SUPPORTING INFORMATION

Novel Hierarchical CuNiAl LDH Nanotubes with Excellent Peroxidase-Like Activity for Wide Range Detection of Glucose

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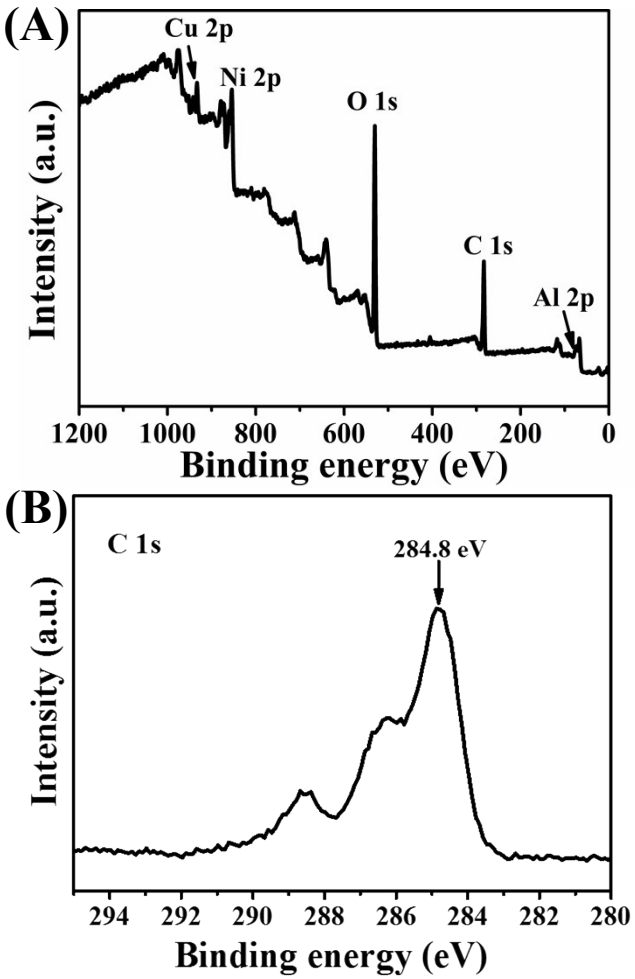

Figure S1. XPS survey spectrum of 100CuNiAl LDH. (B) XPS spectrum of C 1s.

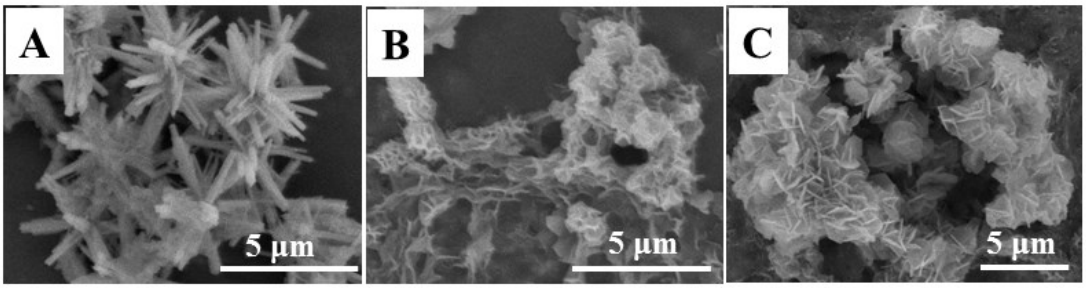

Figure S2. SEM images of CuNiAl LDH prepared with different Cu salts: (A) $CuCl_2$, (B) $Cu(OAc)_2$ and (C) $CuSO_4$.

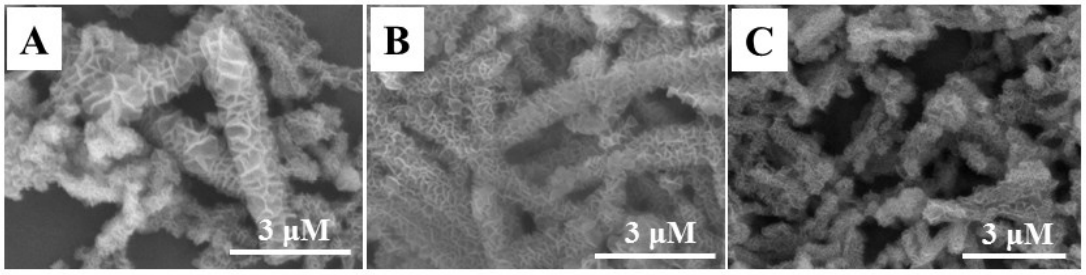

Figure S3. SEM images of CuNiAl LDH prepared with different molar ratios (NH_4NO_3 : $Cu(NO_3)_2$): (A) 1 : 1, (B) 1 : 1.5 and (C) 1 : 2.

