Supporting Information

Electrospinning Synthesis of Carbon-Supported Pt_3Mn Intermetallic Nanocrystals and Electrocatalytic Performance towards Oxygen Reduction Reaction

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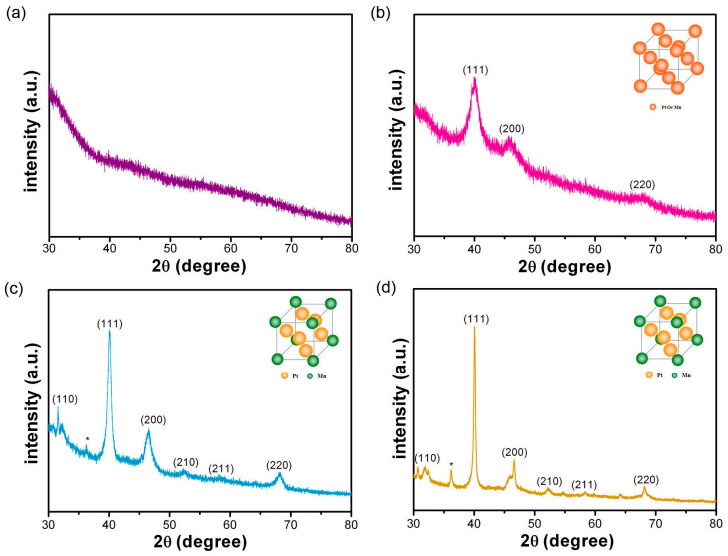

Figure S1. XRD patterns of (a) PtMn-650/CNFs, (b) PtMn-750/CNFs, (c) PtMn-850/CNFs, and (d) PtMn-1050/CNFs.

