Supplementary Information for

## **Surface Functional Groups of Carbon Nanotubes to Manipulate Capacitive Behaviors**

## 5 Sul Ki Park, Qasim Mahmood, and Ho Seok Park\*

Department of Chemical Engineering, College of Engineering, Kyung Hee University, Yongin-si 446-701, Republic of Korea, E-mail: phs0727@khu.ac.kr

10



Fig. S1 Optical images of CNT, Cf-CNT, Sf-CNT, and Nf-CNT (left to right) in DI water.



Fig. S2 XPS curves of CNT, Cf-CNT, Sf-CNT, and Nf-CNT in a full range.

5



Fig. S3 N<sub>2</sub> adsorption/desorption isotherms of CNT, Cf-CNT, Sf-CNT, and Nf-CNT.



**Fig. S4** CV curves of the pristine CNT, Cf-CNT, Sf-CNT, and Nf-CNT at a scan rate of 20 - 100 mV s<sup>-1</sup>.



**Fig. S5** Nyquist plots (the imaginary part versus the real part of impedance spectra) of CNT, Cf-CNT, Sf-CNT, and Nf-CNT. Inset shows the data at high frequency range.



Fig. S6 C1s spectra of Cf-CNT, Sf-CNT, and Nf-CNT before and after charge/discharge.