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Facile synthesis of CuO micro-sheets over peeling off Cu foil in oxalic acid solution and their sensing properties towards n-Butanol

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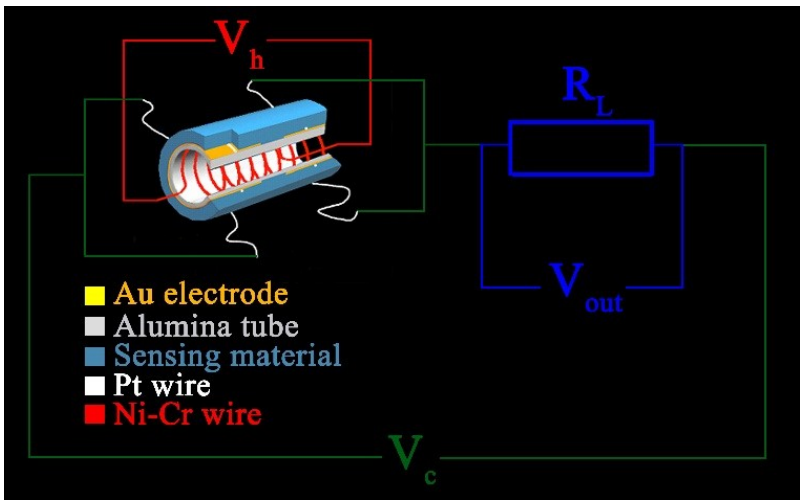

Fig. S1 Schematic structure along with the testing principle of the gas sensor.

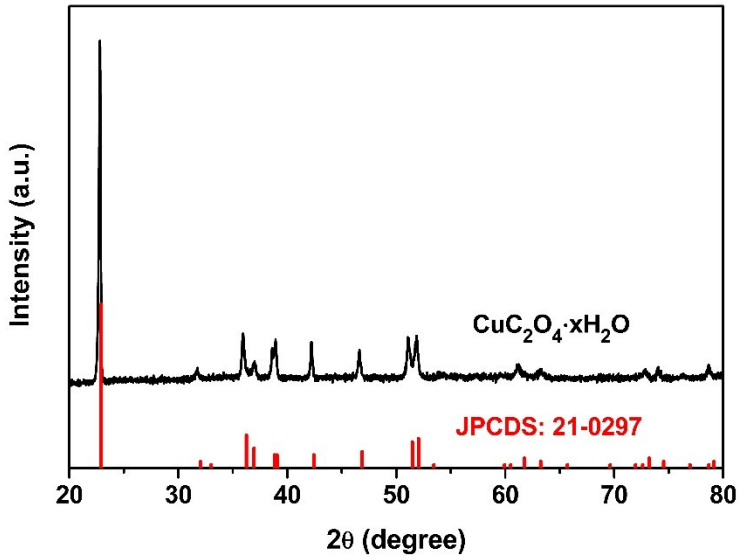

Fig. S2 XRD pattern of $CuC_2O_4 \cdot xH_2O$ precursors.

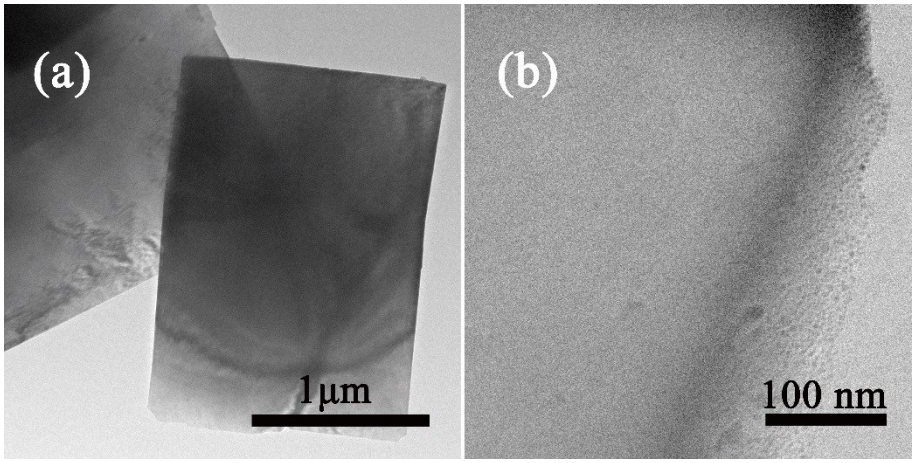

Fig.S3 Typical low- (a) and high-magnification (b) TEM images of $CuC_2O_4 \cdot xH_2O$ precursors.

