Electronic Supplementary Material (ESI) for New Journal of Chemistry.

Supporting Information

One-Pot Synthesis of Porous Crystal Structured Nanosponge-Like Pristine Copper Metal-Organic Framework for Hybrid Supercapacitor Application

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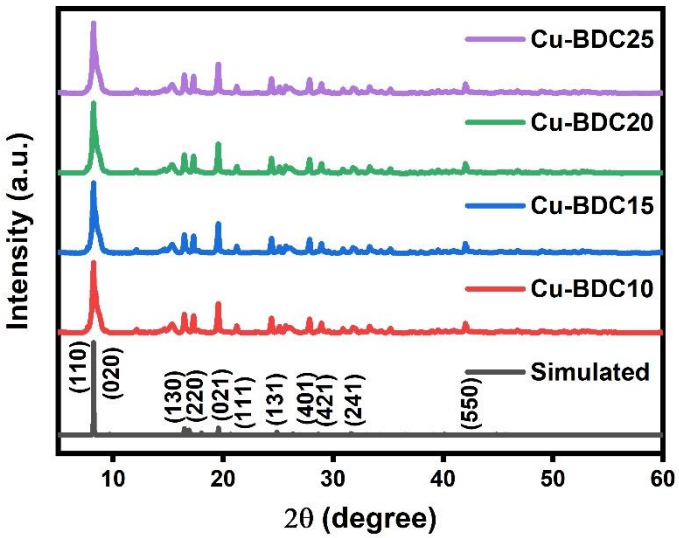

Fig. S1 XRD patterns of simulated, Cu-BDC10, Cu-BDC15, Cu-BDC20, and Cu-BDC25.

