Electronic Supplementary Material (ESI) for Dalton Transactions.

Revealing the electrochemical performance of manganese phosphite/RGO hybrid in acidic media

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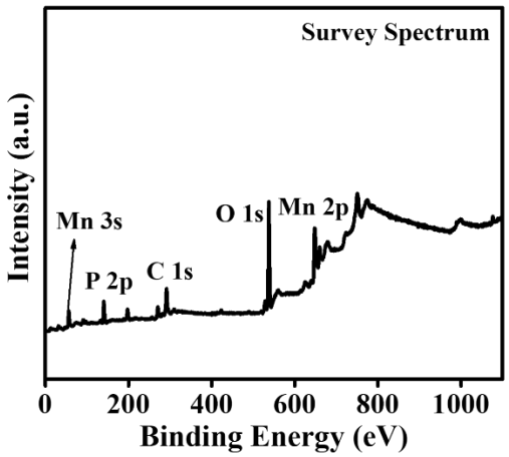

Fig. S1 XPS survey spectra of Mn-HPO/RGO hybrid.

Element	Weight %
Mn	23.6
P	8.9
O	45.5
C	22

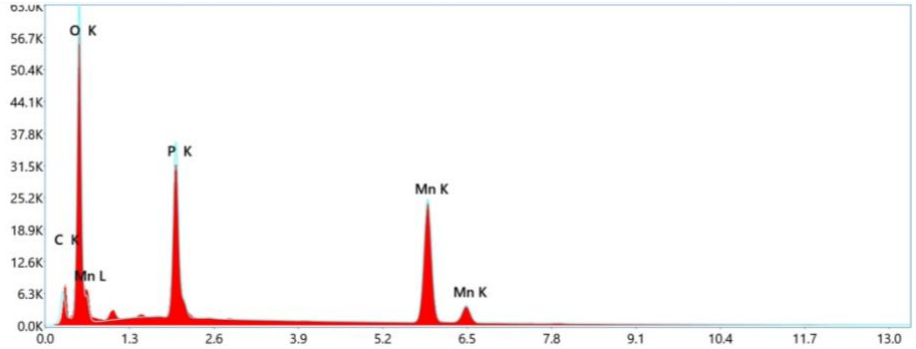

Fig. S2 EDX spectra of the Mn-HPO/RGO hybrid with atomic percentage of elements.

