

From adsorbents to electrode materials: Facile hydrothermal synthesis of montmorillonite/polyaniline/metal oxide (hydroxide) composites

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Table S1 The absorption capacitance of MMT/PANI-x for Co²⁺, Fe²⁺, Ni²⁺ and the specific capacitance of MMT/PANI-x/Co₃O₄ (Fe₂O₃, and Ni(OH)₂).

Sample	Absorption capacitor (mg g ⁻¹)			Capacitance (F g ⁻¹) ^a		
	Co ²⁺	Fe ²⁺	Ni ²⁺	Co ₃ O ₄	Fe ₂ O ₃	Ni(OH) ₂
MMT/PANI-0.8	118.7	106.7	99.1	109	22	58
MMT/PANI-1.0	148.9	169.4	113.8	106	45	61
MMT/PANI-1.2	152.7	187.8	117.9	83	53	74
MMT/PANI-1.4	210.4	227.8	175.6	127	66	145
MMT/PANI-1.6	198.7	148.5	166.1	79	47	123

^aThe capacitance is calculated according to the equation (1) using GCD curve at current density 0.25 A g⁻¹.

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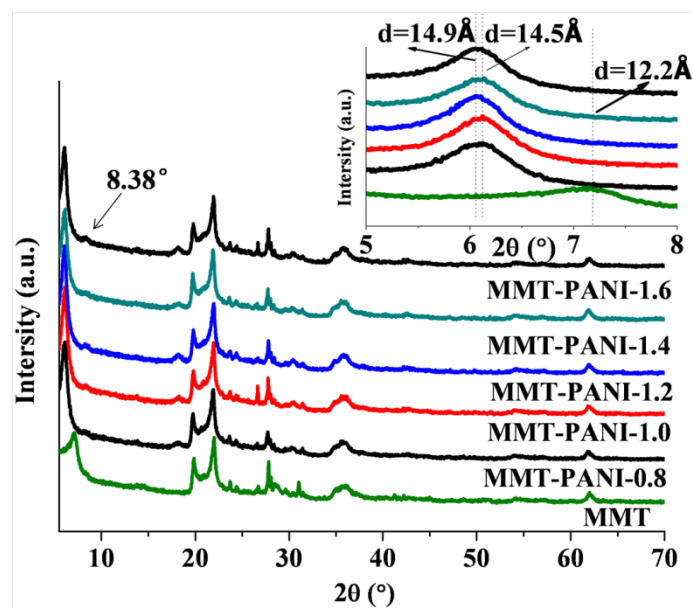


Figure S1 XRD patterns of MMT and MMT/PANI-x composites.

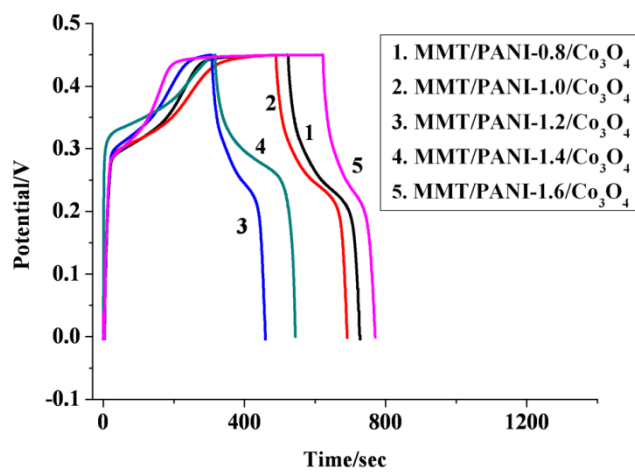


Figure S2 GCD curves of MMT/PANI-0.8 ~ 1.6/ Co_3O_4 composites at current density

