Supplementary information

High Rate Li-Ion Storage Property of MOFs-Carbonized Derivatives Coating on MnO Nanowires

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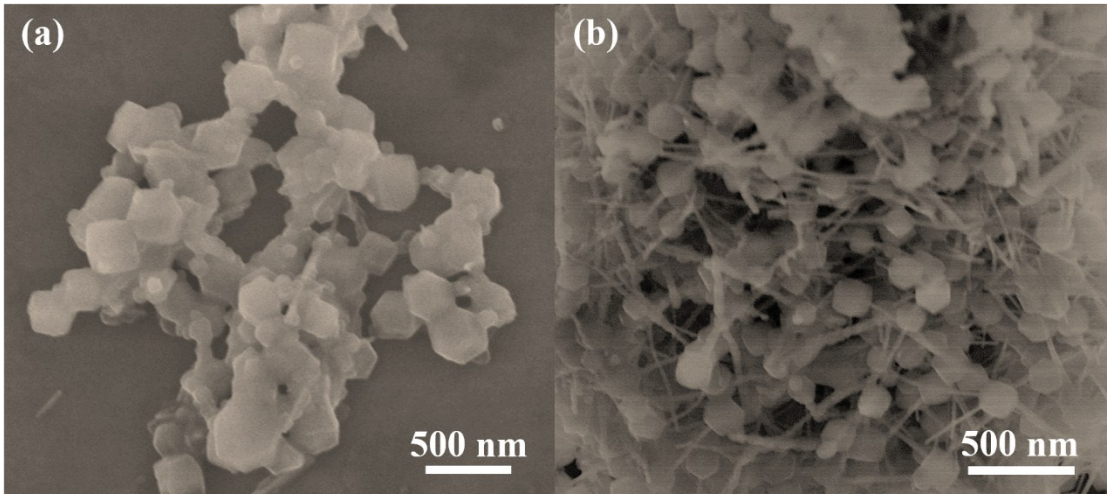

Fig. S1. Scanning electron microscopy (SEM) images of as-prepared ZIF-67-MnO_2 NWs mixture without using PVP (a) and the derivative of ZIF-67-MnO_2 NWs heat-treated at 300 ^oC for 2 h (b).

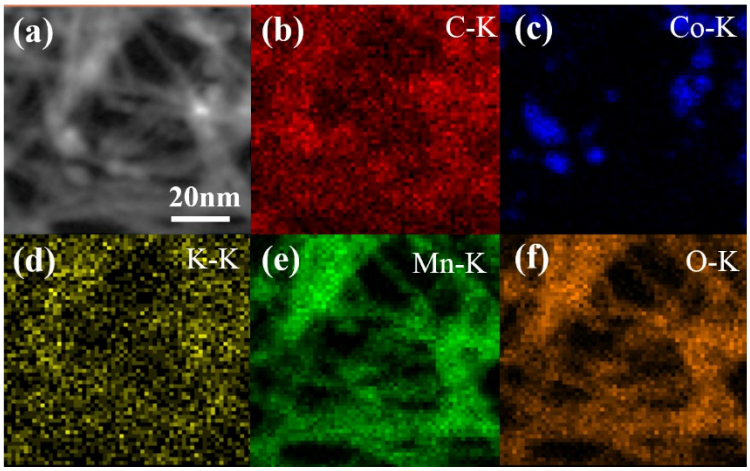

Fig. S2. Acquire HAADF TEM images of carbonized derivative of ZIF-67-MnO_2 NWs (C/Co-MnO NWs) (a), and the corresponding element mapping of C (b), Co (c), K (d), Mn (e) and O (f), respectively.