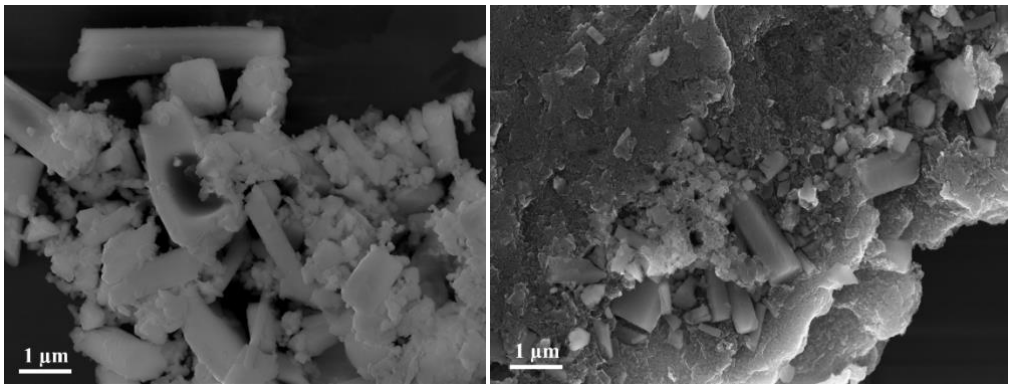

Fig. S3 SEM images of Mn-HPO/RGO synthesized with 5 mg and 20 mg GO

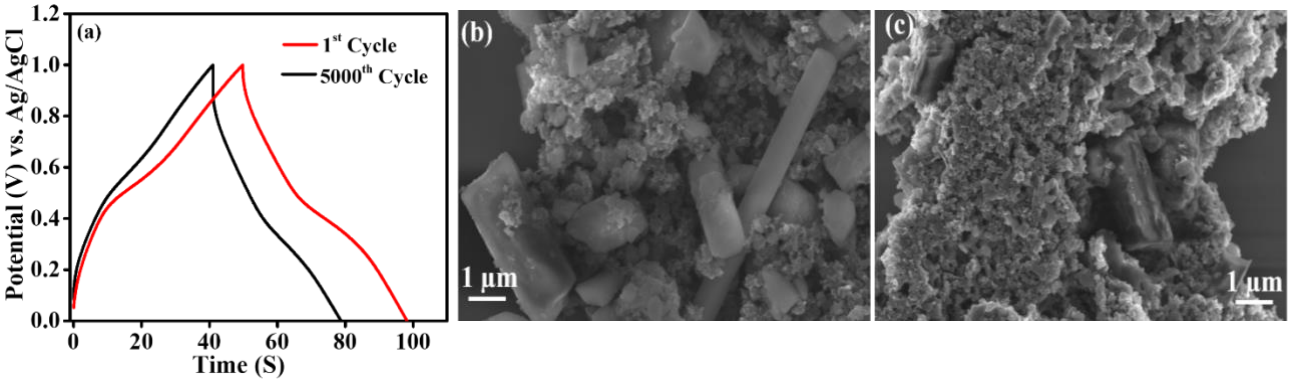

Fig. S4 Charge-discharge curve for 1st and 5000th cycle along with the morphology of the active material before and after cyclic stability

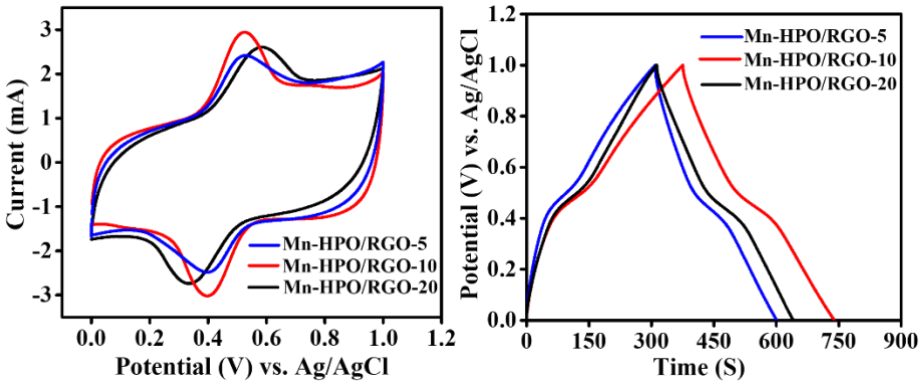

Fig. S5 CV curves at 5 mV/s and GCD curves at 1 A/g for Mn-HPO/RGO-5, Mn-HPO/RGO-10 and Mn-HPO/RGO-20.

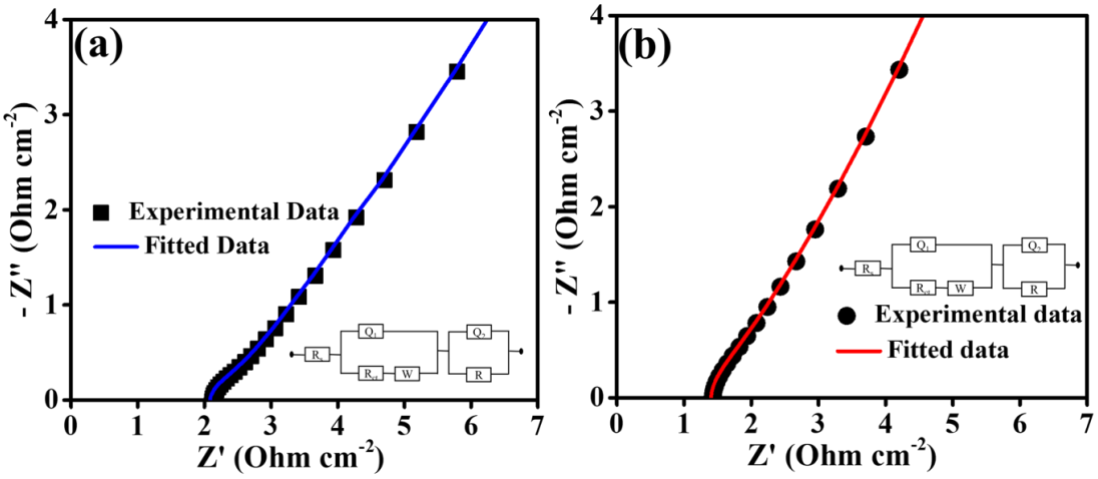

Fig. S6 EIS spectra of (a) Mn-HPO and (b) Mn-HPO/RGO-10 with fitted data.

