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In-situ formation of metal-organic framework derived CuO polyhedrons on carbon cloth for highly sensitive non-enzymatic glucose sensing and supercapacitor applications

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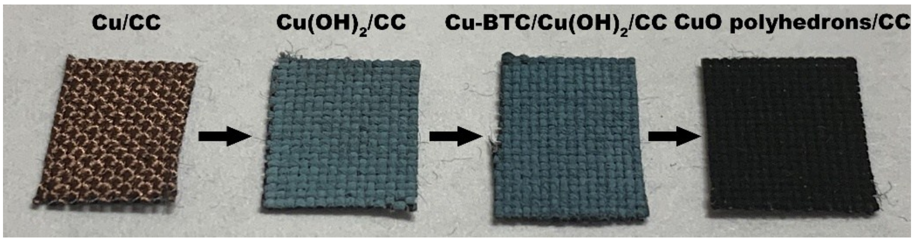

Figure S1. Photographs of Cu/CC, $Cu(OH)_2$ nanorods/CC, Cu-BTC/$Cu(OH)_2$ composites/CC, and CuO polyhedrons/CC.

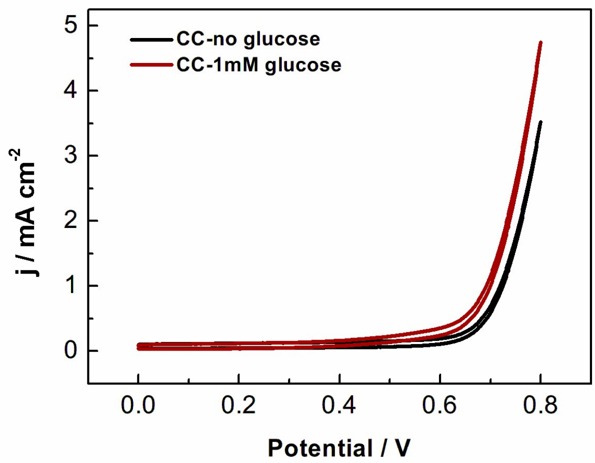

Figure S2. CVs of bare CC in the absence and presence of 1 mM glucose in 0.1 M NaOH solution with a scan rate of 50 mV s^{-1}.

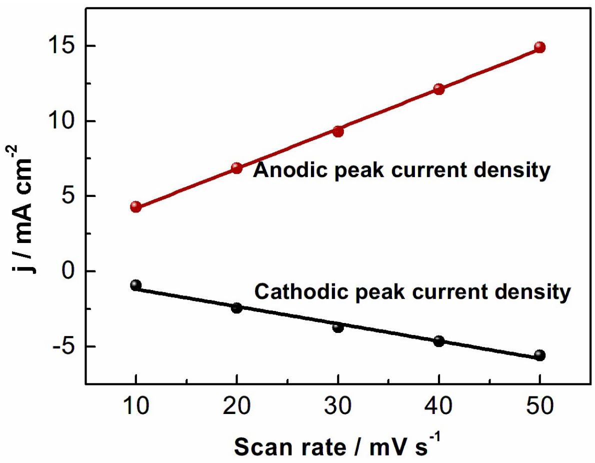

Figure S3. Calibration curves of peak current density vs. scan rate on CuO polyhedrons/CC electrode.

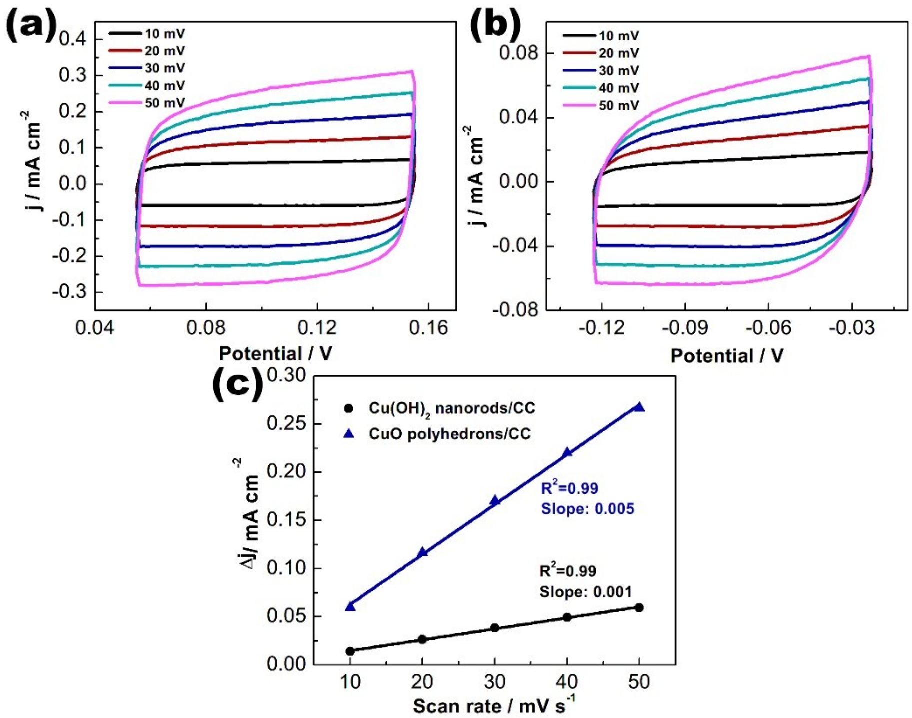

Figure S4. CV curves for (a) CuO polyhedrons/CC, and (b) $Cu(OH)_2$ nanorods/CC electrodes with different scan rates within ±0.05 V of open circuit potential. (c) Capacitive currents at open circuit potential as a function of scan rate for CuO polyhedrons/CC and $Cu(OH)_2$ nanorods/CC electrodes ($\Delta j = j_a - j_c$).

