Supporting Information

Design and synthesis of MOFs-derived CuO/g-C$_3$N$_4$ composites with octahedral structure as advanced anode materials for asymmetric supercapacitors with high energy and power densities

Ziyang Zhu$^1$, Chuanying Wei$^1$, Di Jiang$^1$, Xinru Wu$^1$, Xiaohui Guan$^1$, Min Lu$^{1*}$, Guang-Sheng Wang$^{2*}$

$^1$ School of Chemical Engineering, Northeast Electric Power University, Jilin 132012, PR China

$^2$ School of Chemistry, Beihang University, Beijing 1000191, PR China
**Fig. S1.** (a) XRD patterns of CuBTC; (b) The SEM images of CuBTC.

**Fig. S2.** Thermogravimetric analysis (TGA) curve of as-prepared Cu-btc MOFs under oxygen atmosphere with a ramp of 10 °C min⁻¹.

**Fig. S3.** SEM images of CuO obtained at different calcination temperatures: (a) 300 °C; (b) 400 °C; (c) 600 °C.
**Fig. S4.** SEM images of CuO/g-C₃N₄ with different mass ratios: (a) CuO/g-C₃N₄-0.25; (b) CuO/g-C₃N₄-0.75; (c) CuO/g-C₃N₄-1.0.

**Fig. S5.** (a) GCD curves of CuO at different current densities; (b) CV curves of CuO/g-C₃N₄-4.5, CuO₉₀₀ and CuBTC at a scan rate of 10 mV·s⁻¹; (c) GCD curves of CuO/g-C₃N₄ at different current densities.

**Fig. S6.** (a) CV curves of NiCoMOF at scan rates of 10-50 mV·s⁻¹; (b) GCD curves of NiCoMOF at different current densities.
Fig. 57. (a) SEM image of CuO/ g-C₃N₄ material after 3000 cycles; (b) SEM enlargement of CuO/ g-C₃N₄ material after 3000 cycles.

Fig. 58. CV curves of the NiCoMOF//CuO/g-C₃N₄ ASC tested at a scan rate of 10 mV s⁻¹ with different voltage windows.