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$_2$O$_4$·xH$_2$O precursors.
Fig. S3 Typical low- (a) and high-magnification (b) TEM images of CuC$_2$O$_4$·xH$_2$O 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$_2$O$_4$·xH$_2$O precursor to CuO.
Table S1. Rietveld refinement parameters obtained from X-ray diffraction data of CuO using MAUD software package.

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<tr>
<th>Lattice parameters</th>
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<tr>
<td>Symmetry: Monoclinic</td>
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<tr>
<td>Space group: C2/c</td>
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<tr>
<td>Cell parameters:</td>
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<tr>
<td>a: 4.6865 Å</td>
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<tr>
<td>b: 3.4312 Å</td>
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<tr>
<td>c: 5.1361 Å</td>
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<tr>
<td>α, β, γ (°): 90, 99.40, 90</td>
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<td>Crystallite size (nm): 42.73</td>
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<th>Atomic positions</th>
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<td>O:</td>
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<td>Rwp (%): 6.60</td>
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<td>Rp (%): 5.22</td>
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