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Supplementary Information



Fig. S1 Optical microscope images of (a) bare Pt/IDEs and (b) SnS₂ NFs coated Pt/IDEs. (c) X1000 magnification FESEM image of SnS₂ NFs.



Fig. S2 Experimental setup for gas sensing measurement under LED illumination: (a) dark, (b) red, (c) orange, (d) green, (e) cyan and (f) blue.



Fig. S3 N₂ adsorption-desorption isotherm plot of the SnS₂ NFs. The inset shows pore size distribution.



Fig. S4 XRD spectra of SnS_2 NFs with different RTA conditions.



Fig. S5 Gas sensing curves of SnS₂ NFs under (a) dark condition, (b) orange, (c) cyan and (d) UV light illumination.



Fig. S6 Gas sensing curves of SnS₂ NFs under blue light illumination with different RTA conditions.



Fig. S7 Gas sensing curves of SnS_2 NFs under blue light illumination to 5 ppm of NO_2 , 50 ppm of NH_3 , 50 ppm of C_2H_5OH , 50 ppm of CH_3COCH_3 , 50 ppm of H_2 and 5 ppm of H_2S .



Fig. S8 Resistance curves under blue light illumination at different RH conditions: (a) 10%, (b) 30%, (c) 50% and (d) 80% RH.