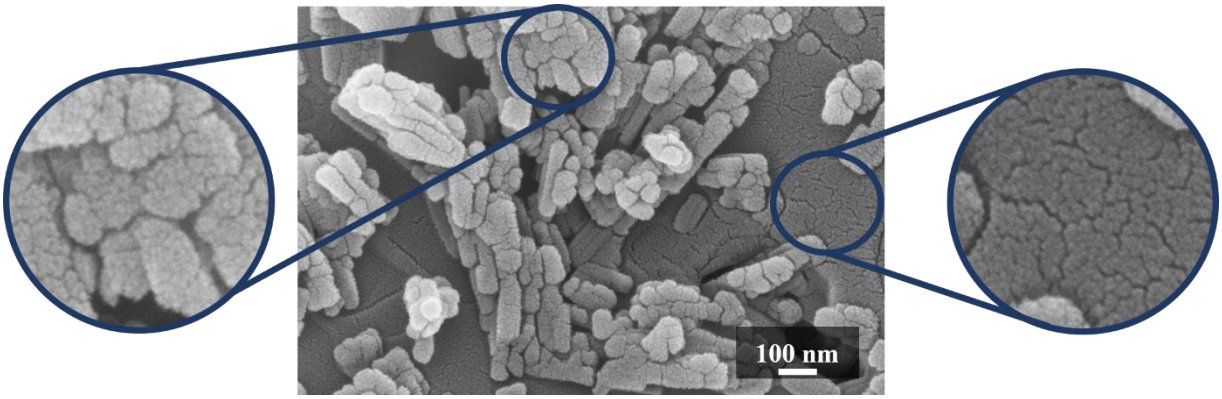

Fig. S2 FE-SEM image of novel nanosponge-like pristine Cu-BDC20

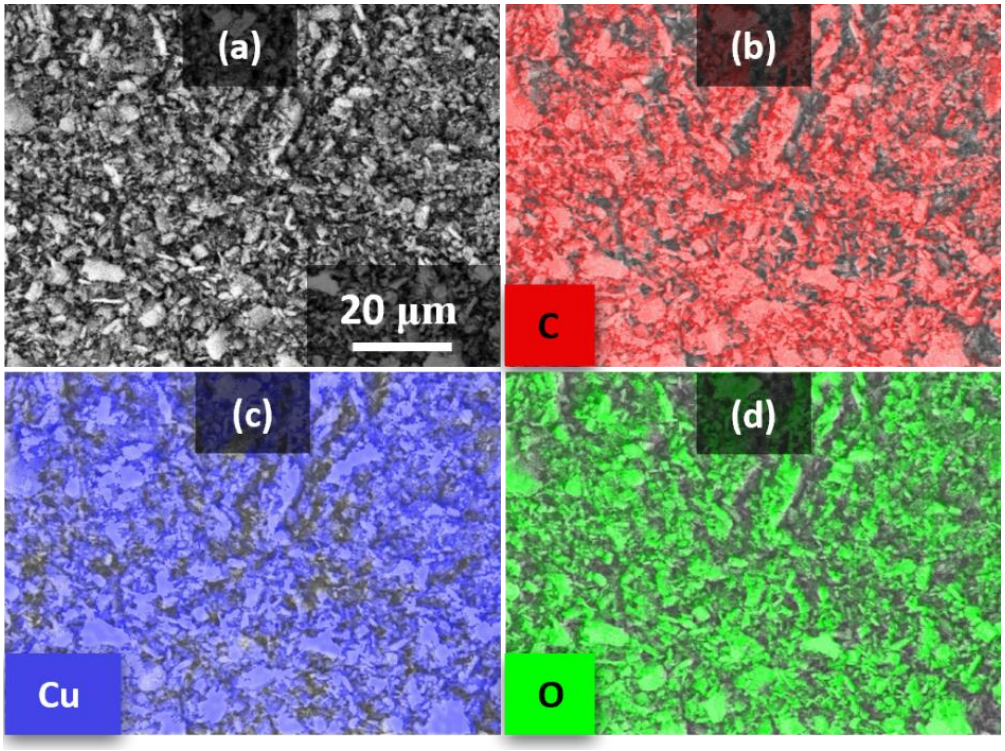

Fig. S3 (a) FE-SEM images at the magnification of 2500 X, (b) elemental mapping of Cu (blue), (c) C (red), and (d) O (green) of as-prepared Cu-BDC20.

Table S1 Surface elemental composition of Cu-BDC20 from EDX spectrum

S.No.	Element	Weight (%)	Atomic (%)
1	Copper	24.23	6.30
2	Oxygen	30.63	31.63
3	Carbon	45.13	62.07

