Supporting Information

A Universal Electrochemical Lithiation-delithiation Method to Prepare Low-crystalline Metal Oxides for High-Performance Hybrid Supercapacitors

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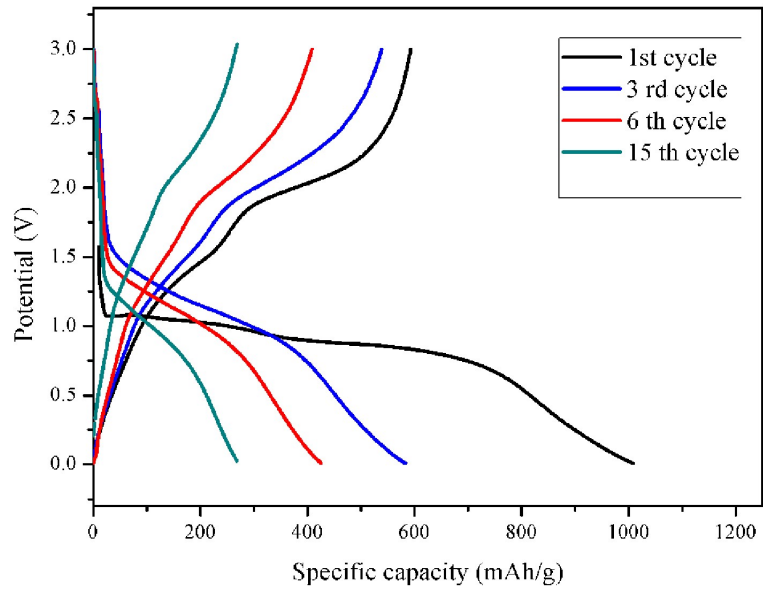
Figure S1. Charge-discharge profiles of lithium battery with cobalt oxide as cathode.
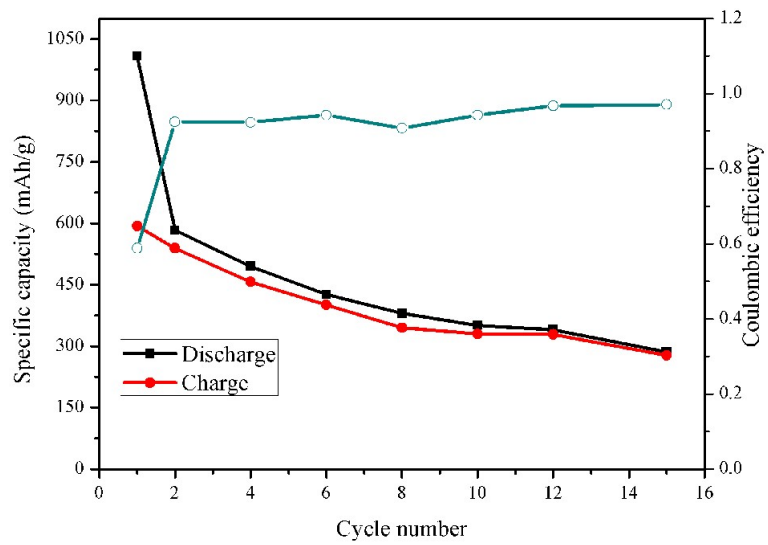

