Electronic Supplementary Material (ESI) for Journal of Materials Chemistry

Supporting Information

Self-Assembly of Well-ordered Whisker-like Manganese Oxide Arrays on Carbon Fiber Paper and Its Application as Electrode Materials for Supercapacitors

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Table S1. Summarization of the supercapacitor performance of different MnO_2 nanocomposites

Representative nanostructures	Specific capacitance	Current density /Scan rate	Remarks	Ref.
MnO_2 nanowhisker arrays on CFP	274.1 F g^{-1}	0.1 A g^{-1}	High specific capacitance, excellent cycling performance	Present
Graphene oxide/MnO_2	197.2 F g^{-1}	200 mA g^{-1}	Good electrochemical behaviors	22
Graphene/ MnO_2	310 F g^{-1}	2 mV s^{-1}	Excellent electrochemical stablity	26
Graphene/ MnO_2-textile	315 F g^{-1}	2 mV s^{-1}	Good rate capability, excellent cycling performance	27
Co_3O_4@MnO_2 arrays	480 F g^{-1}	2.67 A g^{-1}	Good cycle performance, remarkable rate capability	46
MnO_2 nanorod arrays	660.7 F g^{-1} 485.2 F g^{-1}	10 mV s^{-1} 3 A g^{-1}	Good cycling stability, excellent specific capacitance	51
MnO_2 /carbon nanotubes	162.2 F g^{-1}	200 mA g^{-1}	Best electrochemical capacitive performance	52
Carbon nanotube sheet/MnO_x	1250 F g^{-1}	1 A g^{-1}	High specific capacitance	53

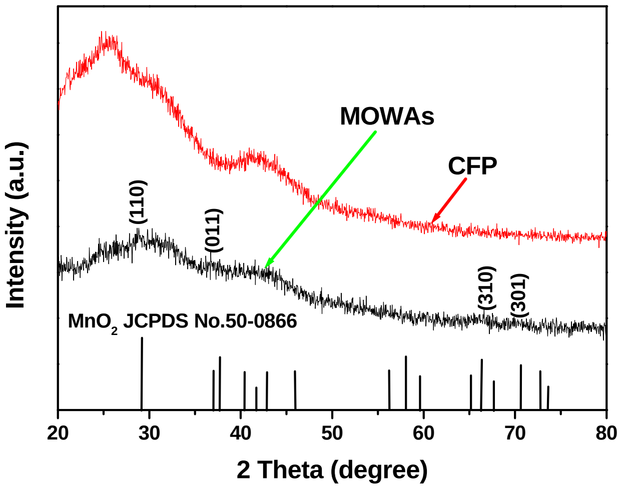

Fig. S1 XRD pattern of the well-ordered MOWAs and the pristine CFP.