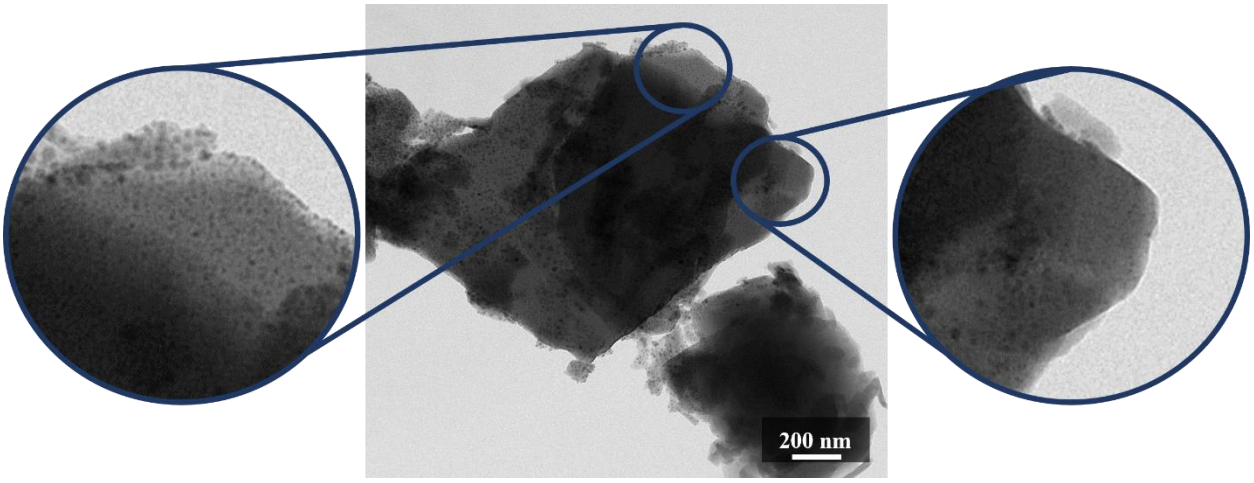

Fig. S4 TEM image of novel nanosponge-like pristine Cu-BDC20

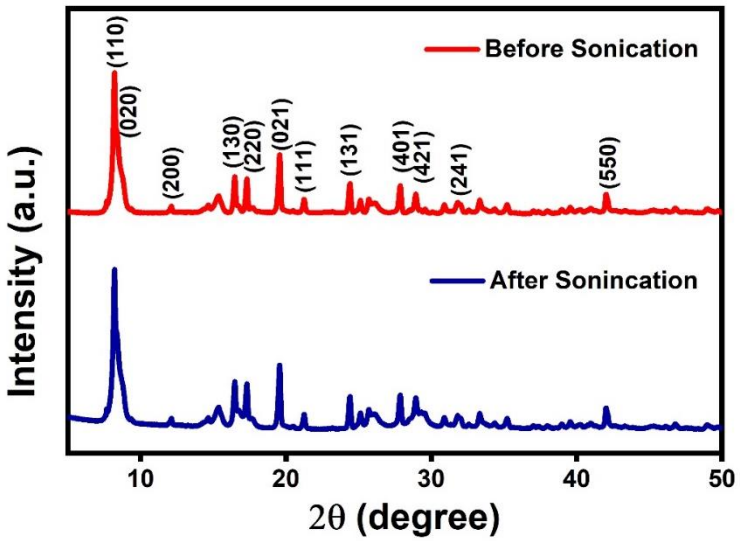

Fig. S5 The XRD patterns of as-prepared Cu-BDC20 before and after sonication.

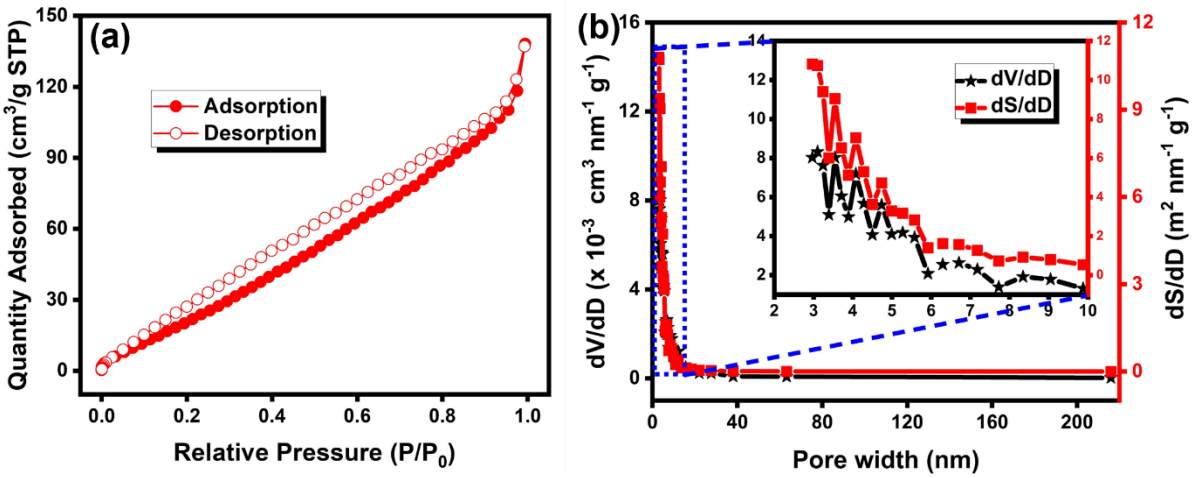

Fig. S6 (a) Nitrogen gas adsorption-desorption isotherm, and (b) BJH (Barrett–Joyner–Halenda) pore size distribution curve of as-prepared Cu-BDC20.

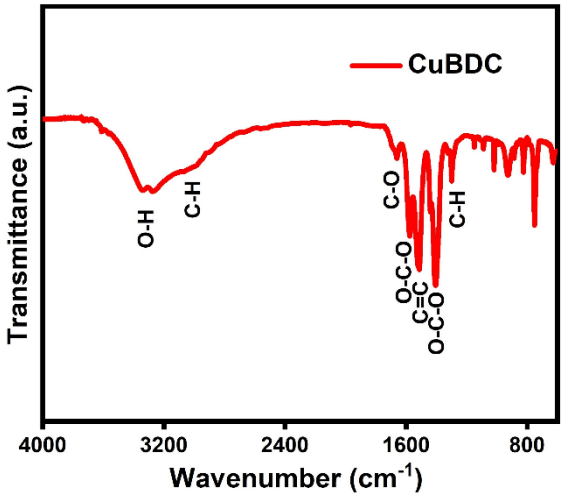

Fig. S7 FTIR spectrum of Cu-BDC20.