Figure S2 Cycling profile of lithium battery with cobalt oxide as cathode.
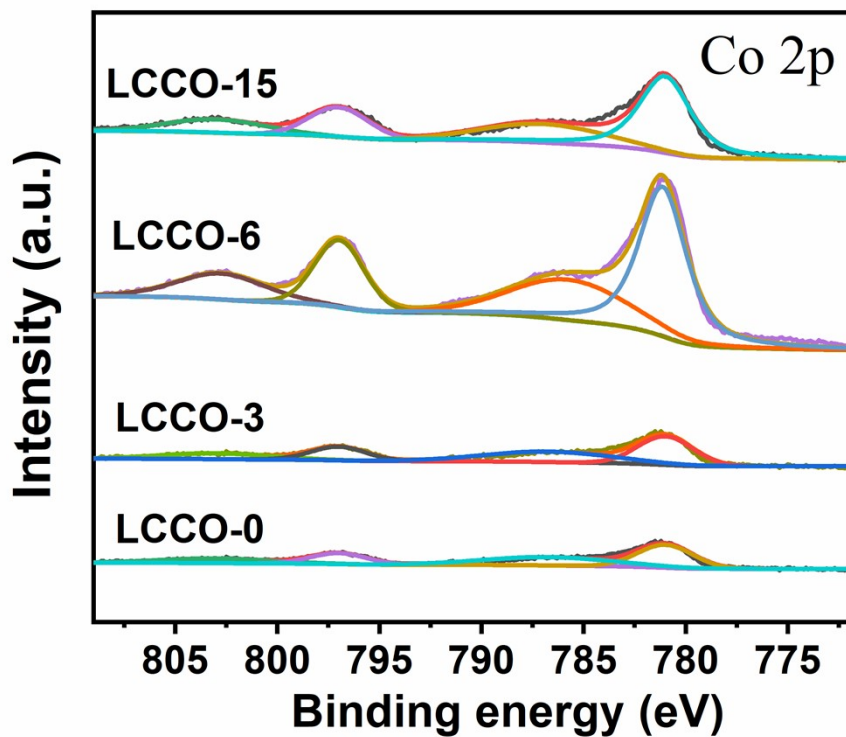
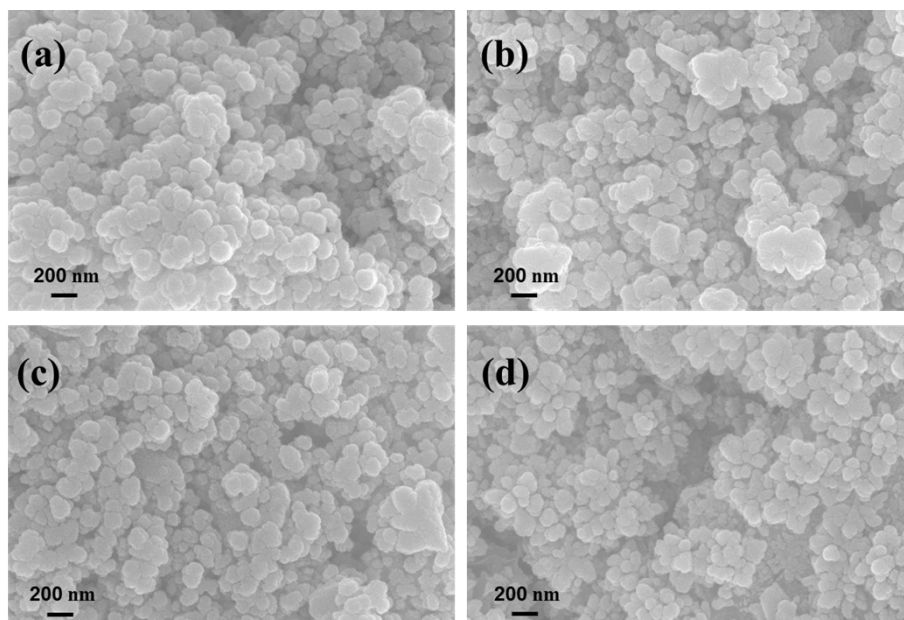Figure S3 XPS spectra of LCCO-0, LCCO-3, LCCO-6, and LCCO-15.