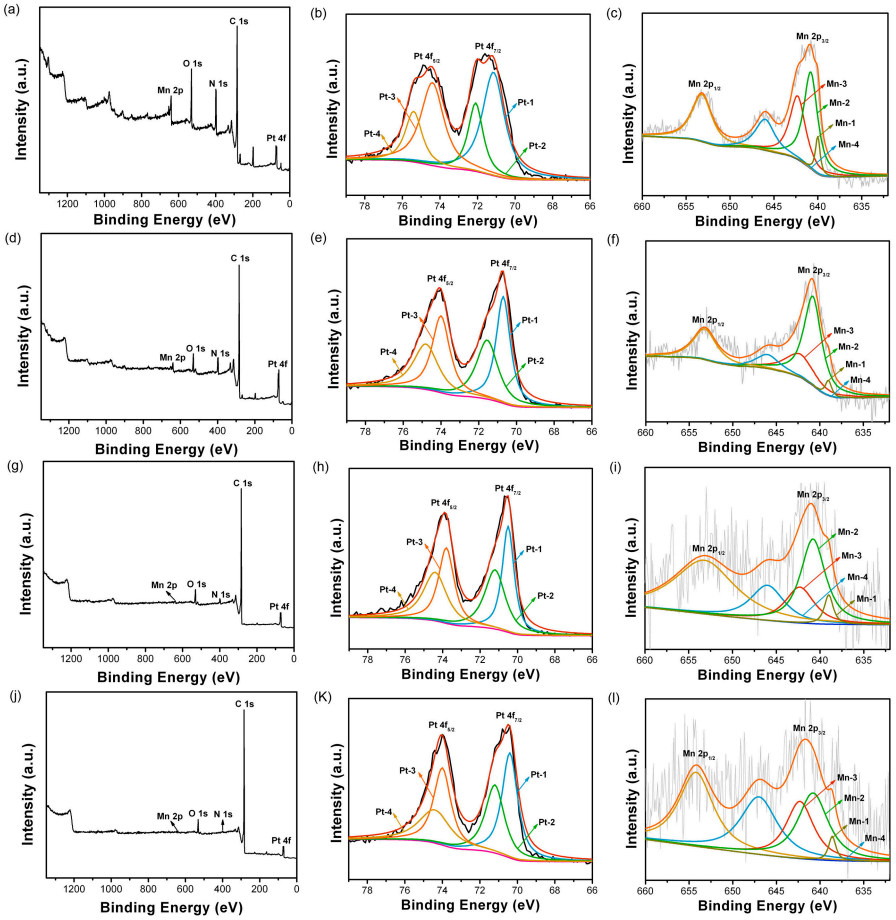

Figure S2. XPS survey spectra of (a) PtMn-650/CNFs, (d) PtMn-750/CNFs, (g) PtMn-850/CNFs, and (j) PtMn-1050/CNFs. Peak-fitting Pt 4f XPS spectra of (b) PtMn-650/CNFs, (e) PtMn-750/CNFs, (h) PtMn-850/CNFs, and (k) PtMn-1050/CNFs. Peak-fitting Mn $2p_{3/2}$ spectra of (c) PtMn-650/CNFs, (f) PtMn-750/CNFs, (i) PtMn-850/CNFs, and (l) PtMn-1050/CNFs.

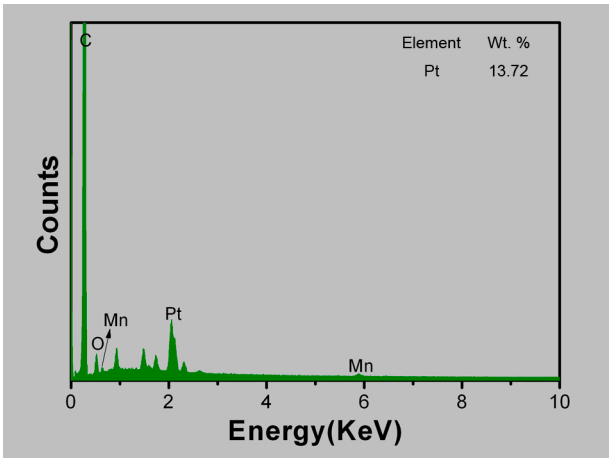

Figure S3. EDS of PtMn-950/CNFs.

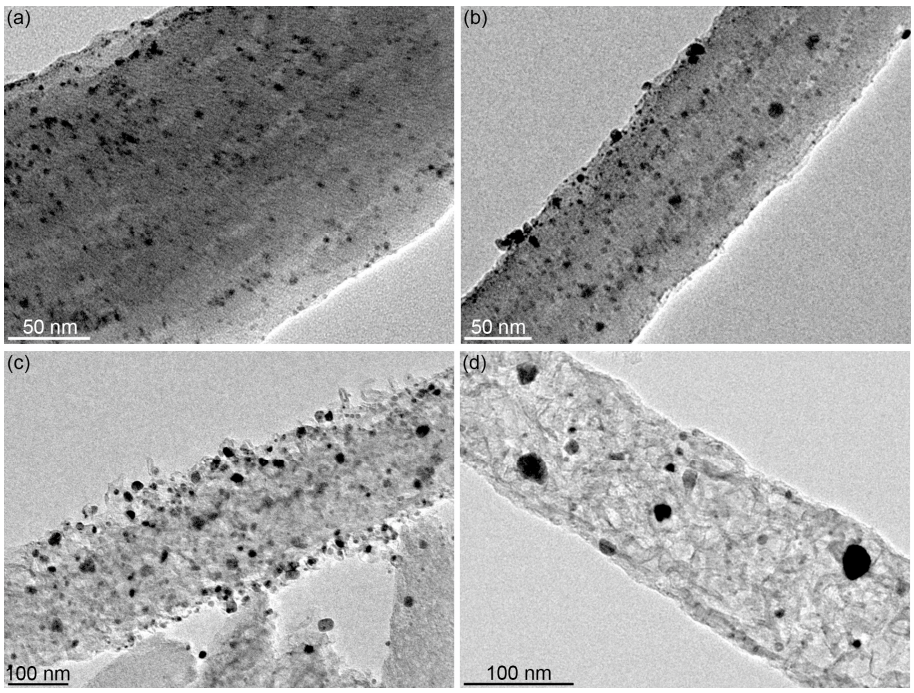

Figure S4. TEM images of (a) PtMn-650/CNFs, (b) PtMn-750/CNFs, (c) PtMn-850/CNFs, and (d) PtMn-1050/CNFs.