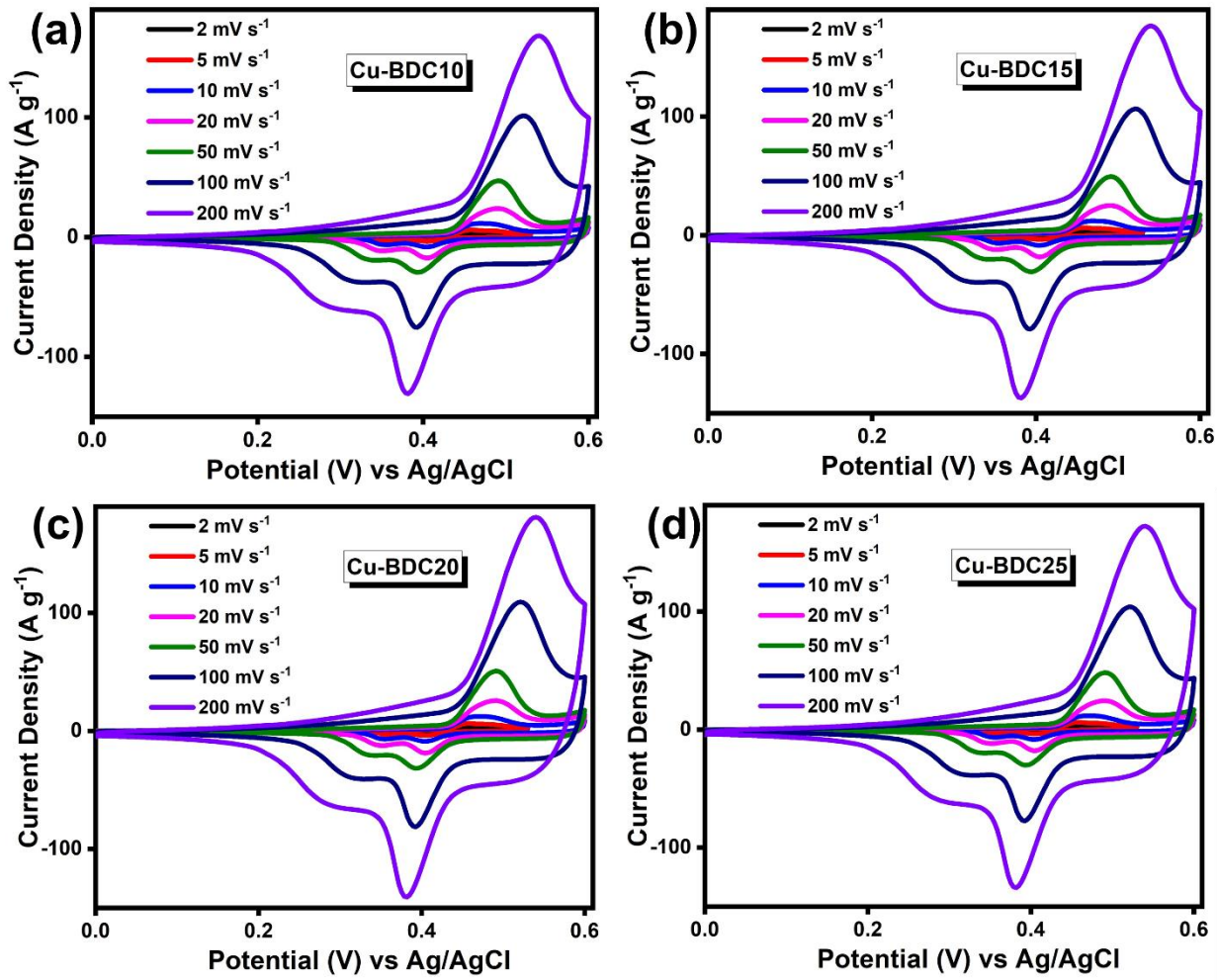

Fig. S8 CV curves at various scan rate of (a) Cu-BDC10, (b) Cu-BDC15, (c) Cu-BDC20, and (d) Cu-BDC25.