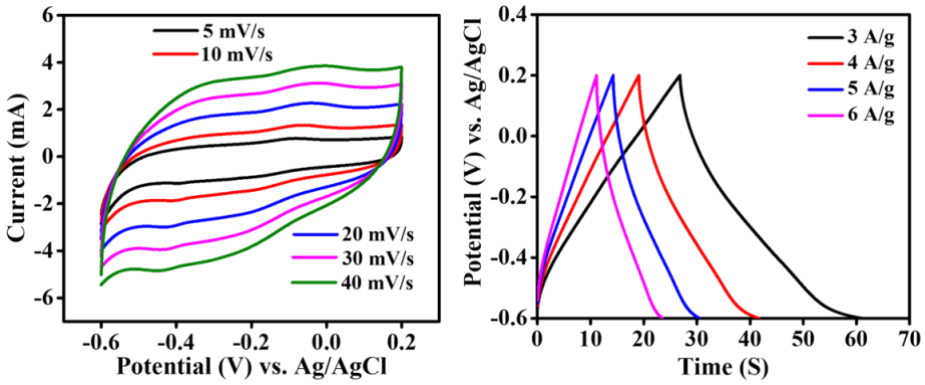

Fig. S7 CV and GCD curves MXene (Ti_3C_2).

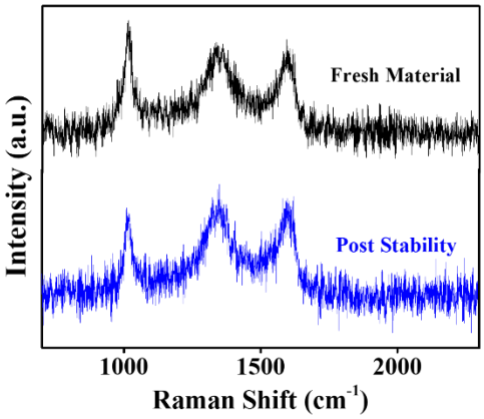

Fig. S8 Raman spectra of the fresh electroactive material and the electroactive material after stability

Table S1 Comparison of supercapacitor performance of Mn-HPO/RGO with previous reports

Name of the Material	Specific Capacitance (F/g)	Electrolyte	Rate performance (in %)	Specific Capacitance of the device (F/g)	Energy Density of the Device (Wh/kg)	Cyclic Stability	References
MnO_x@C@ MnO_x	350	6 M KOH	34.8 %	53.4	23	94 % up to 2000 cycles	**1**
ov-MnO_2@MnO_2	452.4	1 M Na_2SO_4	69.9 %	90.8	40.2	92.2 % up to 10000 cycles	**2**
$Ti_3C_2T_x$ (MXene)−δ -MnO_2 ASC	-	1 M Na_2SO_4	-	23.3	8.3	-	**3**

$Mn_3(PO_4)_2$ /GF	270	6 M KOH	-	28	7.6	96 % up to 10000 cycles	**4**
$Mn_3(PO_4)_2$	203	1 M Na_2SO_4	88 %	46.8	16.64	90 % up to 10000 cycles	**5**
$Mn_3(PO_4)_2$	194	2 M KOH	85 %	41.9	14.89	90 % up to 10000 cycles	**5**
$NH_4MnPO_4 \cdot H_2O$	423	3 M KOH	65 %	65.4	29.4	93 % up to 100k cycles	**6**
Amorphous Manganese phosphate	912.4	1 M Na_2SO_4 + PBS	66.6 %	205.59	126	95 % up to 5000 cycles	**7**
Mn-HPO/RGO hybrid	**770**	**1 M H_2SO_4**	**67 %**	**108**	**34**	**94 % up to 12000 cycles**	**This work**

References.

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