Electronic Supplementary Material (ESI) for RSC Advances.

Supporting Information

Molybdenum-Trioxide Nanopaper as Dual Gas Sensor for Detecting Trimethylamine and Hydrogen Sulfide

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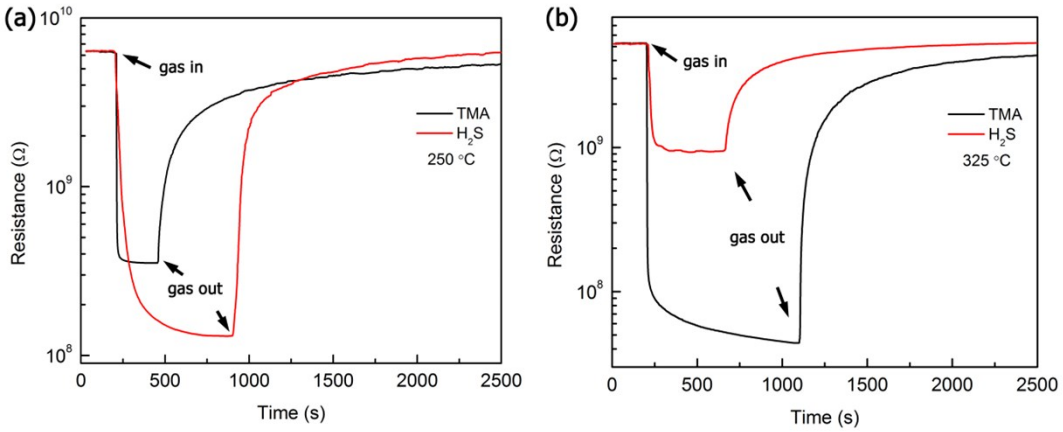

Fig. S1. Sensing transients of the MoO_3-nanopaper gas sensor to 5 ppm TMA and H_2S at 250 °C (a) and 325 °C (b)

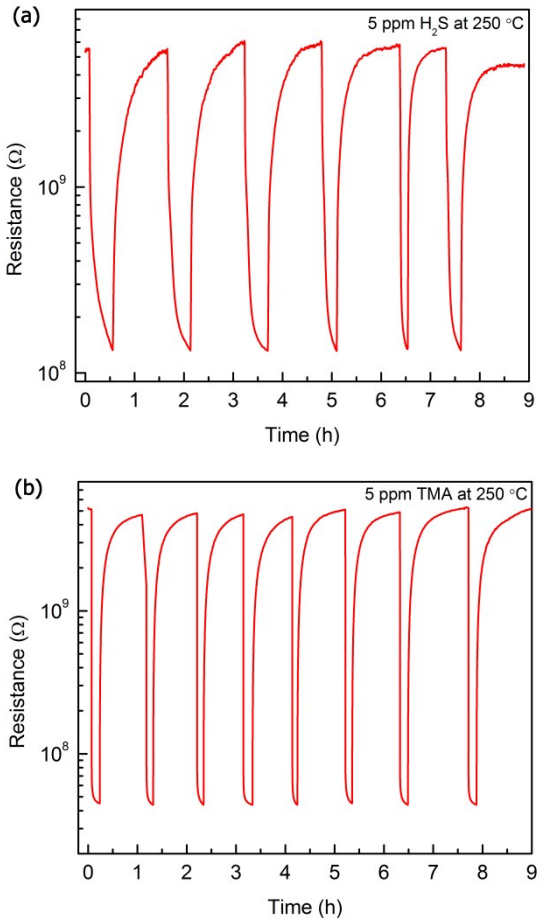

Fig. S2. Stability of the MoO_3-nanopaper sensor upon repetitive exposure to 5 ppm H_2S at 250 °C (a) and 5 ppm TMA at 325 °C (b).

Table S1. Gas-sensing performance of various sensors

Sensor type	Target gas (concentration)	Response (R_a/R_g)	Response / recovery time (s)	Operating temperature (°C)	Ref.
MoO_3 nanopaper	TMA (5 ppm)	121	7/493	325	This work
MoO_3 nanoplate	TMA (5 ppm)	374	-/-	300	[24]
MoO_3 nanobelts	TMA (5 ppm)	36	-/-	240	[34]
WO_3 hollow spheres	TMA (5 ppm)	56.9	~30/400	450	[23]
$LaFeO_3$ nanoparticles	TMA (1000 ppm)	2553	-/-	208	[25]
MoO_3 nanopaper	H_2S (5 ppm)	49	47/512	250	This work
Fe doped MoO_3	H_2S (100 ppm)	145.9	24/36	220	[31]
MoO_3 nanoparticle	H_2S (20 ppm)	370	~40/500	375	[32]
Mo doped ZnO	H_2S (5 ppm)	14.11	~30/200	300	[15]
Fe decorated $Ba_{0.99}Ce_{0.01}TiO_3$	H_2S (1 ppm)	4.36	71/125	150	[33]