Supplemental Files

Cu(II)-Assisted Self-Assembly of Dicyandiamide-Derived Carbon Dots: Construction Inspired from Chemical Evolution and Its H_2O_2 Sensing Application

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Table S1. Summary of CVs analysis for the prepared-catalysts.

Fig. S1 (A) XPS survey peaks and (B) deconvoluted spectra of C 1s of DCD-CDs/Cu-200 and DCD-CDs/Cu-300.

Fig. S2 Plots of peak current vs. scan rate.

Fig. S3 Optimal mass loading of DCD-CDs/Cu-300 on surface of GCE.

Fig. S4 Amperometric response of the DCD-CDs/Cu-300/GCE at different pH and temperatures.

Table S1. Summary of CVs analysis for the prepared-catalysts

Electrode	E_{pa} (V)	E_{pc} (V)	E_{onset} (V)	E_c (V)	I_c (mA)
DCD-CDs/Cu-60	-0.18	-	-0.27	-0.71	-0.084
	0.096				
DCD-CDs/Cu-100	-0.20	-	0.17	-0.69	-0.091
	0.126				
DCD-CDs/Cu-200	-	-	-0.15	-0.70	-0.090
DCD-CDs/Cu-300	-0.124	-0.34	-0.02	-0.50	-0.11
	-0.03				
DCD-CDs/Cu-400	-0.09	-0.174	-0.32	-0.80	-0.085
		-0.38			
		-0.593			
Pure CuO	-0.09	-0.129	-0.47	-0.80	-0.088
		-0.402			
		-0.617			

Fig. S1

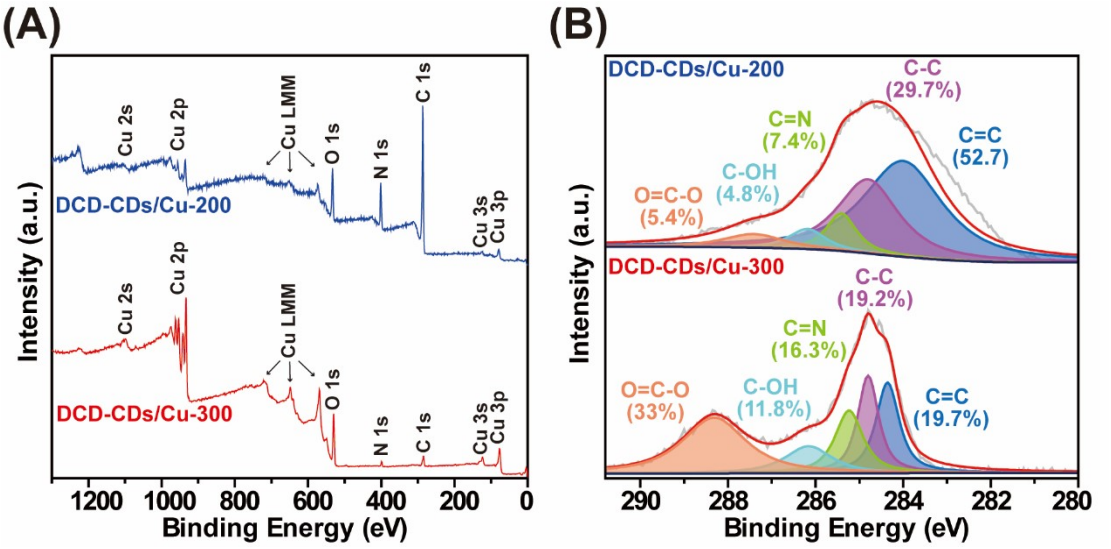

(A)
Cu 2s
Cu 2p
Cu LMM
O 1s
N 1s
C 1s
Cu 3s
Cu 3p
DCD-CDs/Cu-200
DCD-CDs/Cu-300
Intensity (a.u.)
1200 1000 800 600 400 200 0
Binding Energy (eV)
(B)
DCD-CDs/Cu-200
C-C (29.7%)
C=N (7.4%)
C=C (52.7)
C-OH (4.8%)
O=C-O (5.4%)
DCD-CDs/Cu-300
C-C (19.2%)
C=N (16.3%)
O=C-O (33%)
C-OH (11.8%)
C=C (19.7%)
Intensity (a.u.)
290 288 286 284 282 280
Binding Energy (eV)