Figure S4 The high-magnification SEM images of (a) LCCO-0, (b) LCCO-3, (c) LCCO-6, and (d) LCCO-15.
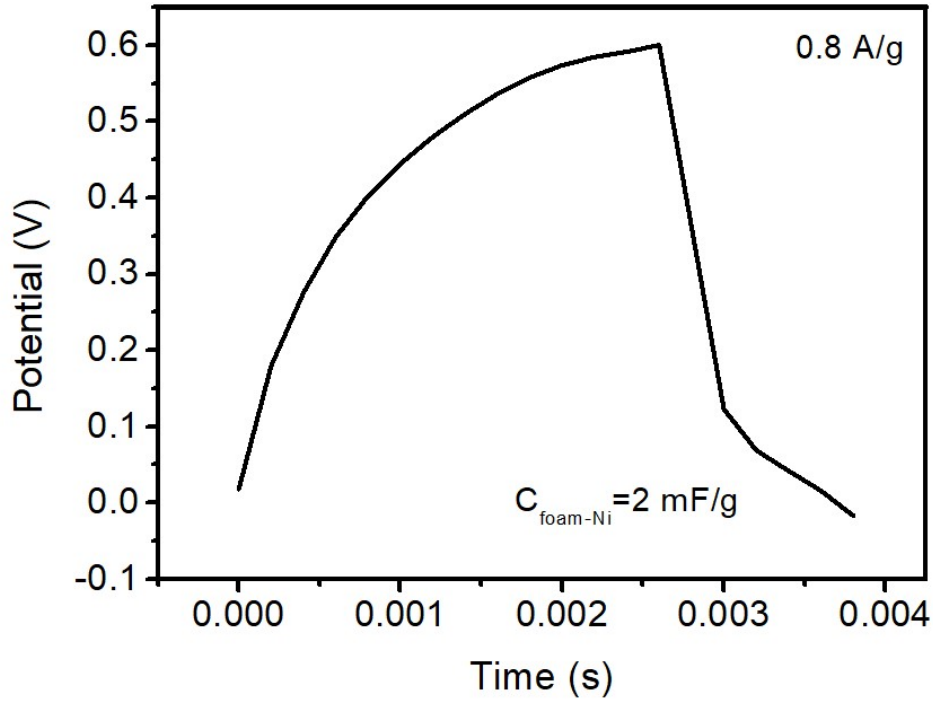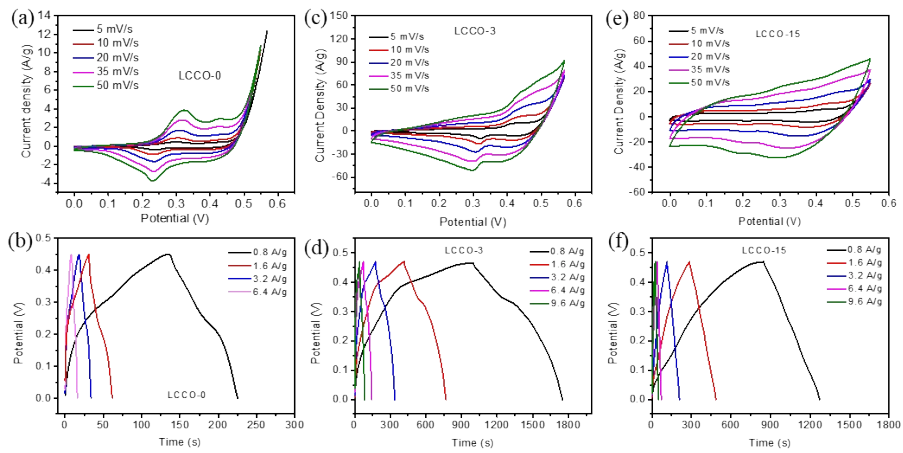
Figure S5 The GCD curves of pure Ni foam.

