Electronic Supplementary Information for:

Design and Synthesis of Ni-MOF/CNTs composites and rGO/Carbon Nitride composites for An Asymmetric Supercapacitor with High Energy and Power Density

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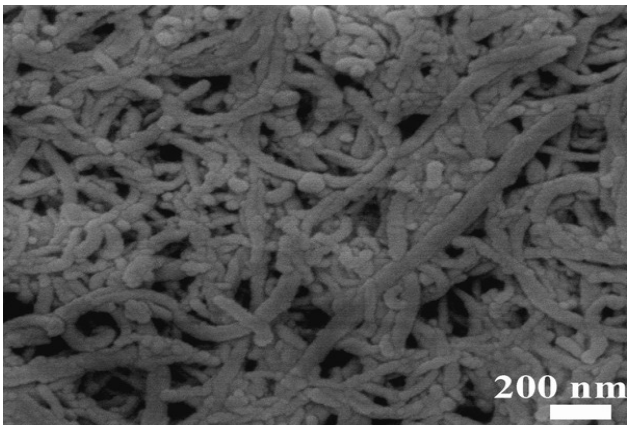

Figure S1. SEM image of Ni-MOF/CNTs-5

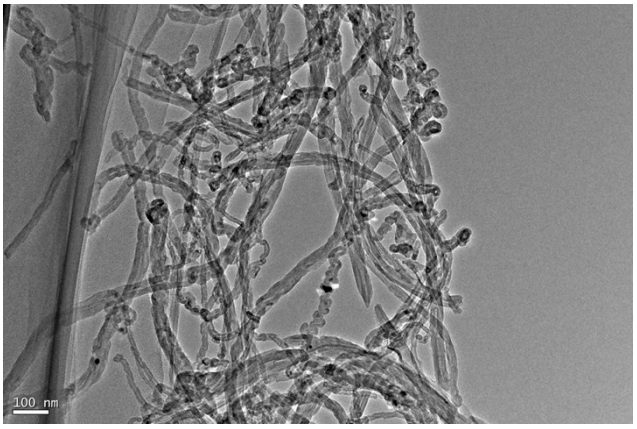

Figure S2. TEM image of mildly oxidized CNTs.

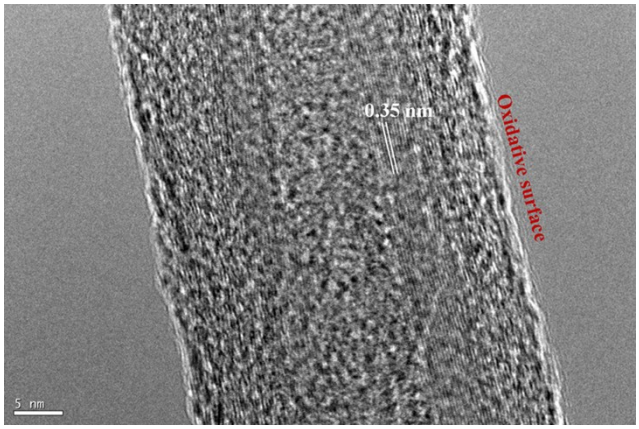

Figure S3. HRTEM image of mildly oxidized CNTs.

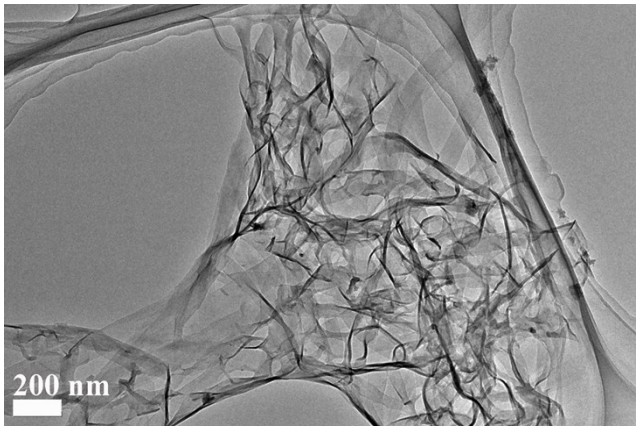

Figure S4. TEM image of Ni-MOF.