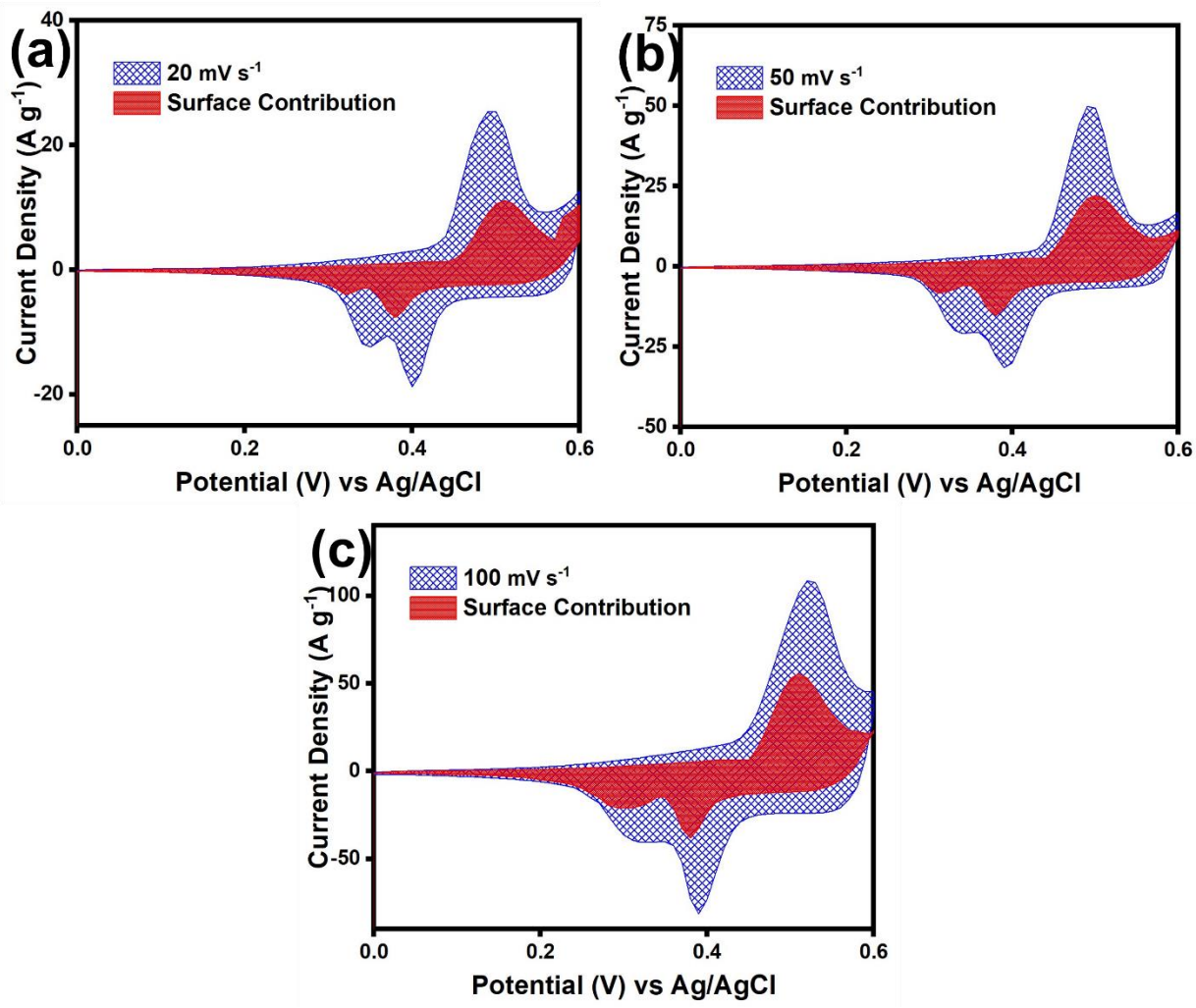

Fig. S9 Outer surface contribution deconvolution from CV curves of Cu-BDC20@NiF at (a) 20 mV s^{-1}, (b) 50 mV s^{-1}, and (c) 100 mV s^{-1} scan rate.