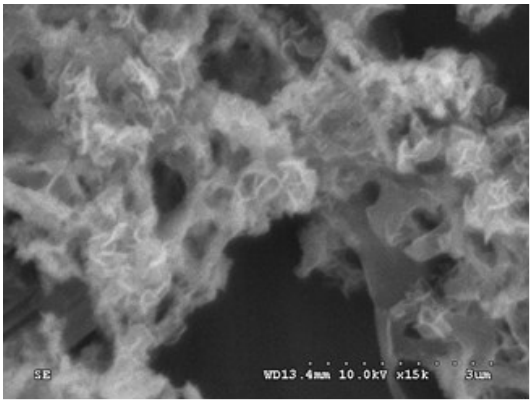

Figure S4. SEM images of CuNiAl LDH (Al_2O_3@NiC_2O_4 as precursor).

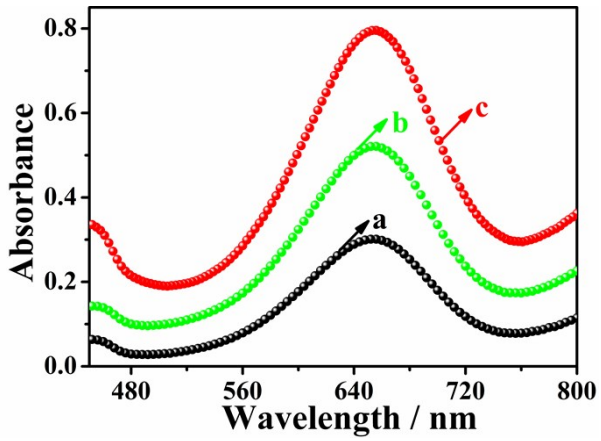

Figure S5. UV-vis absorption in different reaction system. (a) H_2O_2 + TMB + 20CuNiAl-LDH; (b) H_2O_2 + TMB + 50CuNiAl-LDH; (c) H_2O_2 + TMB + 100CuNiAl-LDH. Reaction conditions: 0.8 mM TMB, 50 μg mL^{-1} catalyst, 4 mM H_2O_2 in 20 mM PBS incubated at 55 °C for 30 min.

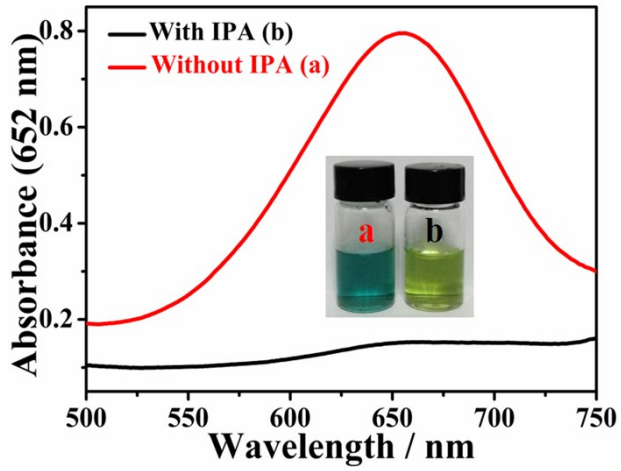

Figure S6. The UV-vis absorption spectra of 0.8 mM TMB mixed solutions in the absence or presence of scavengers (IPA). The inset is the photograph of the related color changes.

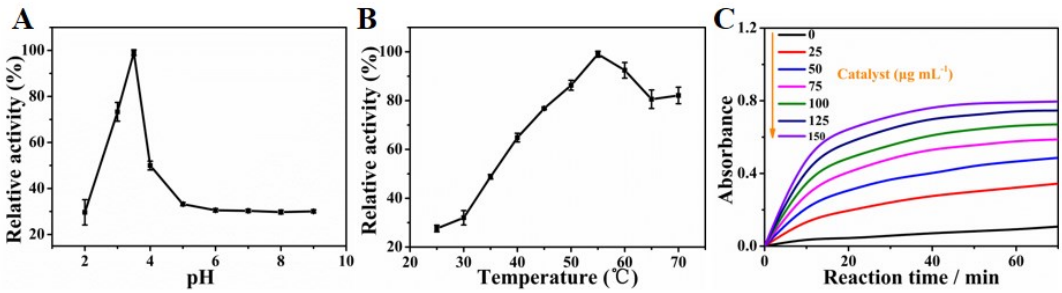

Figure S7. The dependence of peroxidase-like catalytic activities of (A) pH, (B) temperature and (C) concentration of catalyst.

