Electronic Supplementary Information

$CdSnO_3$ Micro-Cubes with Porous Architecture: Synthesis and Gas-Sensing Properties

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The thermal behavior of $CdSnO_3 \cdot 3H_2O$ was characterized by DSC-TG measurements in the air of N_2 during the temperature of 70～800 ºC. As detailed in Fig. S1, in the process of thermal treatment, there is one strong exothermic peak at 270 ºC, while a weak exothermic peak at about 100 ºC, which could be caused by loss of crystal water and the slow release of absorption water, respectively. The strong loss of weight is about 15.20%, which was close to the calculated loss of 16.21% in theory. Furthermore, there is an endothermic peak at about 700 ºC, which may be the result of the crystal form transition and can be further testified in the XRD patterns in Fig. S2. Fig. S2(a) was sintered at 500 ºC by process temperature control, but with an amorphous nature. Fig. S2(b) was sintered at 700 ºC by process temperature control and it can be indexed to rhombohedral $CdSnO_3$ (JCPDS 34-0758) with good crystallinity.

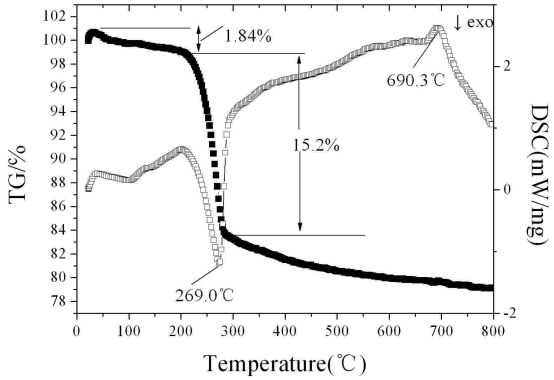

Fig. S1 DSC-TGA curves of $CdSnO_3 \cdot 3H_2O$

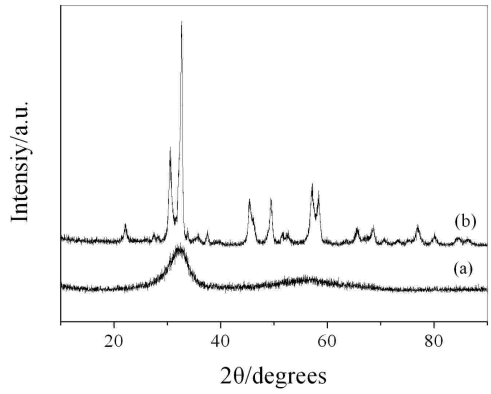

Fig. S2 XRD patterns of $CdSnO_3$ (a) sintered at 500 ºC (b) sintered at 700 ºC

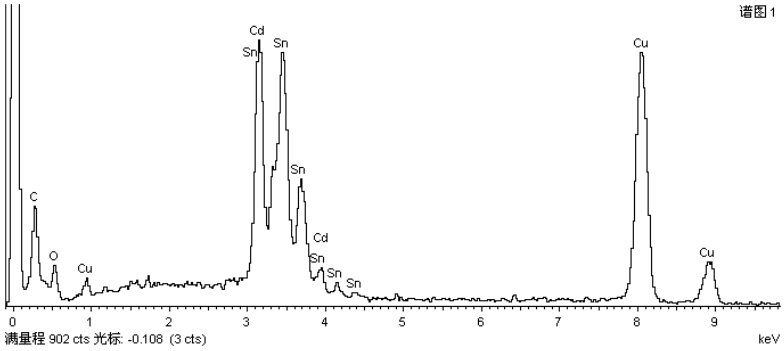

Fig. S3 The EDS of the as-synthesized $CdSnO_3$

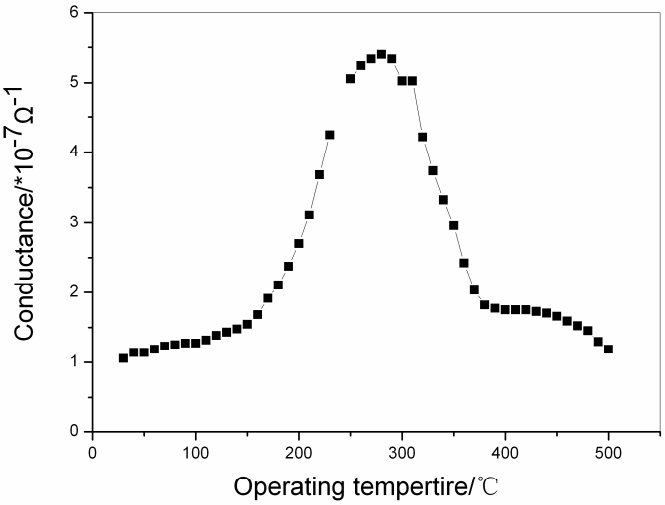

Fig. S4 The conductance-temperature behavior of ilmenite structure-type $CdSnO_3$