0.25 A g^{-1} in 1.0 M KOH.

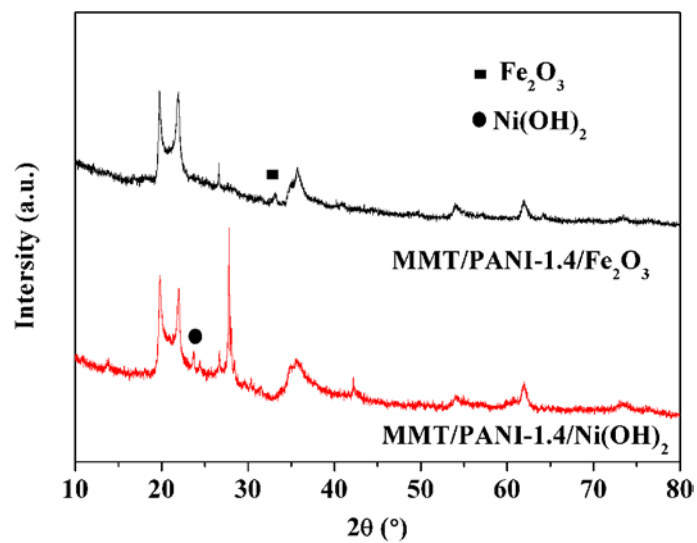


Figure S3 XRD patterns of MMT/PANI-1.4/Ni(OH)₂ and MMT/PANI-1.4/Fe₂O₃ composites.

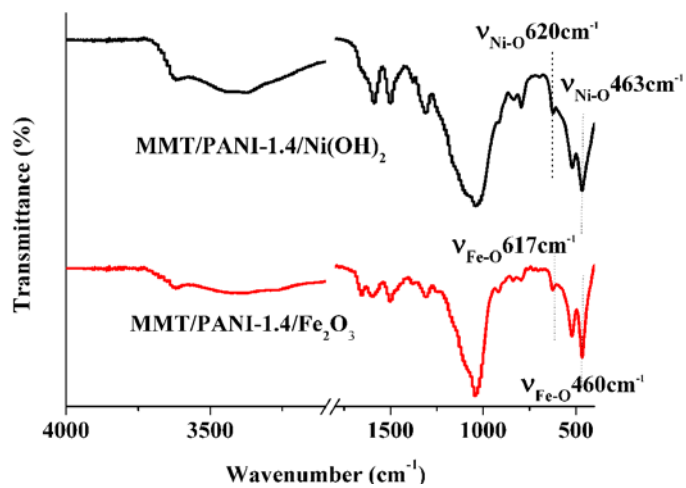


Figure S4 FTIR spectra of MMT/PANI-1.4/Ni(OH)₂ and MMT/PANI-1.4/Fe₂O₃ composites.

