## **Supporting information**

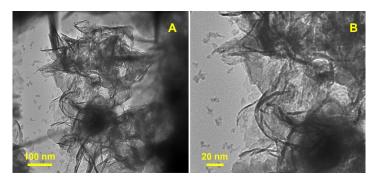
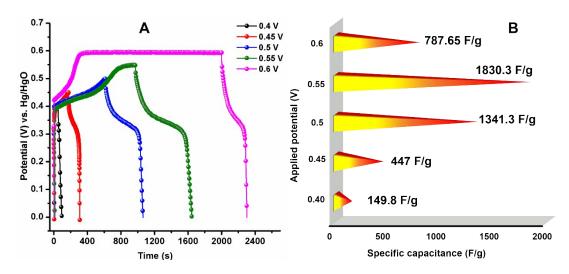


Figure. S1. (A, B) Different magnified TEM images of CoSe<sub>2</sub>.



**Figure. S2.** (A) GCD curve of V-CoSe<sub>2</sub>/NF for different potential window (B) bar diagram for the specific capacitance vs. different applied potential.

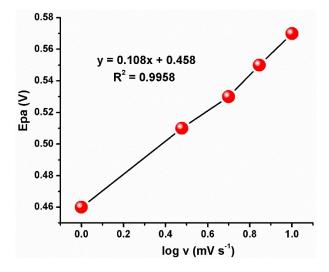
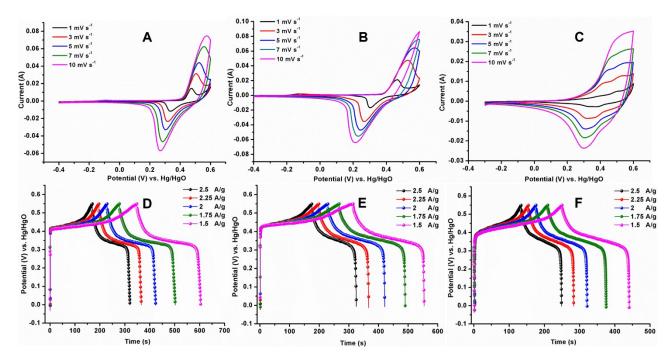
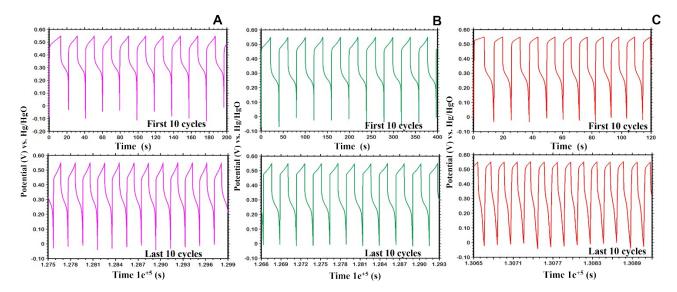


Figure. S3. Linear calibration plot for  $E_{pa}$  vs. logarithm of scan rate



**Figure. S4.** CV curves of (A) Zn-CoSe<sub>2</sub>/NF (B) Mn-CoSe<sub>2</sub>/NF (C) Cu-CoSe<sub>2</sub>/NF for varying the scan rate and GCD curves of (D) Zn-CoSe<sub>2</sub>/NF (E) Mn-CoSe<sub>2</sub>/NF (F) Cu-CoSe<sub>2</sub>/NF for different current densities.



**Figure. S5.** GCD curve of (A) Zn-CoSe<sub>2</sub>/NF (B) Mn-CoSe<sub>2</sub>/NF (C) Cu-CoSe<sub>2</sub>/NF for the first/last 10 cycles from 5000 cycles.

.