

Electronic Supplementary Information:

High Sensitive Methane Catalytic Combustion Micro-Sensor Based on Mesoporous Structure and Nano-Catalyst

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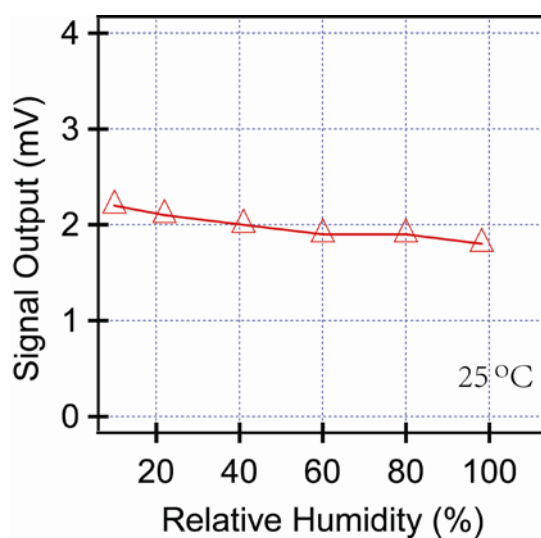


Fig. 1 Effect of the temperature on the signal output of the sensor (10% LEL).

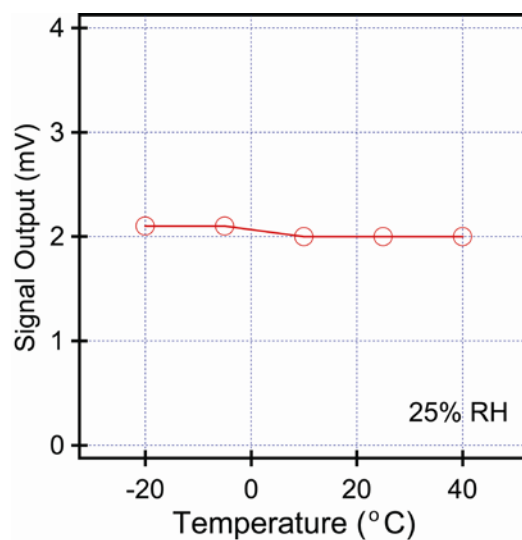


Fig. 2 Effect of the relative humidity on the signal output of the sensor (10% LEL).

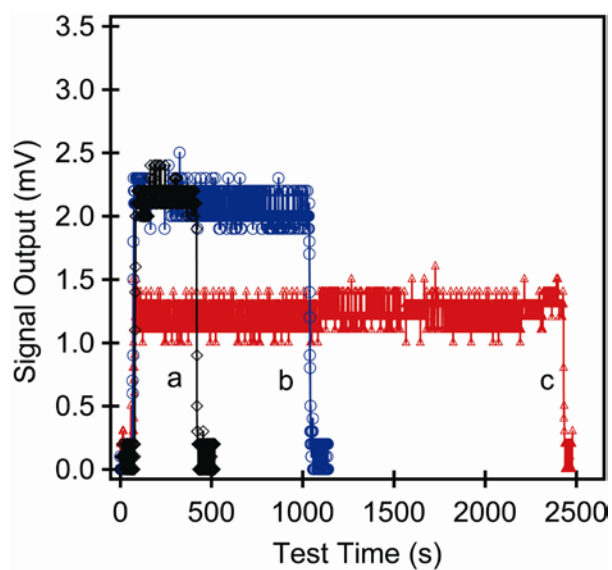


Fig. 3 Response of the sensor (10% LEL) before (a) and after (b) the exposure to 100 ppm H₂S, and the response under the exposure to 100 ppm H₂S mixed with 10% LEL methane (c).

Table 1 T₉₀ response time at different CH₄ concentration

CH ₄ Concentration	10%LEL	30%LEL	50%LEL	70%LEL	90%LEL
T ₉₀ Response time (s)	7	5	5	6	5