Electronic Supplementary Information

Hierarchical Cu/Cu(OH)2 nanorod arrays grown on Cu foam as a high-performance 3D self-supported electrode for enzyme-free glucose sensing

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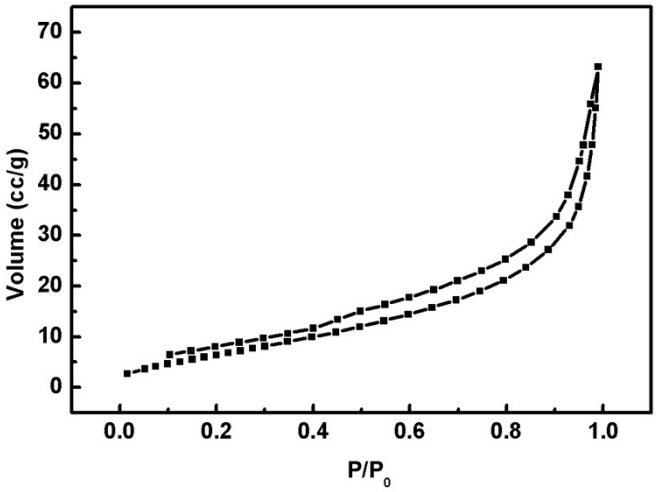

Fig S1. Nitrogen adsorption/desorption isotherm plot of $Cu/Cu(OH)_2$ NRA scratched down from the CFL.

Table S1. Analytical performances of $Cu/Cu(OH)_2$ NRA/CF and other copper-based enzyme-free glucose sensors with hierarchical nanostructure.

Electrode	Applied potential (V)	Sensitivity (mA mM^{-1} cm^{-2})	Linear range (mM)	Detection limit (μM)	Reference
$Cu(OH)_2$ nanotube arrays	0.4	0.418	Up to 3	0.5	38
Cu foam	0.55	5.85	0.001 to 0.5	0.5	41
CuO/TiO_2 nanocomposites	0.7	1.321	0.01 to 2	0.39	42
Hierarchical CuO nanoflowers	0.5	2.657	0.01 to 5	1.71	43
Hyper-branched $Cu@Cu_2O$ coaxial nanowires	0.6	1.42	0.0007 to 2	0.04	21
CuO/ZnO hybrid hierarchical nanostructures	0.6	0.408	0.1 to 1	18	44
Chrysanthemum-like CuO hierarchical film	0.6	3.252	0.002 to 2.3	0.6	36
Candock-like CuO hierarchical film	0.6	4.078	0.005 to 2	1.2	36
Dandelion-like CuO hierarchical film	0.6	5.368	0.005 to 1.6	1.2	36
$Cu(OH)_2$ /PGF	0.6	3.36	0.0012 to 6	1.2	45
$Cu/Cu(OH)_2$ NRA/CF	0.5	9.180	0.001 to 1	0.45	This work

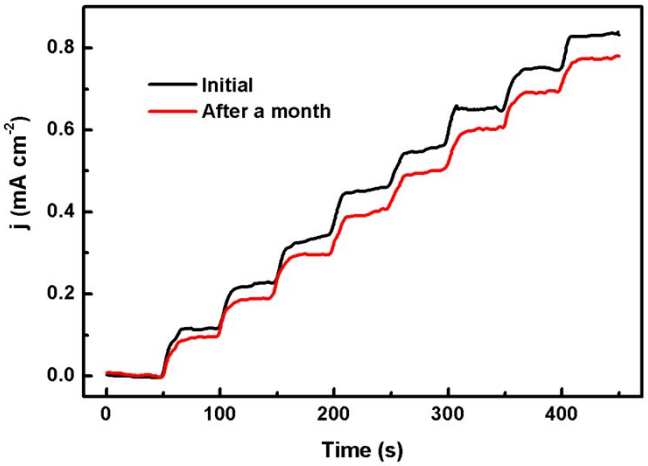

Fig. S2. Amperometric response of $Cu/Cu(OH)_2$ NRA/CF in 0.01 mM glucose initially and after a month.