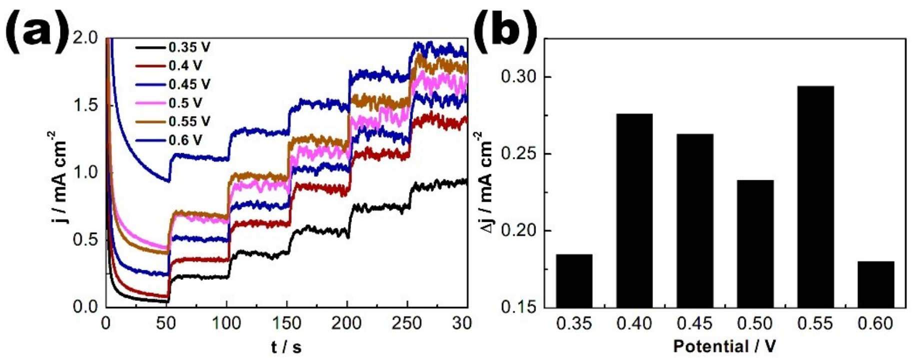

Figure S5. (a) Amperometric responses of the CuO polyhedrons/CC electrode upon successive injections of 50 μM glucose into 0.1 M NaOH under different applied potentials. (b) Corresponding curve of current density response vs. applied potential on CuO polyhedrons/CC electrode.

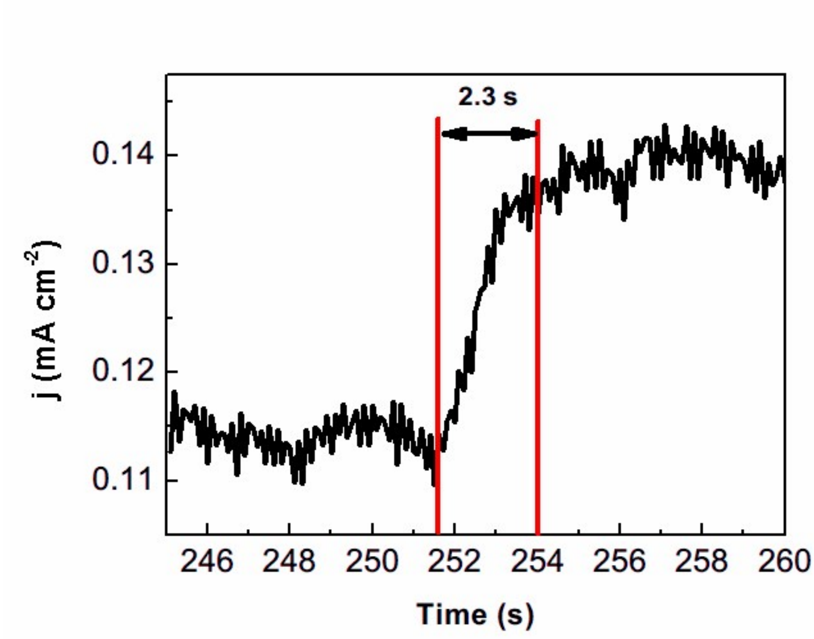

Figure S6. Enlarged view of the amperometric response with the addition of 5 μM glucose.

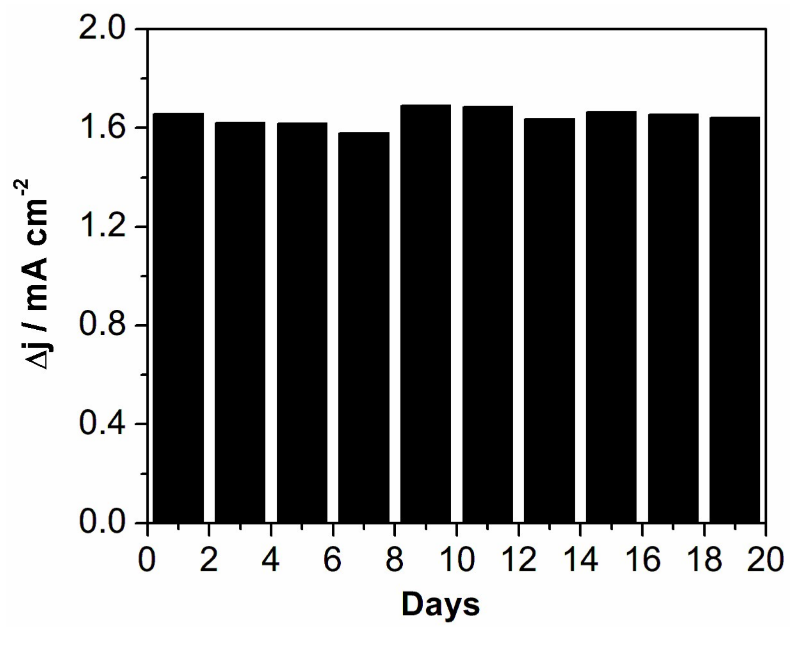

Figure S7. Long-term stability test of the CuO polyhedrons/CC electrode with the addition of 0.1 mM glucose over a 20-day period.