Figure S6 The CV curves of (a) LCCO-0, (c) LCCO-3, and (e) LCCO-15 at various scan rates. The GCD curves of (b) LCCO-0, (d) LCCO-3, and (f) LCCO-15 at various current densities.
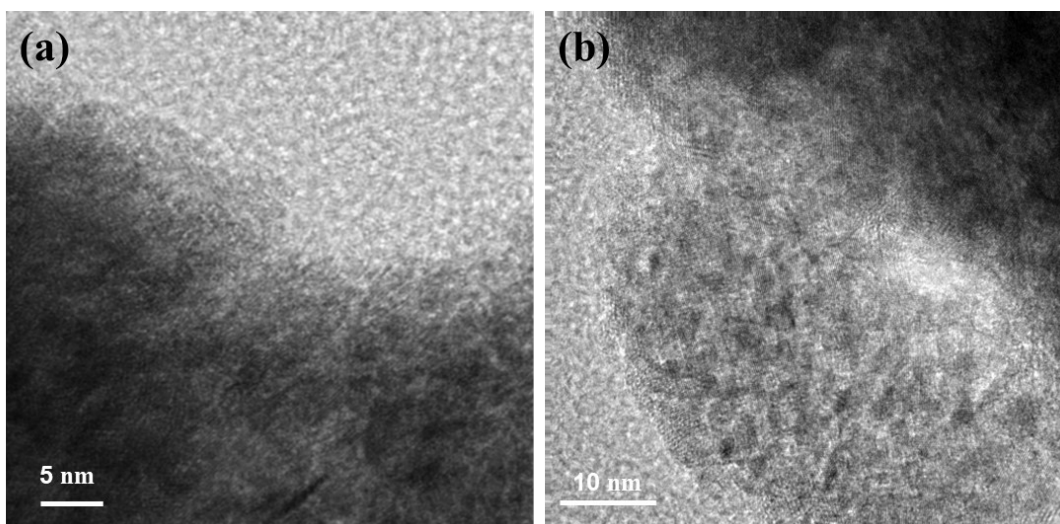
Figure S7 The HRTEM images of LCCO and LCNO after long cycles.
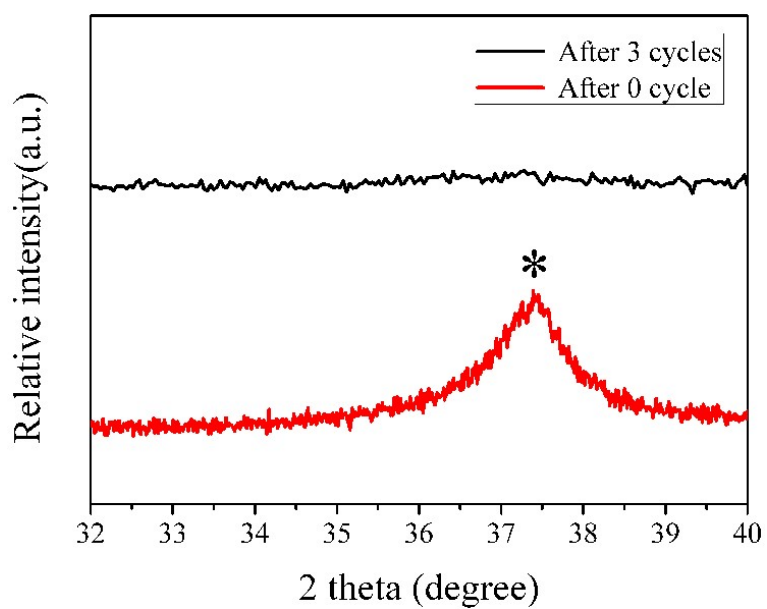

Figure S8 XRD pattern of pristine nickel oxide and low-crystalline nickel oxide after

