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Preparation of Fe_3O_4 with high specific surface area and improved capacitance as supercapacitor

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Table S1 Summary of electrochemical measurements reported in recent papers for Fe_3O_4 supercapacitor electrodes.

Preparation method	Nature of Fe_3O_4	Current collector	Electrolyte	The Potential window	Measurement protocol[a]	Maximum specific capacitance	Capacitance retention after cycle test	Ref (year)
Electrocoagulation	Powder	Ti meshes	1M Na_2SO_3	0-1.2V	Cp (i = 0.015A g^{-1})	27 F g^{-1}	100% after 10,000 cycles	[21] (2003)
Electroplating	film	-	1M Na_2SO_3	-0.8-(-0.1V)	CV (v=2mv s^{-1})	~170 F g^{-1}	-	[22] (2006)
Hydrothermal	Film	Stainless steel foil	1M Na_2SO_3	-1-0.1V	I = 0.006A	118.2 F g^{-1}	88.75% after 500 cycles	[23] (2009)
Microwave method	AC-Fe_3O_4,[b] Powder	Nickel grid	6M KOH	0-1.2V	Cp (i=0.5mA cm^{-2})	37.9 F g^{-1}	82% after 500 cycles	[24] (2009)
Hydrothermal, and treated with pyrrole	Powder	Stainless steel foil	0.1M Na_2SO_3	-1.2-0V	Cp (i <0.5 A g^{-1})	190 F g^{-1}	~85% after 500 cycles	[25] (2010)
Drop-coating technique	film	Stainless steel foil	1M Na_2SO_4	0-1V	CV (v=50mv s^{-1})	82 F g^{-1}	-	[26] (2010)
The electrospinning technique and solvent-thermal process	Powder	Nickel foam	1M Na_2SO_3	-0.9-0.1V	Cp (i = 0.42 A g^{-1})	83 F g^{-1}	91% after 1000 cycles	[27] (2011)
	Fe_3O_4/CNFs,[c] Powder					135 F g^{-1}	64% after 1000 cycles	
Hydrothermal	Fe_3O_4/SnO_2, Film	Ti foil	1M Na_2SO_3	-0.7-(-0.2V)	Cp (i=0.5mA cm^{-2})	~3.8 mF cm^{-2}	82.8% after 2000 cycles	[28] (2012)
Ultrasonic + Hydrothermal	Powder	Graphite sheet	1M Na_2SO_3	-0.9-0.1V	Cp (i = 0.4 A g^{-1})	207.7 F g^{-1}		This work
					(i = 1 A g^{-1})	118 F g^{-1}	100% after 2000 cycles	

[a] CV = Cyclic Voltammetry, Cp = Chronopotentiometry, v = Scan rate, i = Current density, I = Current value.

[b] Activated carbon (AC)-Fe_3O_4 composite

[c] Carbon nanofibers (CNFs)- Fe_3O_4 composite