

Supporting Information

Flax-Derived Carbon: A Highly Durable Electrode Material for Electrochemical Double-Layer Supercapacitors

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Table S1. Electrochemical performance of various activated carbons prepared from different biomass sources.

Sample Name	Biomass Precursor	Activating agent	Electrolyte	Electrode System	Cs [F/g]	Stability [cycles]	E [Wh/kg]	P [W/kg]	Ref
C-Flax	flax	KOH	1 M H ₂ SO ₄	3	500 (0.25 A/g)	—	—	—	this work
C-Flax	flax	KOH	1 M H ₂ SO ₄	2	189 (0.5 A/g)	85% (150 000 @ 5 A/g)	6.58	250	this work
CFC	flax textile	N/A	0.1 M Na ₂ SO ₄	2	1.56 (0.1 A/g)	100% (10 000 @ 5 A/g)	—	—	¹
FF-850	flax fabric	N/A	1 M H ₂ SO ₄	2	12.7 (2 mV/s)	N/A	—	—	²

CF-850	cotton fabric	N/A	1 M H ₂ SO ₄	2	21.1 (2 mV/s)	N/A	—	—	2
CF-CNT	flax fabric	N/A	6 M KOH	3	34 (1 A/g)	N/A	—	—	3
KHC	banana stem	KOH	6 M KOH	3	479.23 (1 mV/s)	72.88% (6000 @ 1 A/g)	—	—	4
PHC	banana stem	H ₃ PO ₄	6 M KOH	3	202.11 (2mV/s)	—	—	—	4
CHC	corn-cob	N/A	6 M KOH	3	309.81 (2 mV/s)	—	—	—	4
SHC	potato starch	N/A	6 M KOH	3	99.9 (2 mV/s)	—	—	—	4
MC-800	acacia gum	KOH	6 M KOH	3	272 (1 A/g)	93% (1000 @ 1 A/g)	—	—	5
MC-800	acacia gum	KOH	6 M KOH	2	223 (1 A/g)		7.76	500	5
AC-700-15	sunflower seed shell	KOH	30% KOH	2	244 (0.25 A/g)	—	4.8	2400	6
PC4/1-C	rice husk	ZnCl ₂	6 M KOH	2	233 (2 A/g)	99% (1000 @ 0.05 A/g)	8.36	N/A	7
PC4/1-C	rice husk	ZnCl ₂	6 M KOH	2	242 (2 mV/s)	—	—	—	7
N1	rice husk	NaOH	3 M KCl	2	210 (0.2 mA)	—	—	—	8
AC-900	carrageenan	KOH	6 M KOH	3	230 (1 A/g)	95% (1000 @ 1 A/g)	—	—	9
TWPC	tea	KOH	6 M KOH	3	332 (1 A/g)	99.4% (100000 @ 20 A/g)	—	—	10
N-SAC-3	shaddock peel	KOH	6 M KOH	3	325 (1 A/g)	89.8% (10000 @ 100 mV/s)	—	—	11
C-750	waste coffee ground	CO ₂	5 M KOH	3	190 (5 mV/s)	92% (2000 @ 1 A/g)	—	—	12
—	firwoods	steam	0.5 M H ₂ SO ₄	3	118 (10 A/g)	—	—	—	13

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