Supporting Information

**In Situ Oxidation of Cu$_2$O Crystal for Electrochemical Detection of Glucose**

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*Figure S1.* Comparison of different glucose sensors performance.
Figure S2. The SEM images of 5M-0.1-300, 5M-0.1-1200, 3M-0.1-300, 5M-0.1-1200.

Figure S3. The Raman spectrum of the Cu$_2$O electrodes fabricated under different conditions.

The Raman spectra of 3M-0.1, 3M-0.3, 5M-0.1, 5M-0.3 and 5M-0.5 electrodes exhibit characteristic peaks at 108.8 cm$^{-1}$, 148.7 cm$^{-1}$, 218.3 cm$^{-1}$, 520 cm$^{-1}$ and 630 cm$^{-1}$, which are attributed to Cu$_2$O [1,2]. The Raman spectra of 3M-0.5, 3M-0.3 and 1M-0.1 exhibit the characteristic peaks of Cu(OH)$_2$ at 290 cm$^{-1}$ and 490 cm$^{-1}$, according to previous researches [2–4]. It should be noticed that the Raman spectrum of 3M-0.3 exhibits the both characteristic peaks of Cu$_2$O and Cu(OH)$_2$. This agrees with the SEM in Figure S1 that shows the existence of nanoparticles and nanotubes.
References