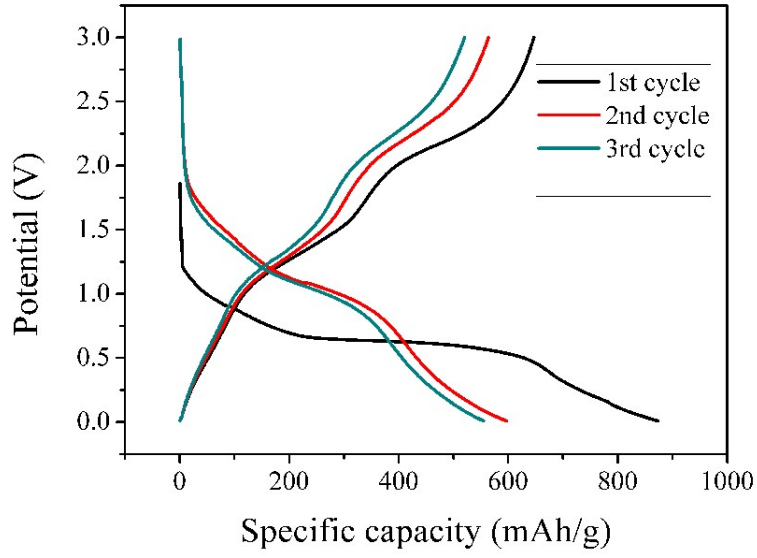3 cycles of lithiation-delithiation.

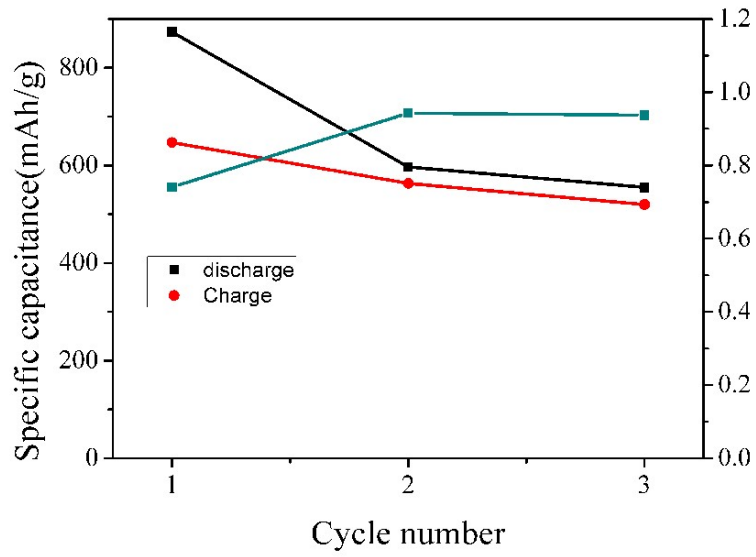Figure S9 Charge-discharge profiles of lithium battery with nickel oxide as cathode.

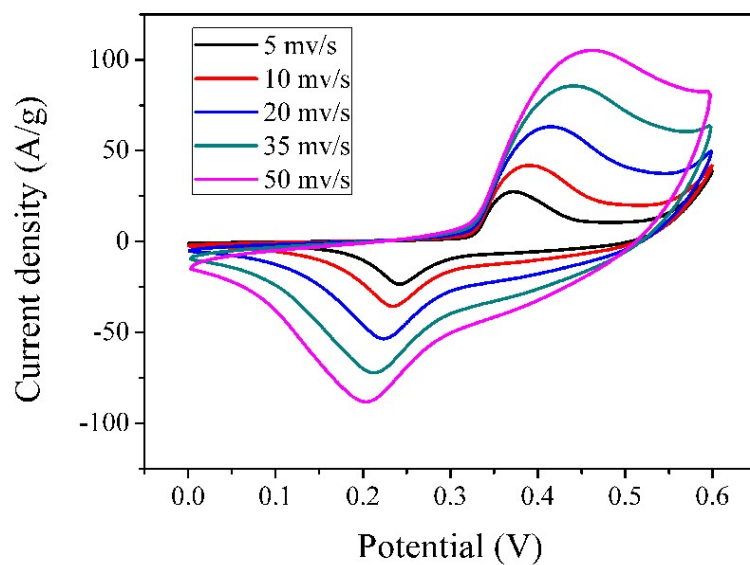Figure S10 Cycling profile of lithium battery with nickel oxide as cathode.