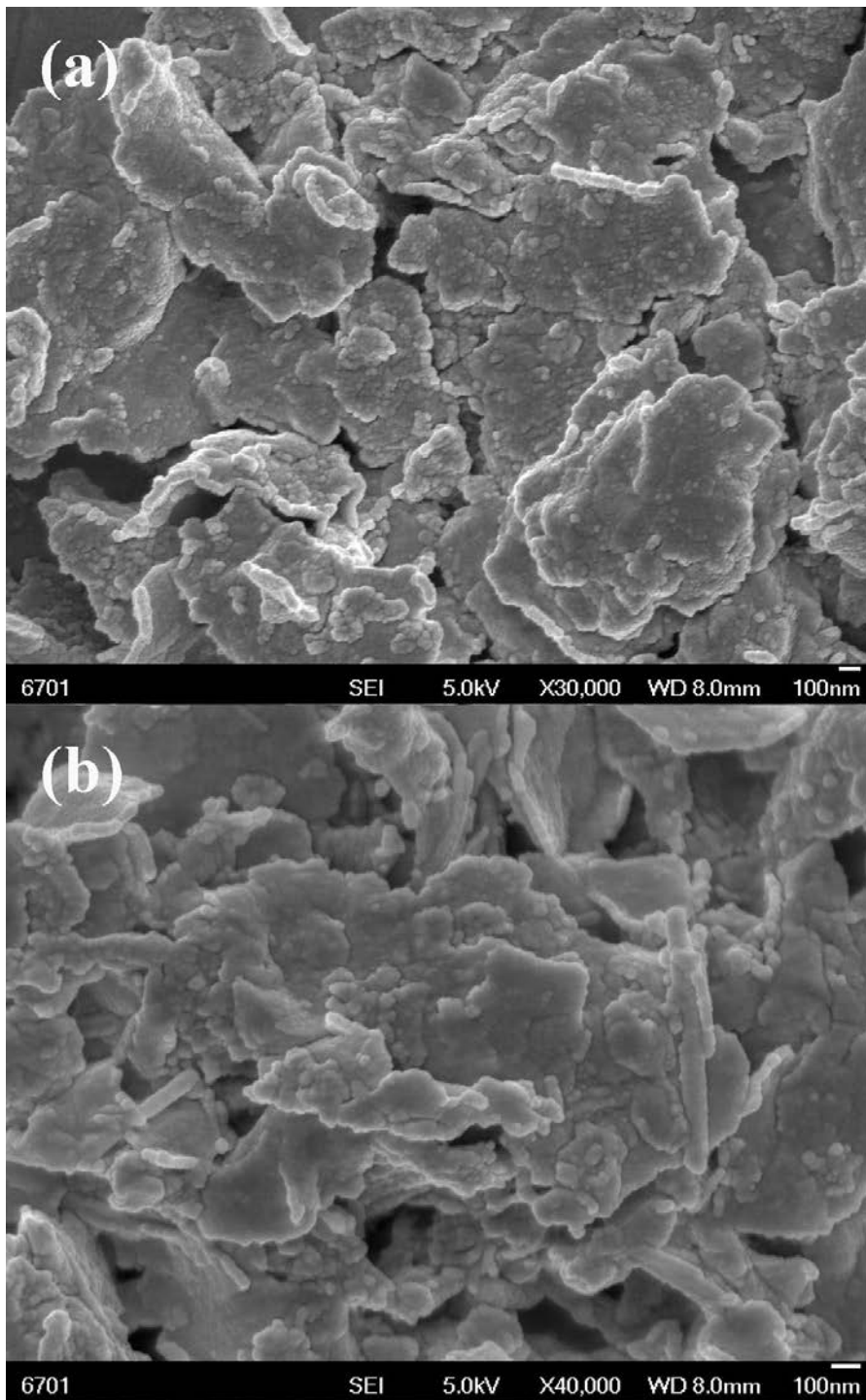


Figure S5 SEM images of (a) MMT/PANI-1.4/Fe₂O₃ and (b) MMT/PANI-1.4/Ni(OH)₂ composites.