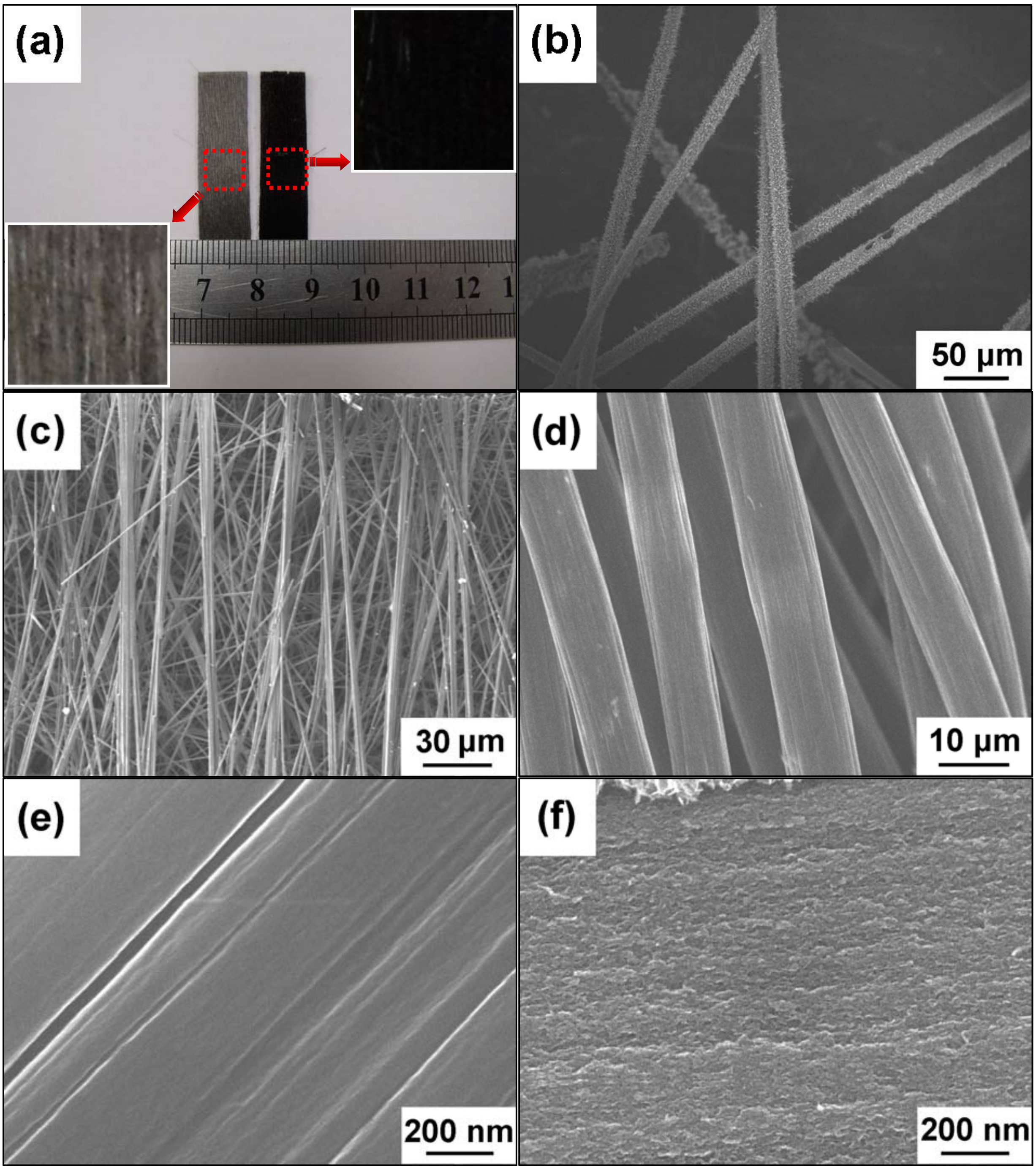

Fig. S2 (a) Optical images of two pieces of samples before and after hydrothermal reaction (Enlarged image of the area marked by a rectangle); (b) Low-magnification SEM image of MOWAs; (c-e) SEM images of pristine CFP at various magnifications; (f) High-magnification SEM image of CFP after hydrothermal reaction.

