Supporting Information for:

Nanorod-aggregated flower-like CuO growing on carbon fiber fabric for a super high sensitive non-enzymatic glucose sensor

Weina Xu1, Shuge Dai1, Xue Wang1,2,*, Xianming He1, Mingjun Wang1, Yi Xi1, Chengu Hu1,*

Fig. S1 Low- (a) and high-magnification (b) FE-SEM images of pure CuO.

Fig. S2 CVs of CuO/G and CuO/CFF electrodes with the presence of 1.0 mM glucose in 100 mM NaOH solution at 50 mV s⁻¹.

Fig. S3 Amperometric response of CuO/CFF electrodes for different hydrothermal growth time with successive addition of glucose to 100 mM NaOH solution per 50 s at 0.45 V (a); calibration curves of current response versus glucose concentration at CuO/CFF electrodes for different hydrothermal growth time (b).

Fig. S4 The loading mass of CuO on CFF for hydrothermal growth time of 4h (a), 6h (b) and 8h (c).

Real blood analysis
Table S1 Determination of glucose in blood serum samples.
**Fig. S1** Low- (a) and high-magnification (b) FE-SEM images of pure CuO.
Fig. S2 CVs of CuO/G and CuO/CFF electrodes with the presence of 1.0 mM glucose in 100 mM NaOH solution at 50 mV s\(^{-1}\).
**Fig. S3** Amperometric response of CuO/CFF electrodes for different hydrothermal growth time with successive addition of glucose to 100 mM NaOH solution per 50 s at 0.45 V (a); calibration curves of current response versus glucose concentration at CuO/CFF electrodes for different hydrothermal growth time (b).

**Fig. S4** The loading mass of CuO on CFF for hydrothermal growth time of 4h (a), 6h (b) and 8h (c).
Real blood analysis

The CuO/CFF is also applied to detect the concentration of glucose in three different human blood serum samples. The blood samples are obtained from known personals and 40 μL serum sample is added to a 20 mL 100 mM NaOH aqueous solution. The current response was recorded at the applied potential of 0.45 V. And the corresponding results are shown in table S1 and the proposed sensor can gives a good recovery of glucose by addition of 0.1 mM glucose to the solutions containing the serum samples. The CuO/CFF electrode can be used as an amperometric sensor for routine determination of glucose level in real blood serum samples.

The blood samples are provided voluntarily by the known peoples who are Weina Xu, Xianming He and Yifan Lin, the students from Chongqing University, China. And they are consented to their blood serum samples used in our experiments.

Table S1 Determination of glucose in blood serum samples.

<table>
<thead>
<tr>
<th>Samples</th>
<th>concentration (mM)</th>
<th>R.D.S(%) n=3</th>
<th>Added Glc (mM)</th>
<th>Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5.4</td>
<td>2.58</td>
<td>0.1</td>
<td>95%</td>
</tr>
<tr>
<td>2</td>
<td>4.8</td>
<td>2.13</td>
<td>0.1</td>
<td>97%</td>
</tr>
<tr>
<td>3</td>
<td>5.5</td>
<td>3.25</td>
<td>0.1</td>
<td>98%</td>
</tr>
</tbody>
</table>