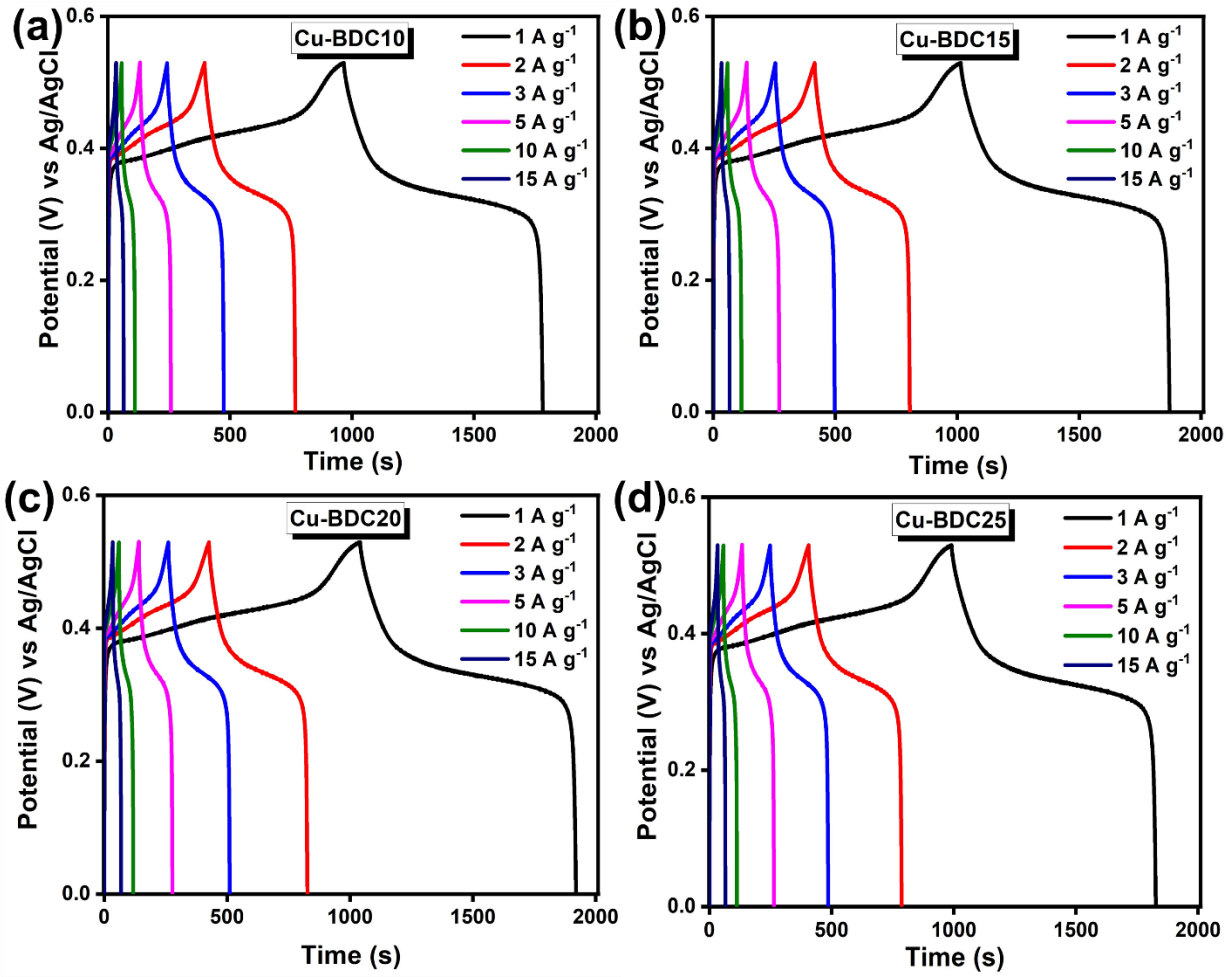

Fig. S10 GCD curves at various current density of (a) Cu-BDC10, (b) Cu-BDC15, (c) Cu-BDC20, and (d) Cu-BDC25.

