Electronic Supplementary Material (ESI) for RSC Advance.

Supporting Information for "Preparation of BaSnO3 and Ba0.96La0.04SnO3 by reactive core-shell precursor: formation process, CO sensitivity, electronic and optical properties analysis"

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Fig. S1 Observed (points) and calculated (continuous line) X-ray Rietveld refined patterns of BaSnO<sub>3</sub>-800.

Table S1. Cationic compositions, lattice parameter and BET surface area of  $BaSnO_3$  and  $Ba_{0.96}La_{0.04}SnO_3$  samples calcined at 800 °C for 4h.

Samples	Real mole ratio	Unit cell parameter	Volume	S / m <sup>2</sup> g <sup>-1</sup>
		/ Å	/ Å <sup>3</sup>	
BaSnO <sub>3</sub>	Ba / Sn = 1.008 / 1	4.115(9)	69.7	7.5
Ba <sub>0.96</sub> La <sub>0.04</sub> SnO <sub>3</sub>	Ba / La /Sn = 0.955 /	4.117(6)	69.8	9.2
	0.036 / 1			



Fig. S2 (a) A typical TEM image of the nanorod in BaSnO<sub>3</sub>-120 precursor and (b) the magnified view of selected area in (a).