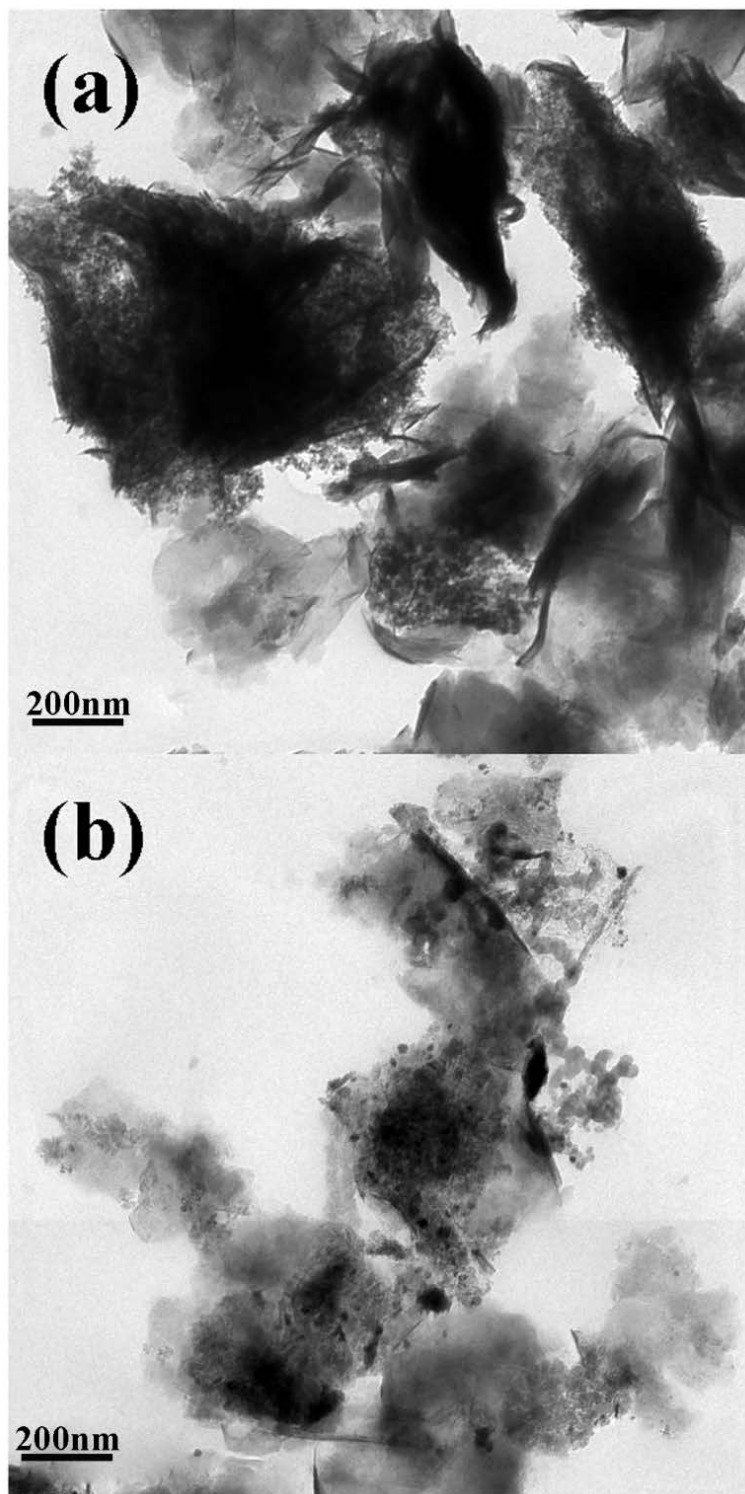


Figure S6 TEM images of (a) MMT/PANI-1.4/ Fe_2O_3 and (b) MMT/PANI-1.4/ $\text{Ni}(\text{OH})_2$ composites.

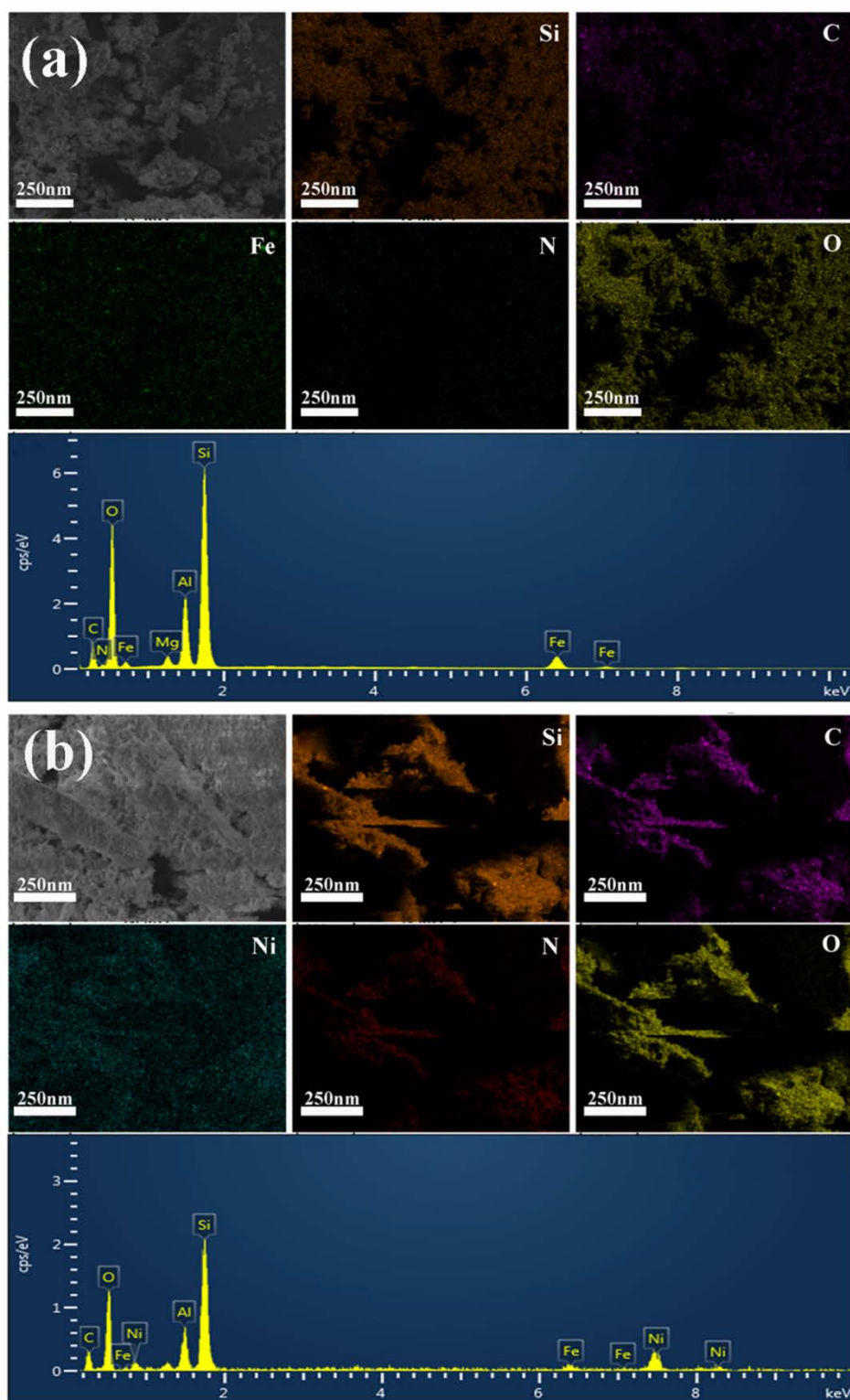


Figure S7 Element mapping images and EDX curve of (a) MMT/PANI-1.4/Fe₂O₃ and (b) MMT/PANI-1.4/Ni(OH)₂ composites.

