

Article

Supporting information: Microwave facile synthesis of NiO_x@graphene nanocomposites for application in supercapacitors: Insights to the formation and storage mechanism

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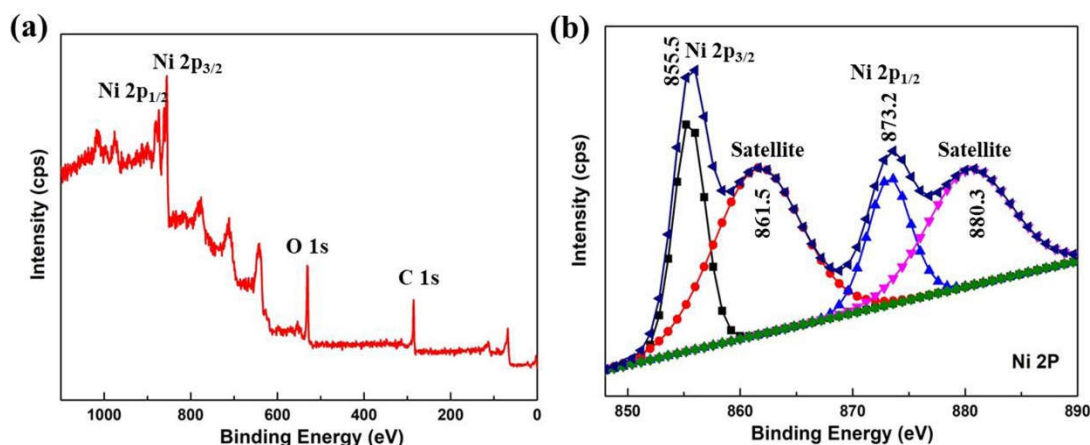


Figure S1. (a) XPS spectrum of the NiO_x@GR-C2; (b) High-resolution XPS spectrum of Ni 2p.

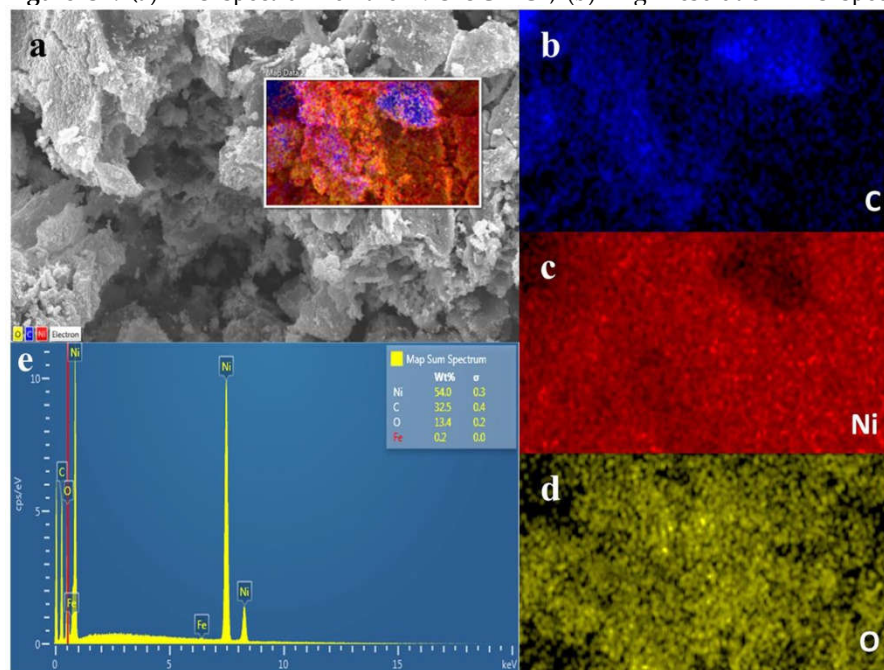


Figure S2. (a) SEM image of NiO_x@GR-C2 (inset: EDS composite elemental map); elemental mapping: (b) C, (c) Ni, (d) O; (e) EDS spectrum.

Table S1. Operation conditions for synthesizing NiO_x@graphene.

Sample	<i>G</i> ^a (mg)	Ni(OH) ₂ (mg)	NiO _x ^b (mg)	Microwave power (W)	Heating time (min)
NiO _x @GR-A1	25	61.8	49.8	1250	5
NiO _x @GR-A2	25	46.4	37.4	1250	5
NiO _x @GR-A3	25	30.9	24.9	1250	5

^aMass of graphene.^bMass of NiO_x calculated according to the nickel precursor.**Table S2.** Operation conditions for synthesizing NiO_x@graphene.

Sample	<i>G</i> ^a (mg)	Ni(Ac) ₂ ·4H ₂ O (mg)	NiO _x ^b (mg)	Microwave power (W)	Heating time (min)
NiO _x @GR-B1	25	165.8	49.8	1250	5
NiO _x @GR-B2	25	124.4	37.4	1250	5
NiO _x @GR-B3	25	82.9	24.9	1250	5

^aMass of graphene.^bMass of NiO_x calculated according to the nickel precursor.**Table S3.** Operation conditions for synthesizing NiO_x@graphene.

Sample	<i>G</i> ^a (mg)	Ni(NO ₃) ₂ ·6H ₂ O (mg)	NiO _x ^b (mg)	Microwave power (W)	Heating time (min)
NiO _x @GR-C1	25	193.9	49.8	1250	5
NiO _x @GR-C2	25	145.4	37.4	1250	5
NiO _x @GR-C3	25	96.9	24.9	1250	5

^aMass of graphene.^bMass of NiO_x calculated according to the nickel precursor.