Supplementary Material

Integrating Cu/Cu_xO ternary nanocomposites with multi-walled carbon nanotubes enabling a high-performance nonenzymatic amperometric glucose sensor

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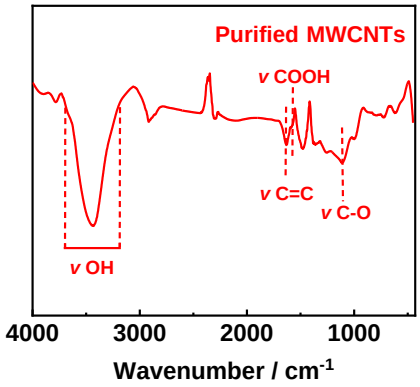

Figure 1. FTIR spectra of the purified MWCNTs.

Table 1. Relative information in Cu 2p of Cu/Cu_xO@MWCNTs presented in XPS

Peak	Position		Aera	Ratio
$2p_{3/2}$	932.640	Cu	28110.990	2.43
	934.579	CuO	24965.590	2.16
Sat_3	941.566		5910.510	
Sat_2	944.176		5250.017	
$2p_{1/2}$	952.524	Cu_2O	13549.290	1.17
	954.601	CuO	11550.290	1
Sat_1	962.754		5242.208	

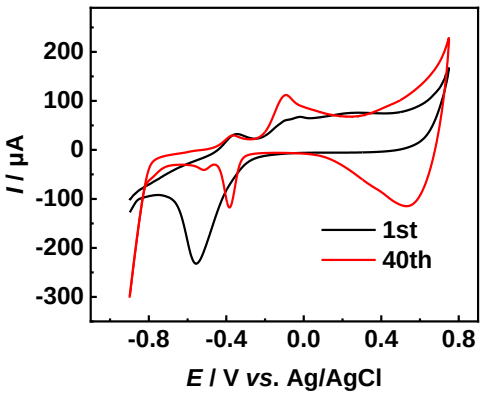

Figure 2. The typical cyclic voltammograms of the first (black curve) and 40th (red curve) cycle extracted from a 40-cycle repetitive CV obtained at the Cu/Cu_xO@MWCNTs-modified GC electrode in 0.1 M NaOH solution at the scanning rate of 50 $mV \cdot s^{-1}$.

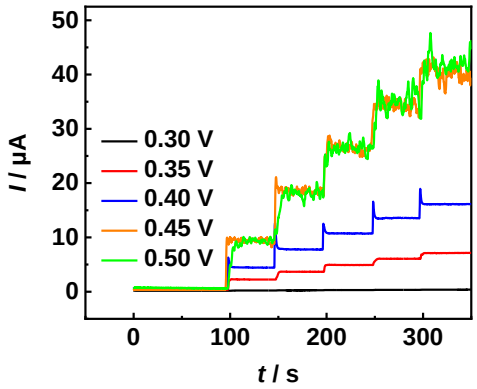

Figure 3. Voltage optimization experiment with a dropwise addition of 0.1 mM glucose of Cu/Cu_xO@MWCNTs-modified GC electrode.

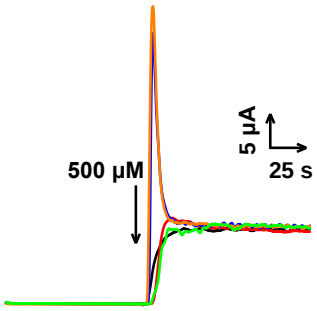

Figure 4. Typical amperometric responses of five different Cu/Cu_xO@MWCNTs-modified GC electrodes towards 500 μM glucose.