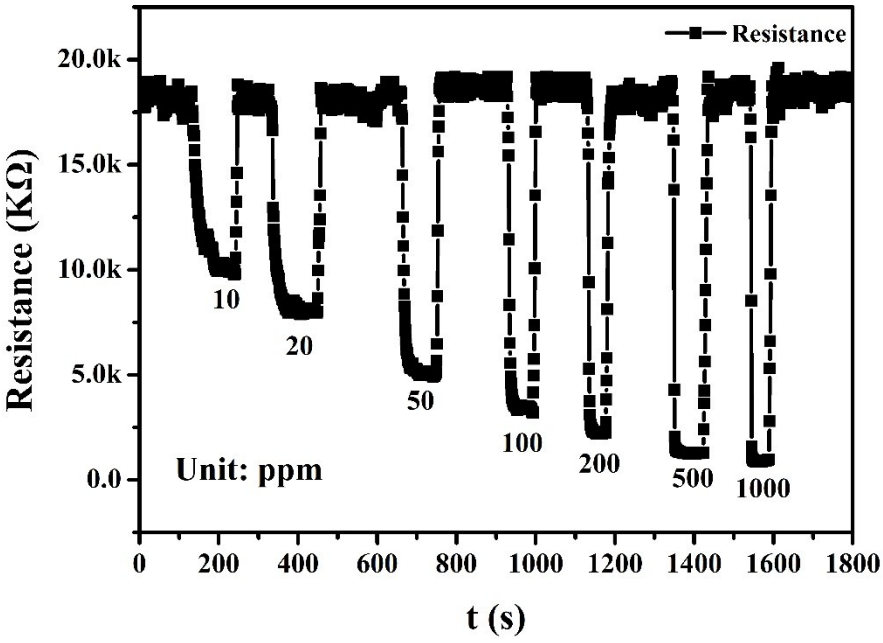

Figure S4. Resistance curve of PdO/SnO_2 to various concentrations of CO gas ranging from 10 ppm to 1000 ppm.

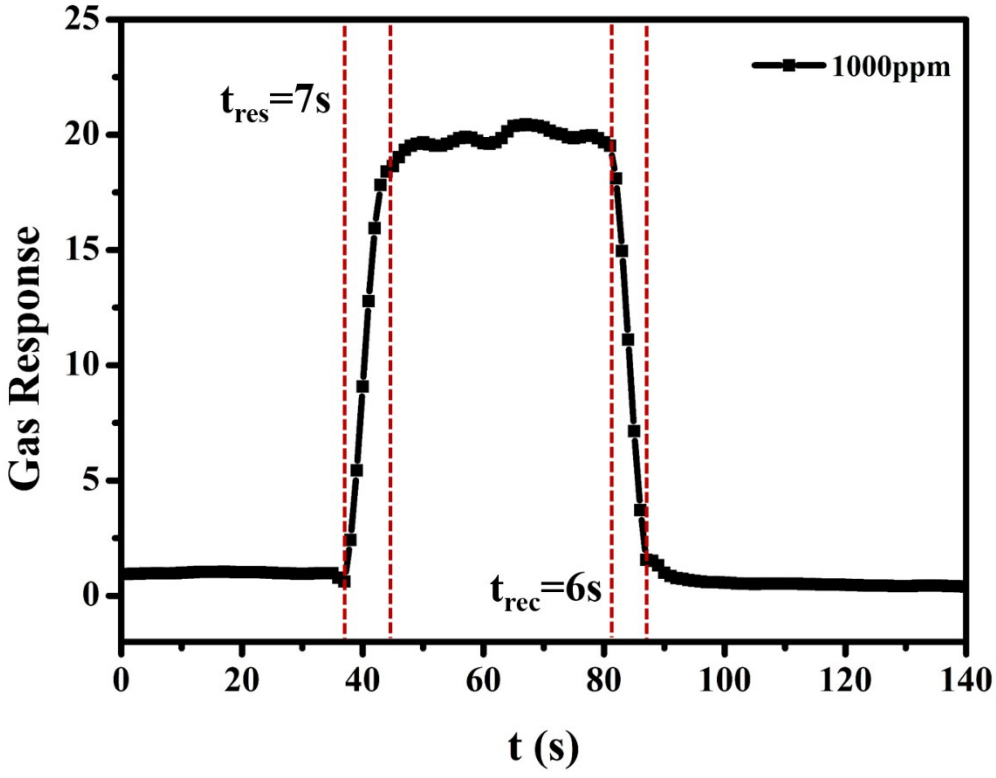

Figure S5. Real-time gas sensing transients of the sensor based on PdO/SnO_2 to 1000 ppm CO at 100 ℃