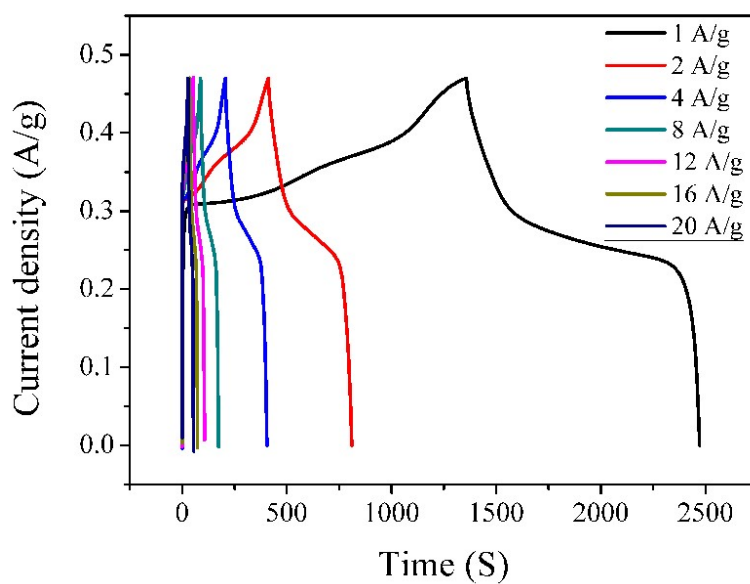Figure S11 CV curves of as-prepared low-crystalline nickel oxide at different scan rate.

Figure S12 CP curves of as-prepared low-crystalline nickel oxide at different current density.
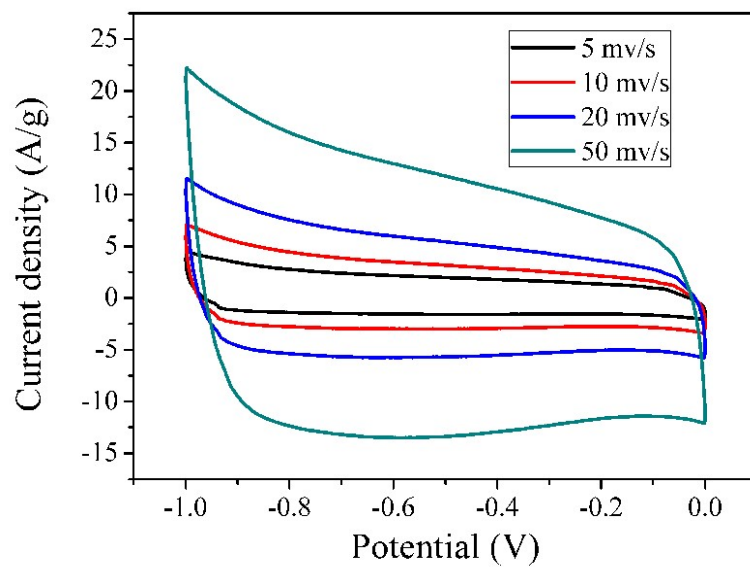
Figure S13 CV curves of commercial activated carbon (AC) at different scan rates.
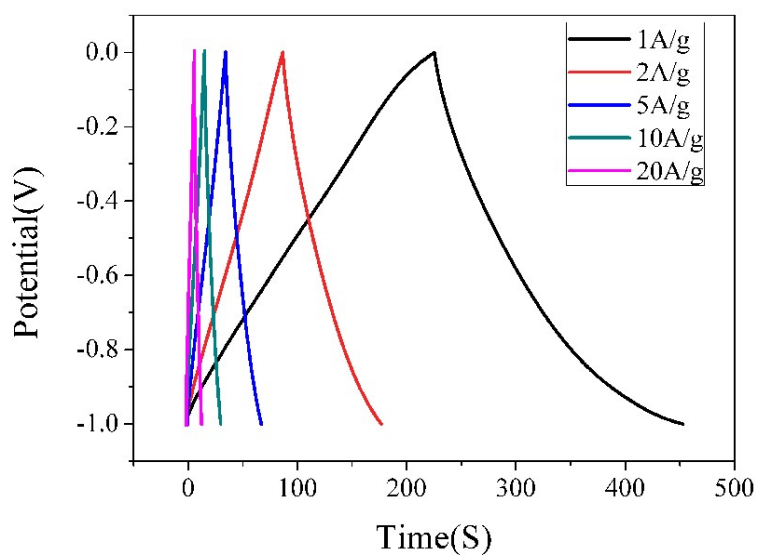