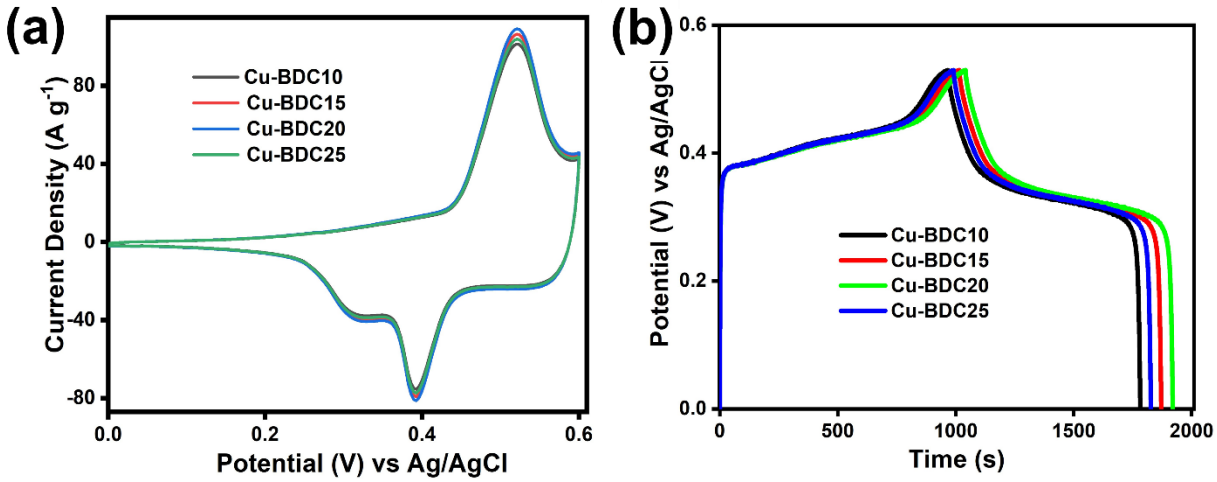

Fig. S11 Electrochemical measurements (a) CV curves at 100 mV s^{-1} and (b) GCD curves at 1 A g^{-1} of Cu-BDC10, Cu-BDC15, Cu-BDC20, and Cu-BDC25.

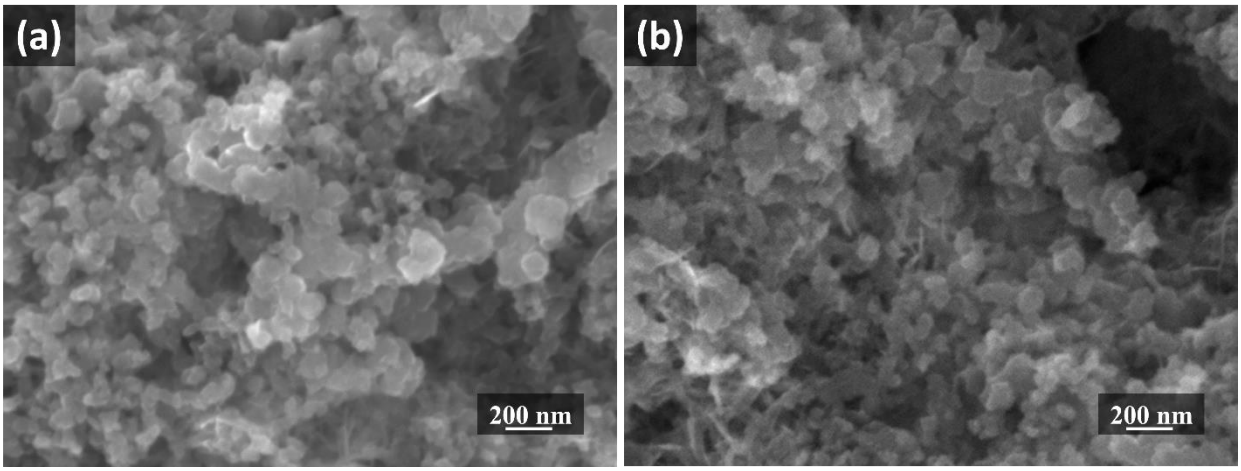

Fig. S12 FE-SEM images of the Cu-BDC20@NiF (a) before, and (b) after cycle test.