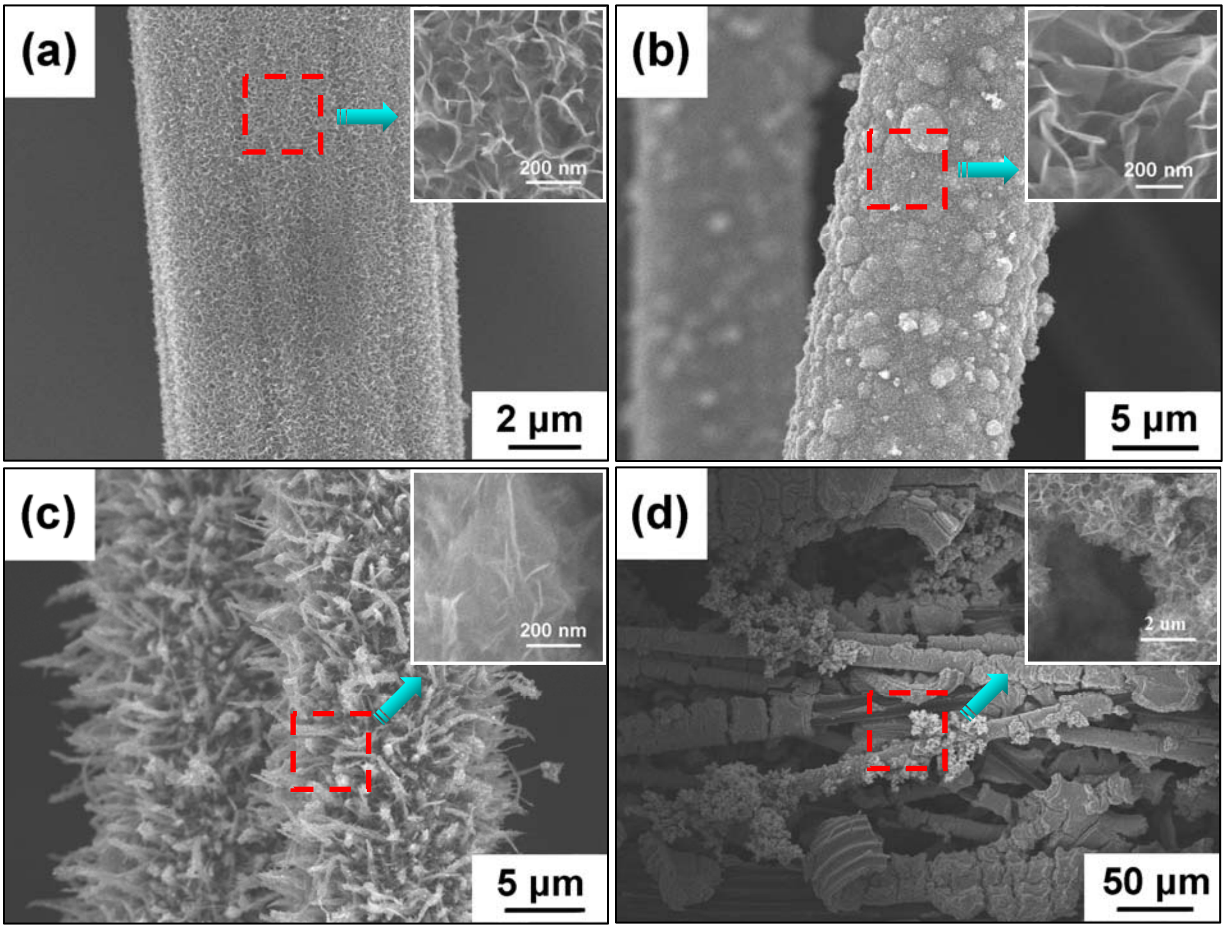

Fig. S3 (a) SEM image of MOCSs; (b) SEM image of MOCSs with few plumules; (c) SEM image of MOWAs; (d) SEM image of I-MOCSs.

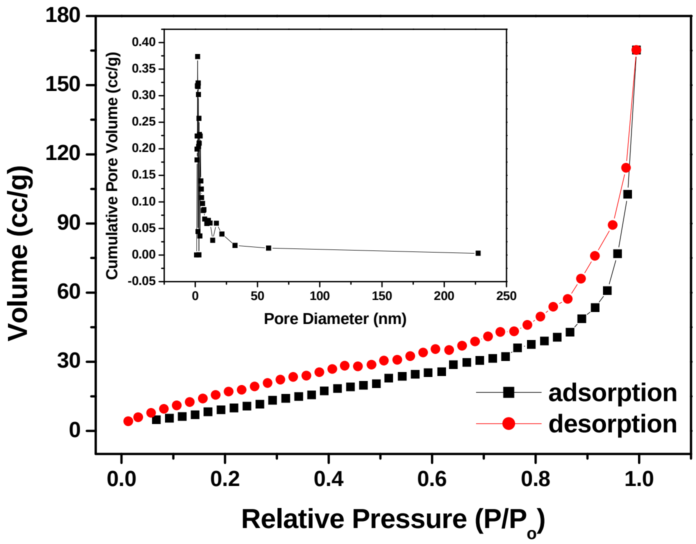

Fig. S4 Nitrogen adsorption-desorption and pore-size distribution isotherm for the obtained MOWAs products.