Fig. S2

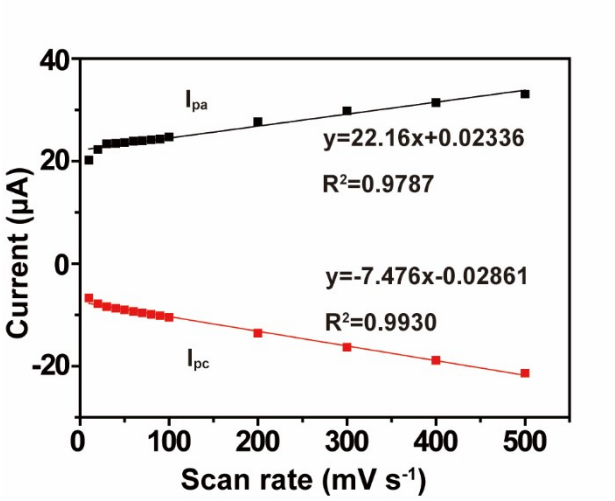

40
20
0
-20
Current (μA)
I_{pa}
y=22.16x+0.02336
R^2=0.9787
y=-7.476x-0.02861
R^2=0.9930
I_{pc}
0 100 200 300 400 500
Scan rate (mV s^{-1})

Fig. S3

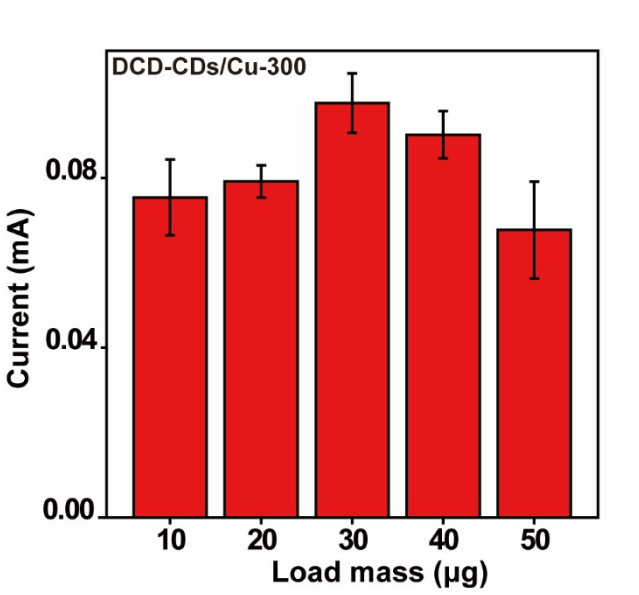
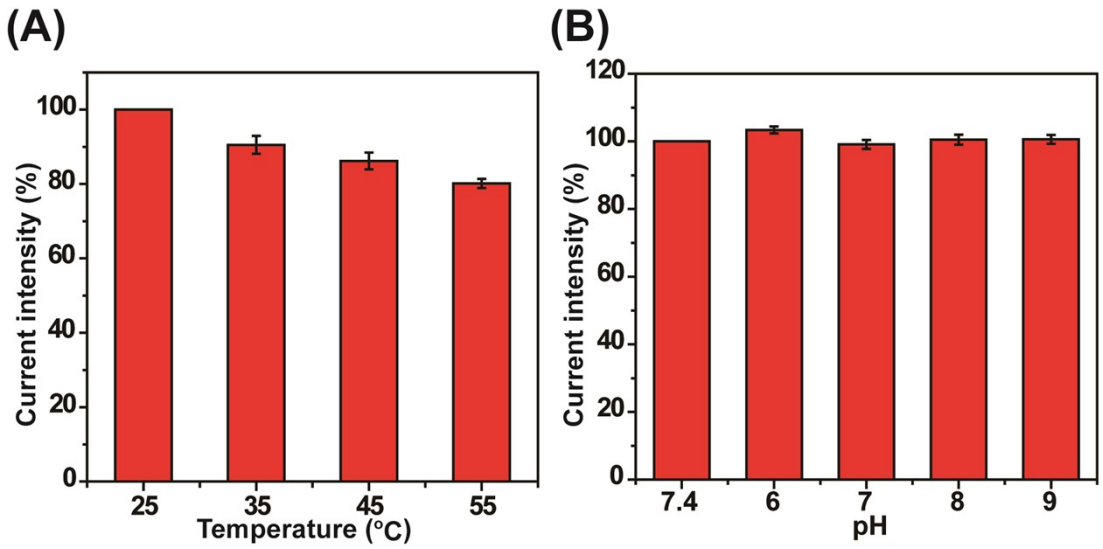

DCD-CDs/Cu-300
Current (mA)
0.00
0.04
0.08
10
20
30
40
50
Load mass (μg)

Fig. S4


(A)
Current intensity (%)
0
20
40
60
80
100
25
35
45
55
Temperature (°C)
(B)
Current intensity (%)
0
20
40
60
80
100
120
7.4
6
7
8
9
pH