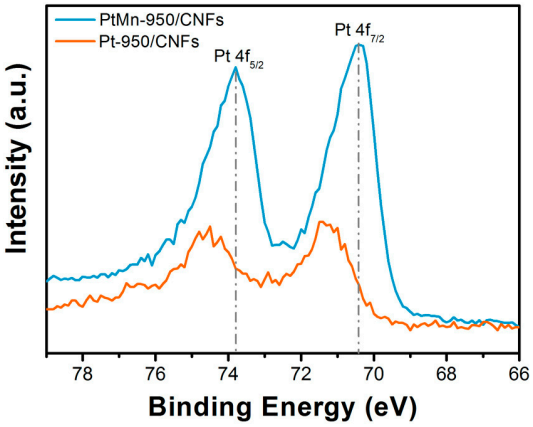

Figure S5. Pt 4f XPS spectra of PtMn-950/CNFs and Pt-950/CNFs.

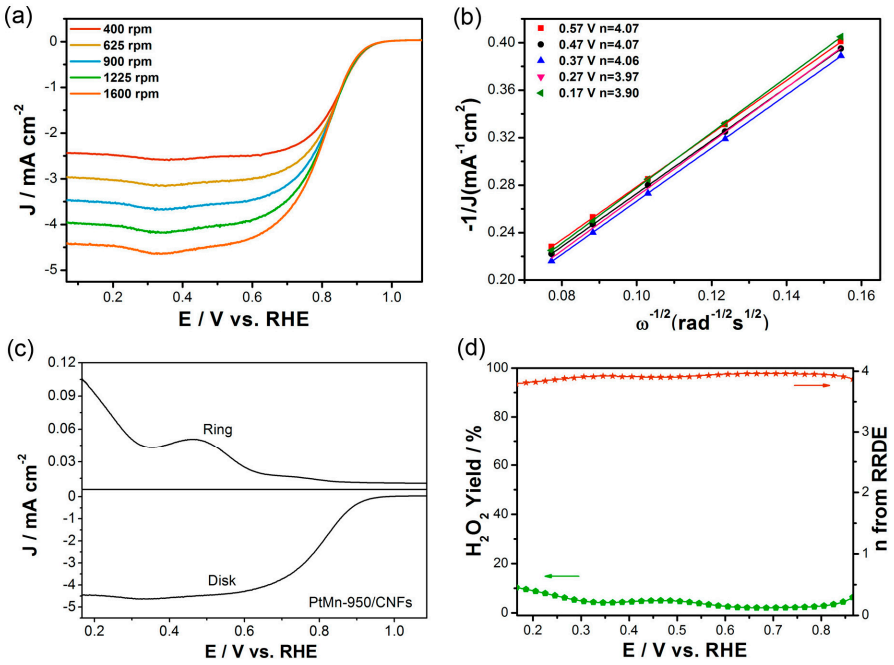

Figure S6. Electrochemical characterization of PtMn-950/CNFs after ADTs (5000 cycles): (a) ORR polarization curves at different rotation rates in O_2-saturated 0.10 M KOH; (b) Koutecky–Levich plots at different potentials; (c) ORR polarization curves recorded on the RRDE in O_2-saturated 0.10 M KOH solution at 1600 rpm; (d) the calculated H_2O_2 yield and electron transfer numbers (n).

Table S1. The calculation of the kinetic current densities at 0.832 V (vs. RHE)

Sample	PtMn-650/CNFs	PtMn-750/CNFs	PtMn-850/CNFs	PtMn-950/CNFs	PtMn-1050/CNFs
J / mA cm^{-2}	0.063	0.485	0.675	1.925	0.718
1/J / mA^{-1} cm^{2}	15.80	2.06	1.48	0.52	1.39
J_L / mA cm^{-2}	2.19	2.65	2.64	4.31	3.20
1/J_L / mA^{-1} cm^{2}	0.458	0.377	0.378	0.232	0.313
J_K^* / mA cm^{-2}	0.07	0.59	0.91	3.48	0.93

$^*JK = 1/(1/J - 1/JL)$