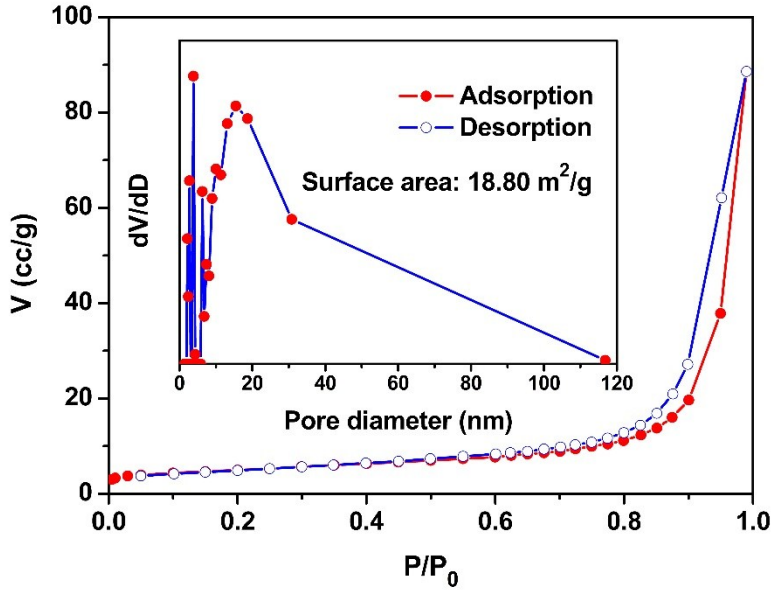

Fig.S4 Nitrogen adsorption–desorption isotherm of the CuO sheets (the inset displays the corresponding pore size distribution obtained from the desorption curve).

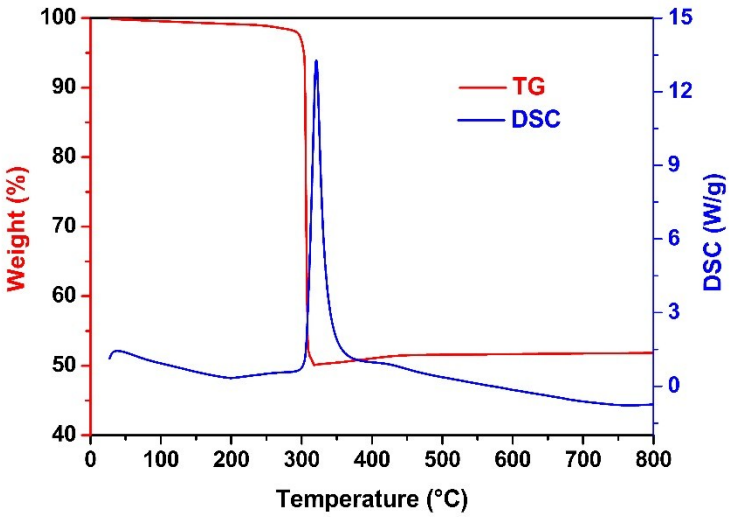

Fig.S5 TG and DSC curves of thermal conversion $CuC_2O_4 \cdot xH_2O$ precursor to CuO.

Table S1. Rietveld refinement parameters obtained from X-ray diffraction data of CuO using MAUD software package.

Lattice parameters

Symmetry: Monoclinic

Space group: C2/c

Cell parameters:

a: 4.6865 Å

b: 3.4312 Å

c: 5.1361 Å

α, β, γ (°)： 90, 99.40, 90

Crystallite size (nm): 42.73

Atomic positions

Cu:

x: 0.0839

y: 0.2393

z: 0

O:

x: -0.1861

y: 0.4193

z: 0.2249

Reliability factors

Rwp (%): 6.60

Rp (%): 5.22