Electronic supplementary information:

## Single-Walled Carbon Nanotubes Templated CuO Networks for Gas Sensing

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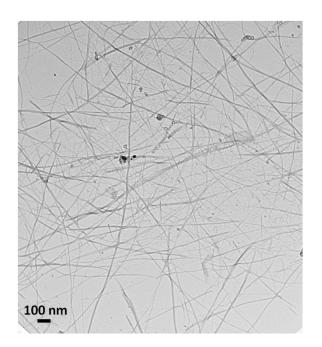


Figure S1. TEM of o-SWCNTs.

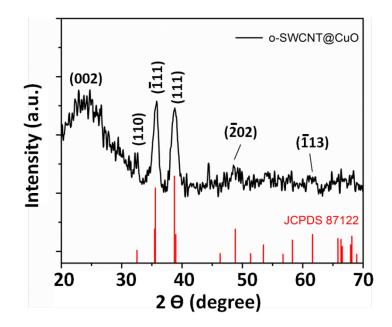


Figure S2. XRD spectrum of the o-SWCNT@CuO composite.

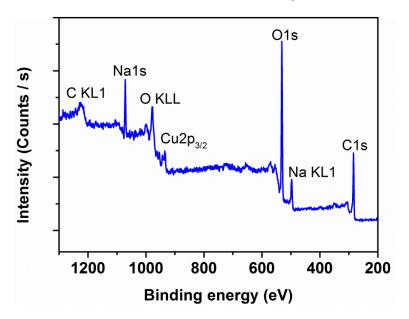


Figure S3. XPS spectra of o-SWCNT@CuO. Na signal is from the glass slide.

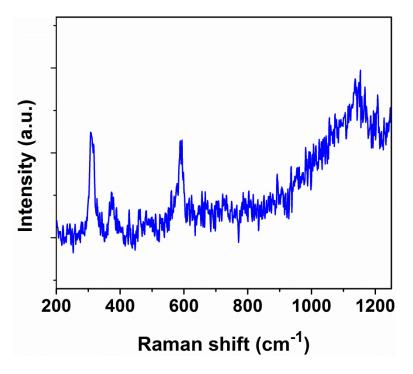


Figure S4. Raman spectra of CuO@o-SWCNT.

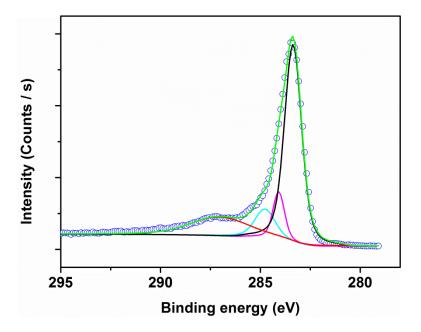


Figure S5. Pristine (P3) o-SWCNT C1s XPS spectra.

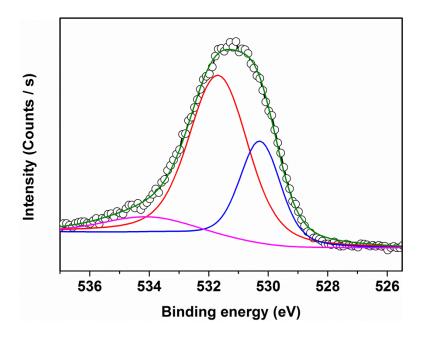


Figure S6. O1s XPS spectra of o-SWCNT.

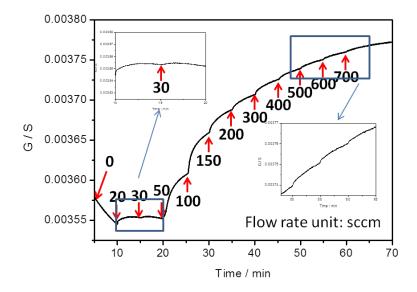


Figure S7. Influence of  $N_2$  flow rate on the conductance.

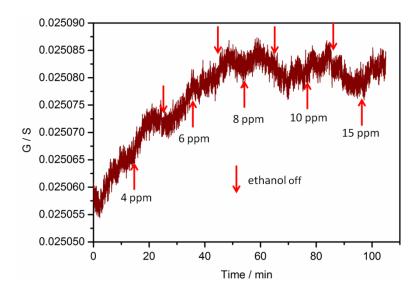


Figure S8. Ethanol sensing performance of pristine o-SWCNT.

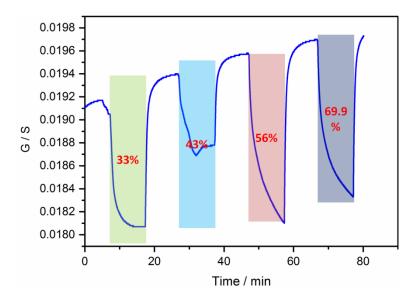


Figure S9. Humidity sensing performance of pristine o-SWCNT.

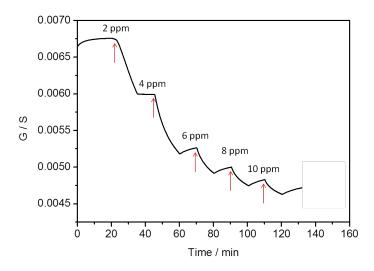


Figure S10. H<sub>2</sub>S sensing performance of SWCNT/CuO composite.

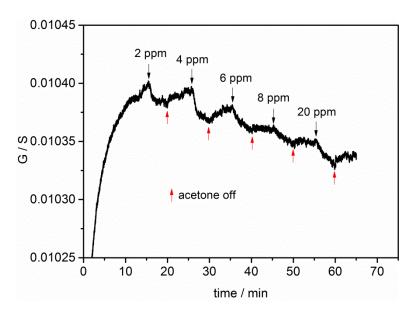


Figure S11. Acetone sensing behavior of SWCNT/CuO composite.