Electronic Supplementary Material (ESI) for RSC Advances

Supplementary materials

CeO_2 nanofibers for *in-situ* O_2 and CO sensing in harsh environment

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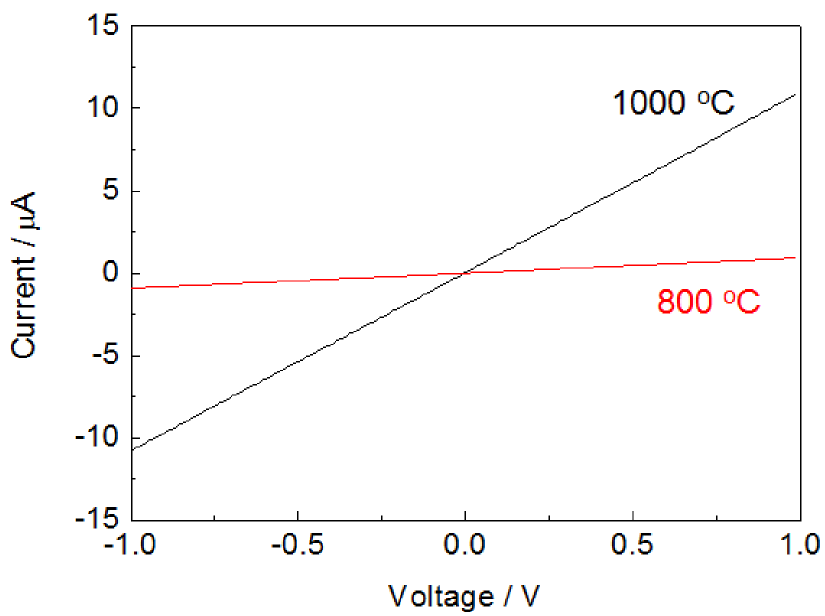

Figure S1. *I–V* profiles of CeO_2 nanofibers-based sensor at 800 and 1000 °C.

Table S1. Sensing performance of various resistor-type CO sensors

	Operating T/ ^{o}C	Carrying gas	C_{CO}* /ppm	Sensitivity (R_0/R_g)	Response time t_{90}/s	Ref.
Anatase/La_2O_3/CuO	600	N_2+5%O_2	200	1.8	-	[1]
Anatase/La_2O_3/CuO	600	N_2	250	4	-	[2]
SnO_2	250	N_2+10%O_2	6000	~1.3	30	[3]
Pt/SnO_2	150	air	600	55	-	[4]
Pt/SnO_2	400	air	10	2.3	6	[5]
CuO/ZnO/SnO_2	200	air	200	8	-	[6]
Au/SnO_x	200	wet air	100	6.5	133	[7]
CuO/Zn_2SnO_4	300	air	200	14	-	[8]
SnO_2/ Zn_2SnO_4	350	air	200	12	-	[9]
$BaSnO_3$	650	N_2	5000	3	-	[10]
CeO_2	450	air	5000	3.1	2	[11]
Au/SnO_2/Ga_2O_3	600	wet air	100	2.2	~ 60	[12]
$La_{0.9}Ce_{0.1}CoO_3$	100	air	100	3.4 (R_g/R_0)	-	[13]
$LaCoO_3$-PdO	200	air	100	16(R_g/R_0)	-	[14]
ZnO	350	air	250	8	-	[15]
Al/ZnO	400	air	1000	2.5	-	[16]
ZnO-ITO	350	air	100	60	-	[17]
ZnO-ITO	500	air	100	8	-	[17]
Present work	800	N_2	100	48.3	130	
	1000	N_2	100	29.7	142	

* The concentration of CO which was used to calculate the sensitivity in each paper.

The sensitivity of the previous reported sensors were recalculated based on the data presented in the papers. The best result of each paper was chosen.

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