Figure S5. HRTEM image of Ni-MOF.

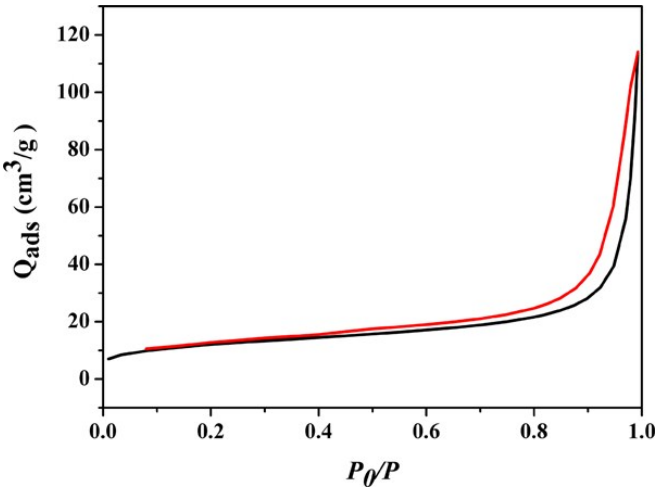

Figure S6. Nitrogen adsorption-desorption isotherm of Ni-MOF/CNTs-5 at 77.3 K.

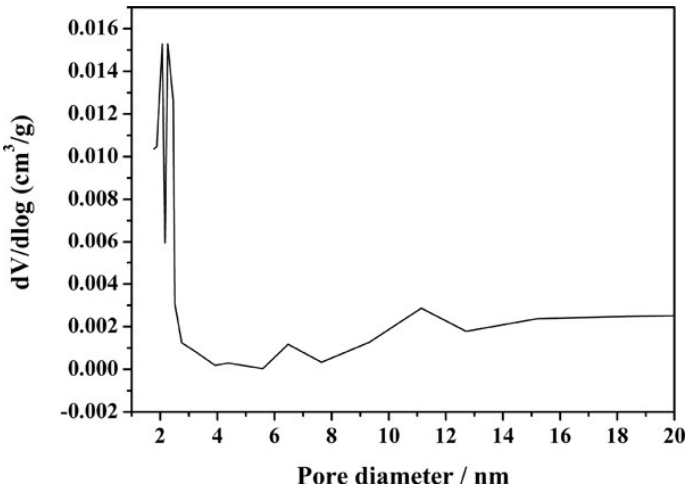

Figure S7. The pore-size distribution of Ni-MOF/CNTs-5.

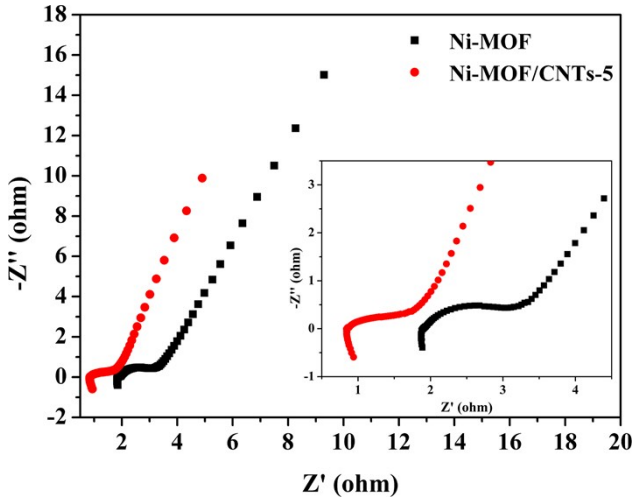

Figure S8. Nyquist plots of Ni-MOF and Ni-MOF/CNTs-5 composite.