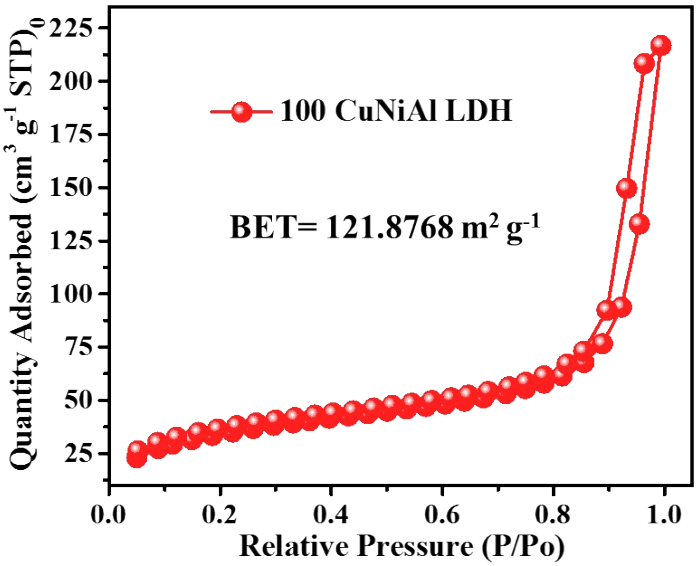

Figure S8. BET of 100CuNiAl LDH.

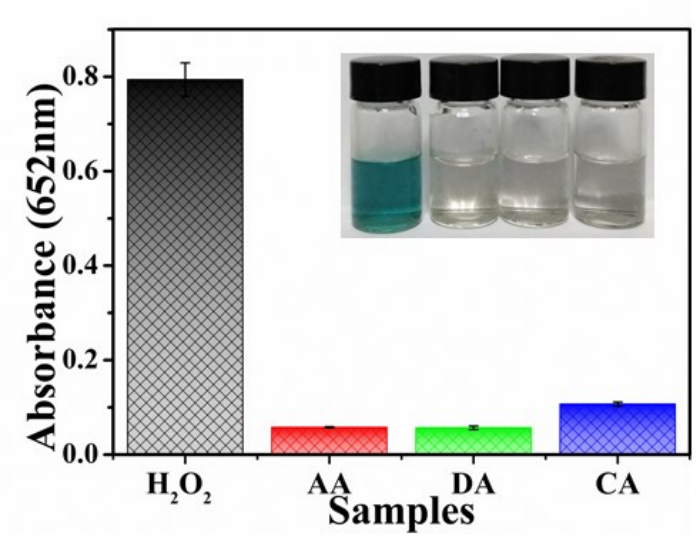

Figure S9. Selectivity analysis for 4 mM H_2O_2 detection, L-ascorbic (AA), dopamine hydrochloride (DA) and citric acid (CA) as the control group.

Table S1. Results of the Glucose Detection in Fresh Juices.

Original amount (μM)	Added (μM)	Found (μM)	Recovery (%)	RSD (%)
196.88	40	236.02	97.85	6.43
137.45	40	179.19	104.35	7.08
110.15	40	149.78	99.07	3.17

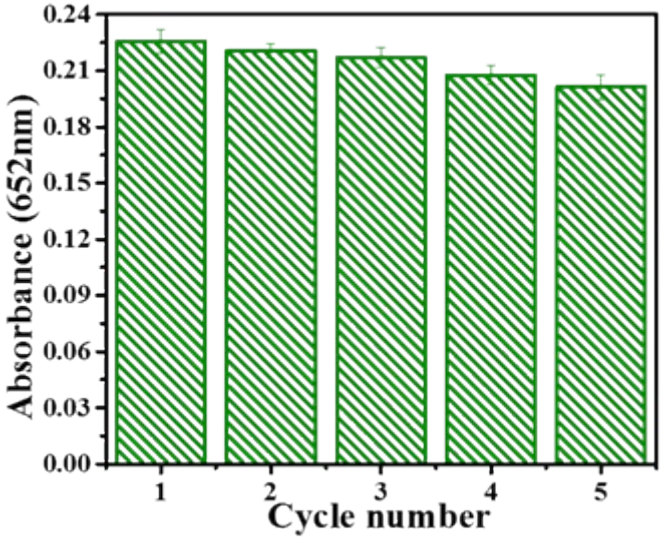

Figure S10. UV-vis absorbance changes at 652 nm of reusability experiments.