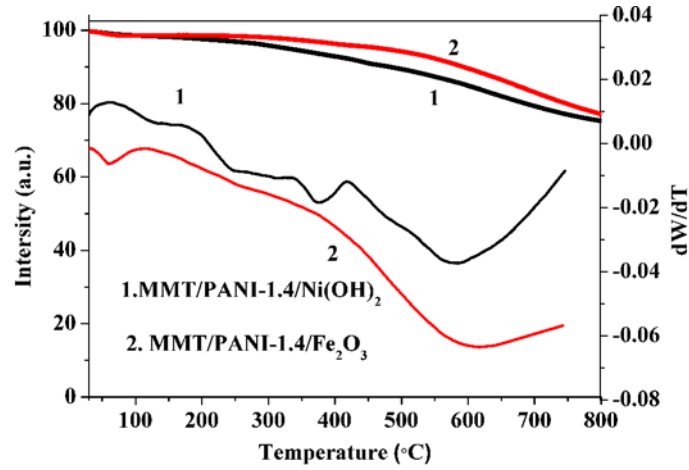


Figure S8 TG and DTG curves of (1) MMT/PANI-1.4/Ni(OH)₂ and (2) MMT/PANI-1.4/Fe₂O₃ composites.

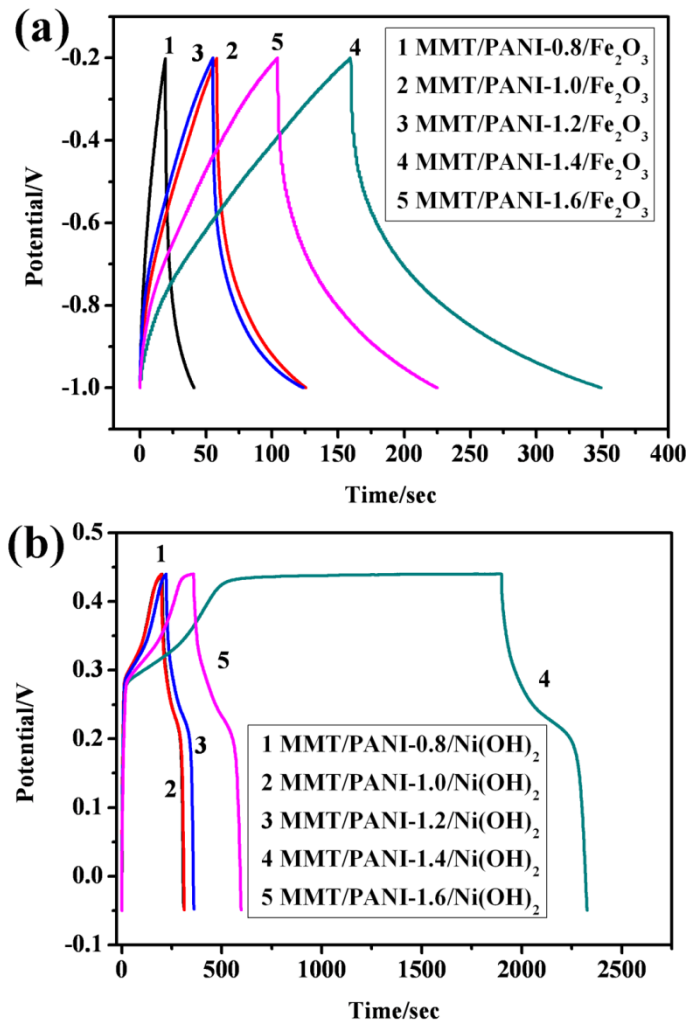


Figure S9 GCD curves of (a) MMT/PANI-0.8 ~ 1.6/Fe₂O₃ and (b) MMT/PANI-0.8 ~ 1.6/Ni(OH)₂ composites at current density 0.25 A g⁻¹ in 1.0 M KOH.