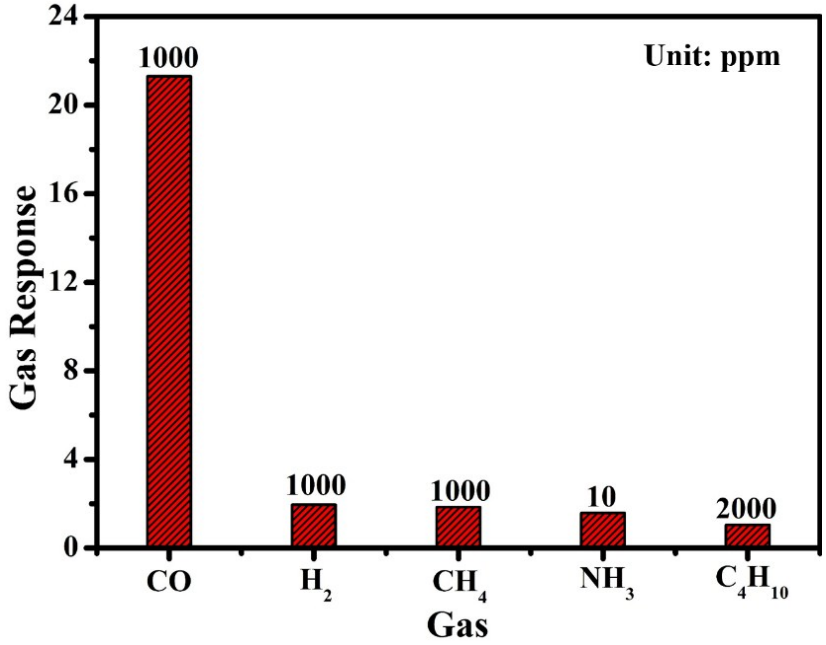

Figure S6. Selectivity of PdO/SnO_2 to several gases at 100 ℃

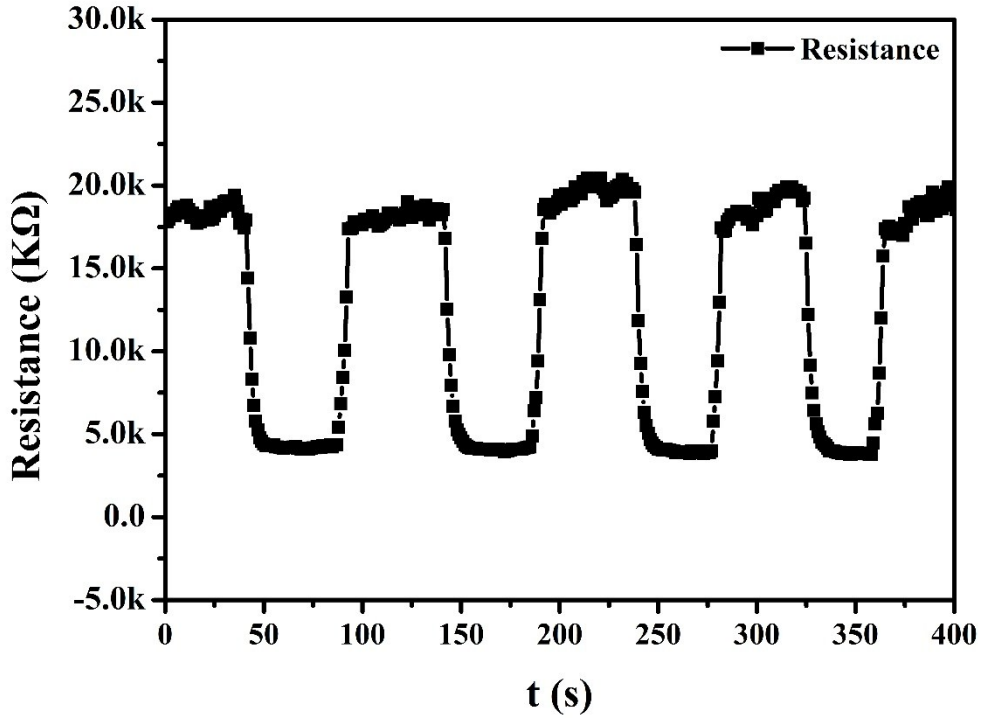

Figure S7. Four periods of resistance curve of the sensor to 100 ppm CO at 100 ℃