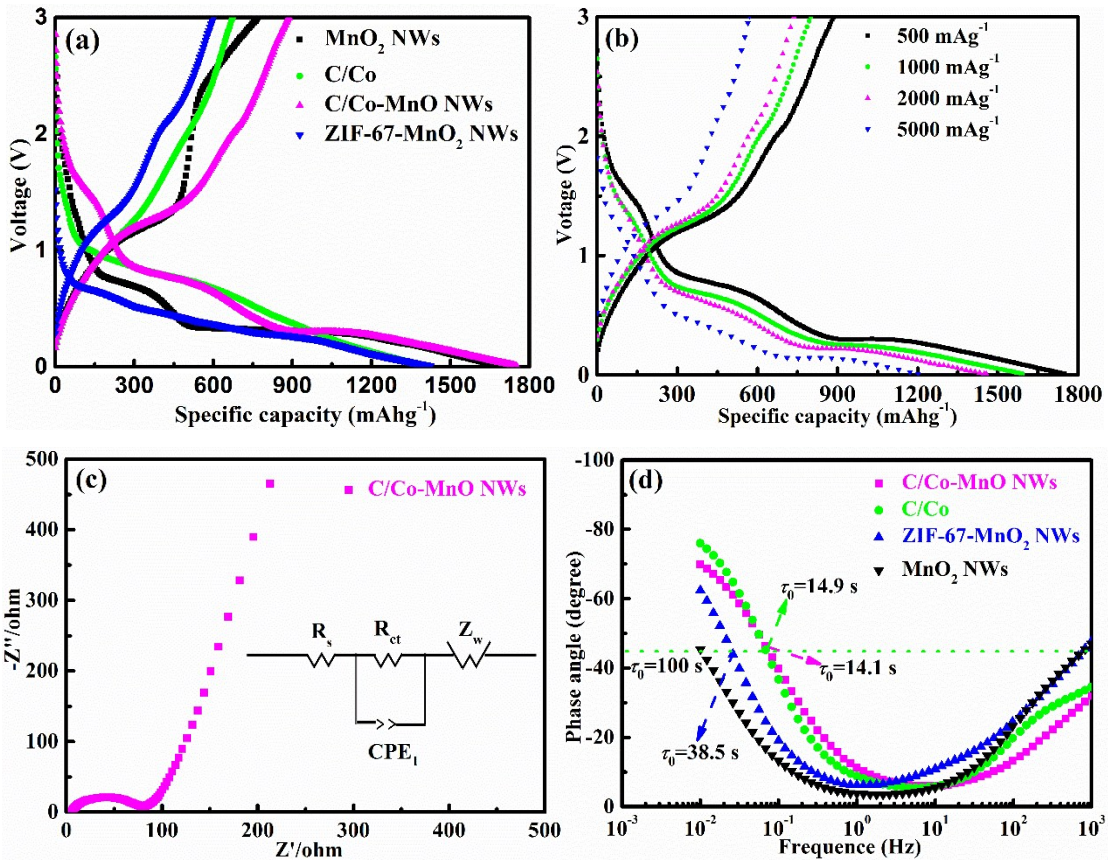

Fig. S3. The first cycle charge/discharge profiles corresponding to (a) the as-prepared MnO_2 NWs, C/Co, C/Co-MnO NWs and ZIF-67-MnO_2 NWs and (b) C/Co-MnO NWs at the current density ranged from 500 to 5000 mAg^{-1}, respectively, (c) The electrochemical impedance spectra of the C/Co-MnO NWs, (d) the Bode plots of C/Co-MnO NWs, C/Co, ZIF-67-MnO_2 NWs, and MnO_2 NWs, respectively.

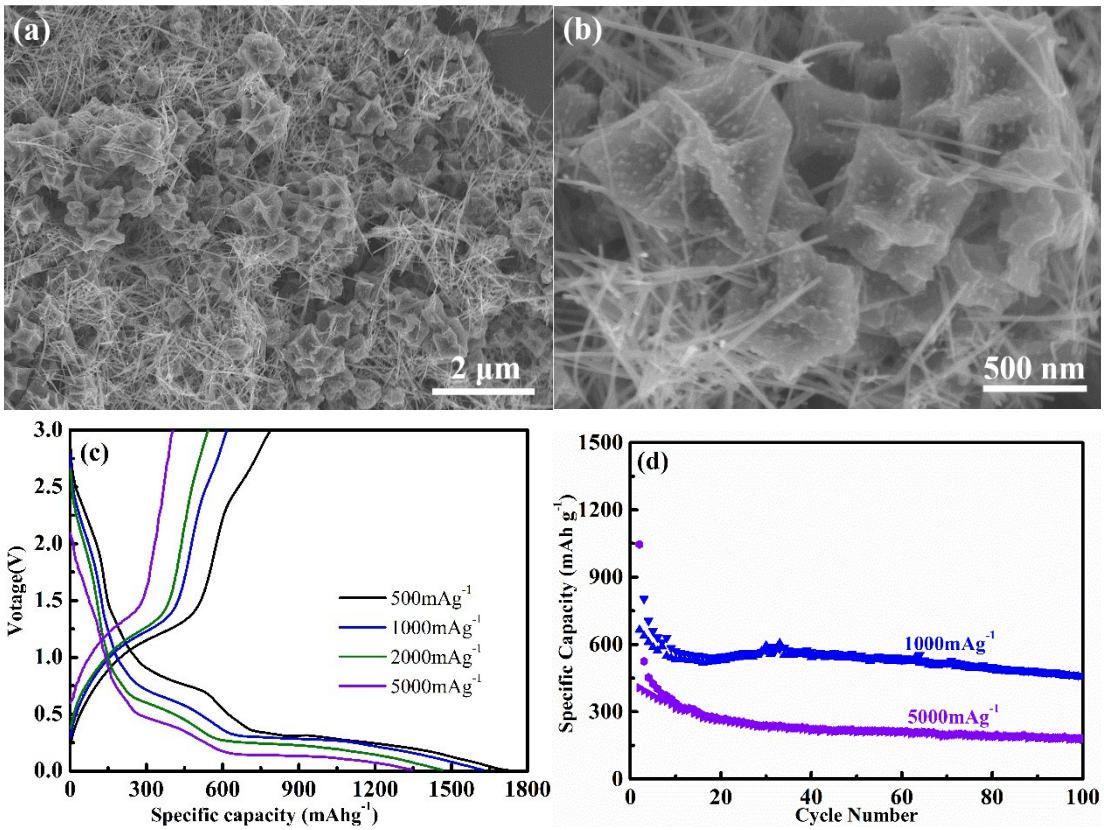

Fig. S4. (a) and (b) The SEM images, (c) the first cycle charge/discharge profiles and (d) the cyclic performance at different current density of the controlled physical mixture of MnO_2 NWs and Co/C derivatives. The mixtures was prepared by physically mixing the as-prepared MnO_2 NWs (75*wt*%) and Carbonized ZIF-67 (25*wt*%) via ultrasonication in ethanol, followed by drying the dispersion at 60 ^{o}C for 10 h in blowing drying oven.