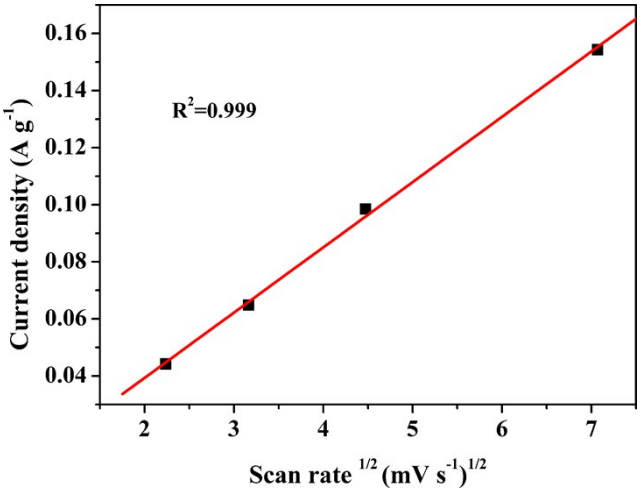

Figure S9. The relationship of current density *vs* the square root of scan rates in pure Ni-MOF.

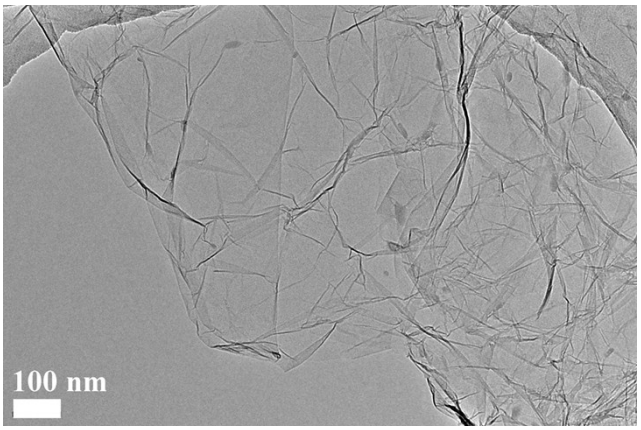

Figure S10. TEM image of GO sheets.

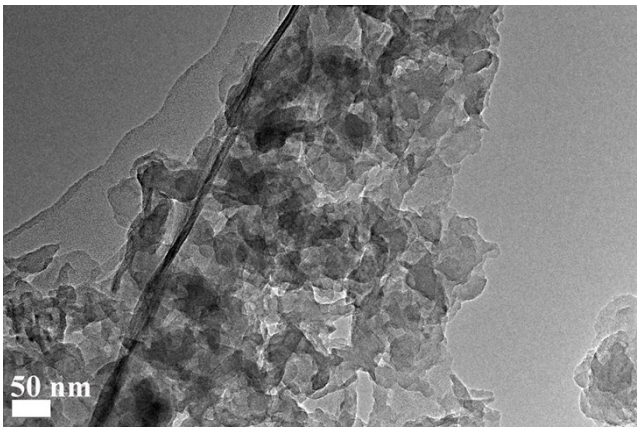

Figure S11. TEM image of *g*-C_3N_4 sheets.

Table S1. Comparison of capacity retention of asymmetric supercapacitors fabricated in our work with others reported.

Asymmetric Supercapacitors	Cycling Number	Current Density or Scan Rate	Capacity Retention	Reference
Ni_3S_2/MWCNT-NC//AC	5000	4 A g^{-1}	90%	[1]
Co_3O_4@$Ni(OH)_2$//RGO	1000	25 mA cm^{-2}	86%	[2]
Co_9S_8//Co_3O_4@RuO_2	2000	2.5 mA cm^{-2}	90.2%	[3]
RuO_2/graphene//graphene	2000	1.0 A g^{-1}	95%	[4]
Ni_3S_2/MWCNT-NC//AC	5000	4.0 A g^{-1}	90%	[5]
Graphite/Ni/Co_2NiO_4 //graphite/Ni/AC	5000	10 mA cm^{-2}	96.4%	[6]
Ni-Co LDH//rGO	5000	5 A g^{-1}	82%	[7]
CoO@C//AC	10000	50 mA cm^{-2}	96.9%	[8]
$Ni(OH)_2$/graphene//porous graphene	3000	100 mV s^{-1}	94%	[9]
$Ni(OH)_2$//activated carbon	1000	5 mV s^{-1}	82%	[10]
$LiNi_{1/3}Co_{1/3}Mn_{1/3}O_2$//AC	1000	100 mA g^{-1}	80%	[11]
Graphene/MnO_2//activated carbon nanofiber	1000	200 mV s^{-1}	97%	[12]
Ni-MOF/CNTs//rGO/C3N4	5000	2 A g^{-1}	95%	Our Work

References:

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