Supporting Information

Hierarchical ZnO@MnO_2@PPy Ternary Core-Shell Nanorod Arrays: An Efficient Integration of Active Materials for Energy Storage

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Figure:

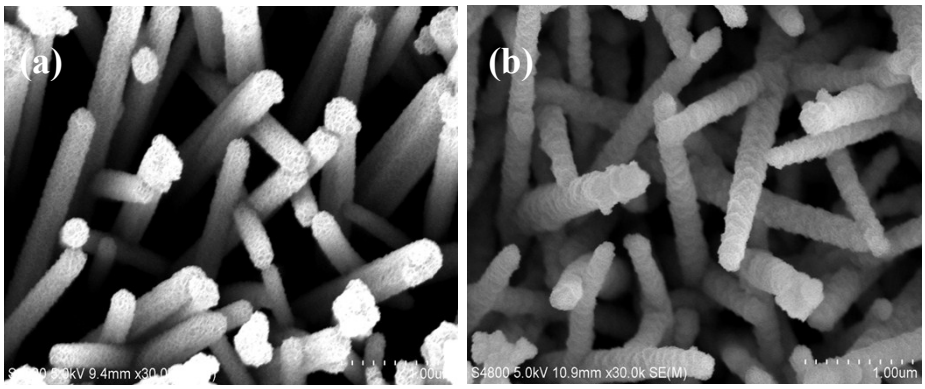


Figure S1 Typical FESEM images at high magnifications of (a) ZnO@MnO_2 nanorod arrays; (b)ZnO@MnO_2@PPy nanorod arrays supported on Zn foil.

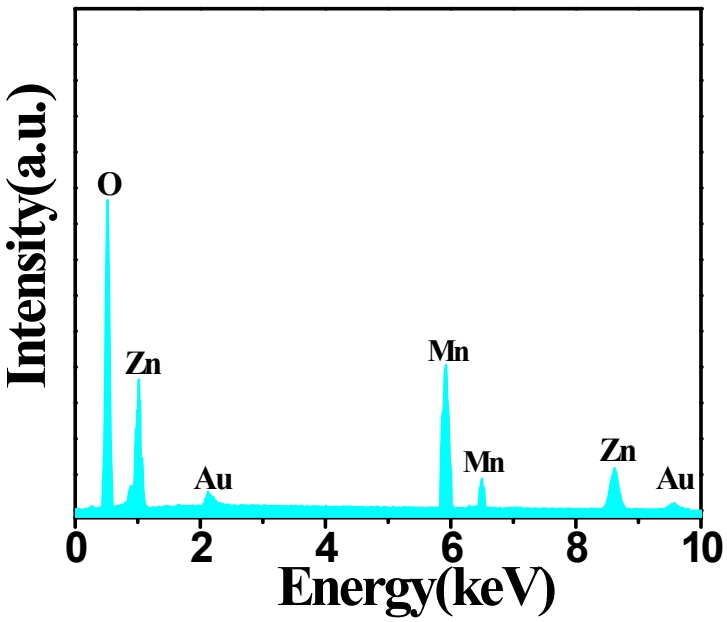


Figure S2 The EDS of the ZnO@MnO_2 nanorod arrays.

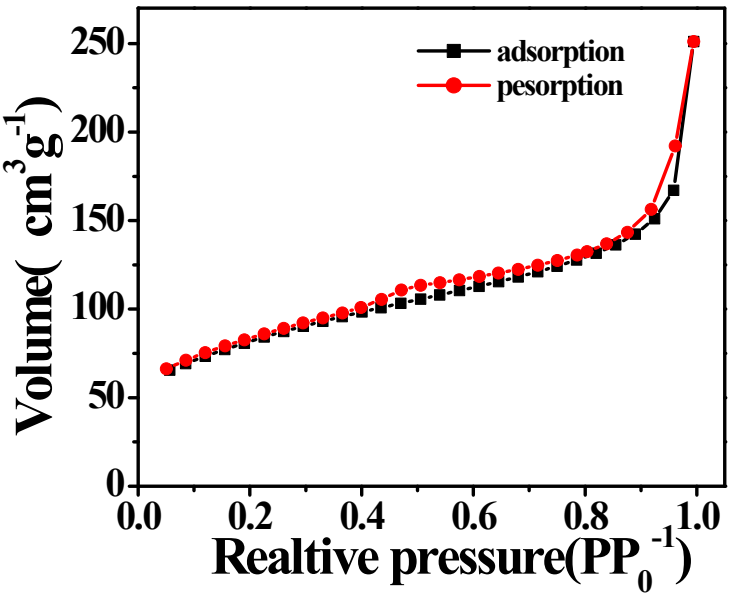
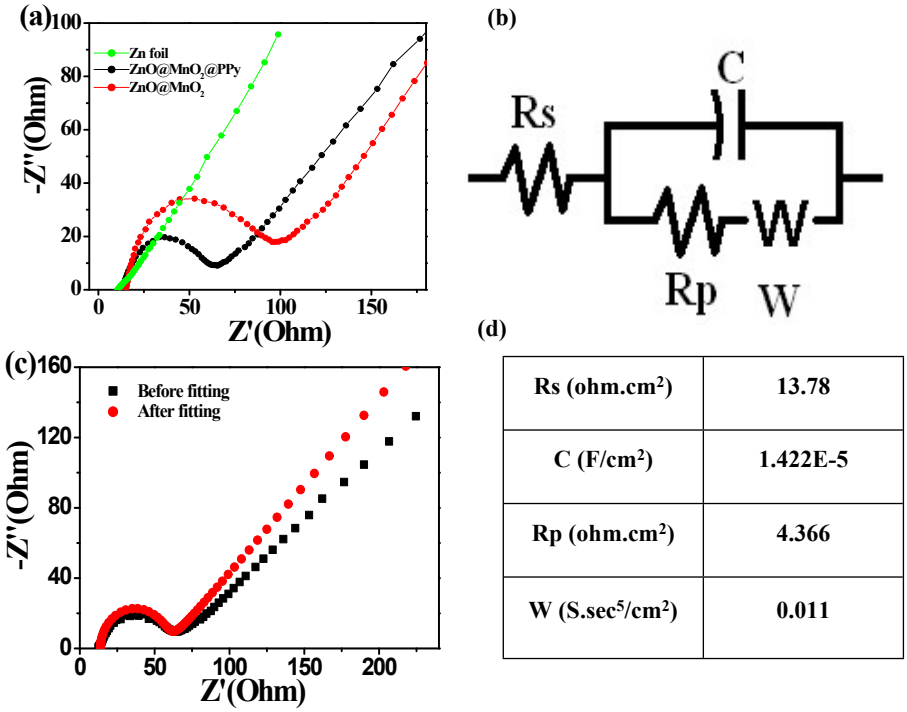


Figure S3 N_2 adsorption-desorption isotherm of the ZnO@MnO_2@PPy ternary core-shell nanocomposites.



Rs (ohm.cm^2)	13.78
C (F/cm^2)	1.422E-5
Rp (ohm.cm^2)	4.366
W (S.sec^5/cm^2)	0.011

Figure S4 (a) Impedance Nyquist plots of the ZnO@MnO_2@PPy nanorod arrays, ZnO@MnO_2 nanorod arrays and Zn foil.(b)The electrical equivalent circuit. (c)The EIS fitting data of the ZnO@MnO_2@PPy ternary core-shell nanorod arrays.