Figure S14 CP curves of commercial activated carbon (AC) at different current densities.
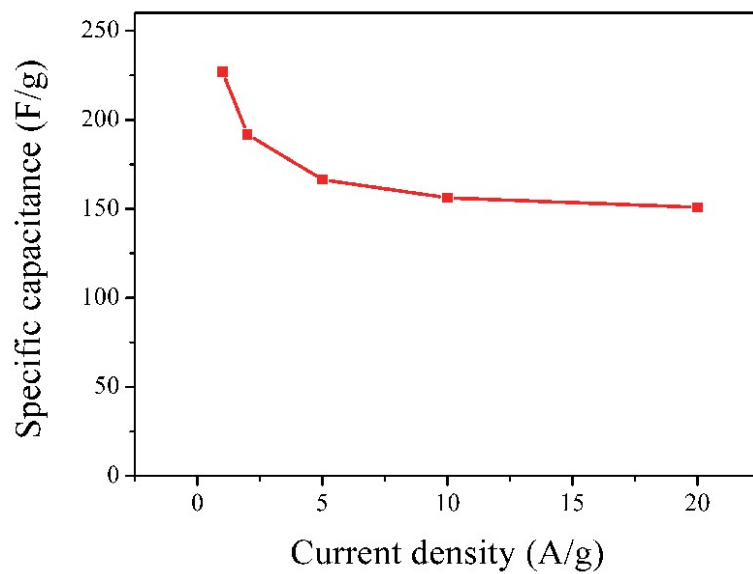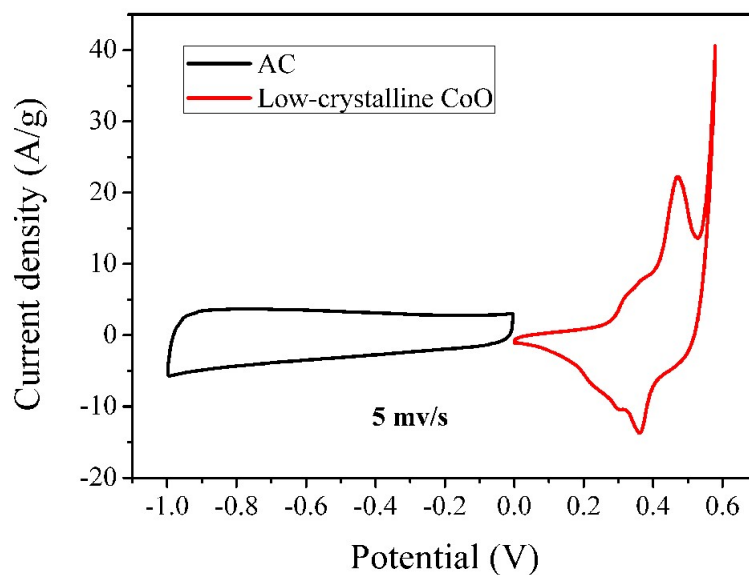
Figure S15 Rate capacities of commercial activated carbon (AC).

Figure S16 CV profile of balanced cathode and anode at 5 mV/s.