Electronic Supplementary Material (ESI) for RSC Advances.

Pseudocapacitance electrode and asymmetric supercapacitor based on biomass Juglone/activated carbon composites

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1. Supporting figures

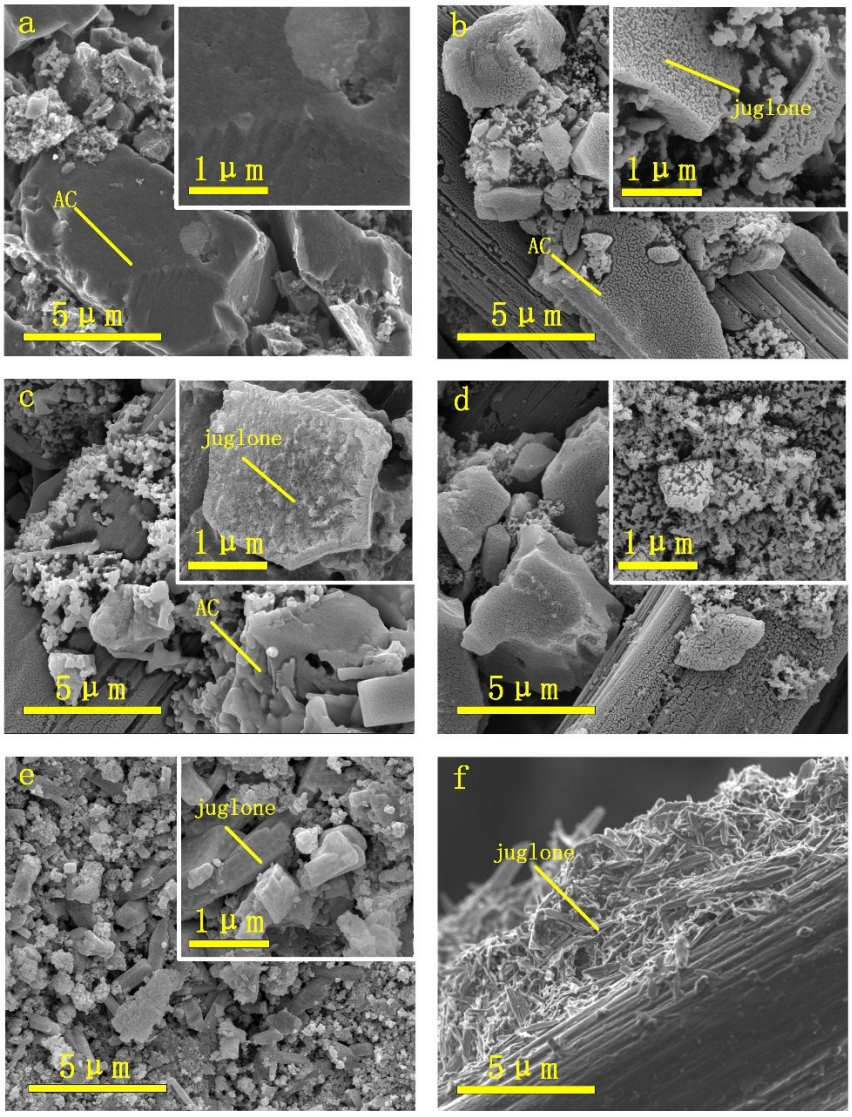

Figure s1. SEM images of pure AC electrodes (a), 1:9 group(b) , 1:3 group (c),1:1 group (d), 3:1 group (e)and pure juglone electrodes(f)

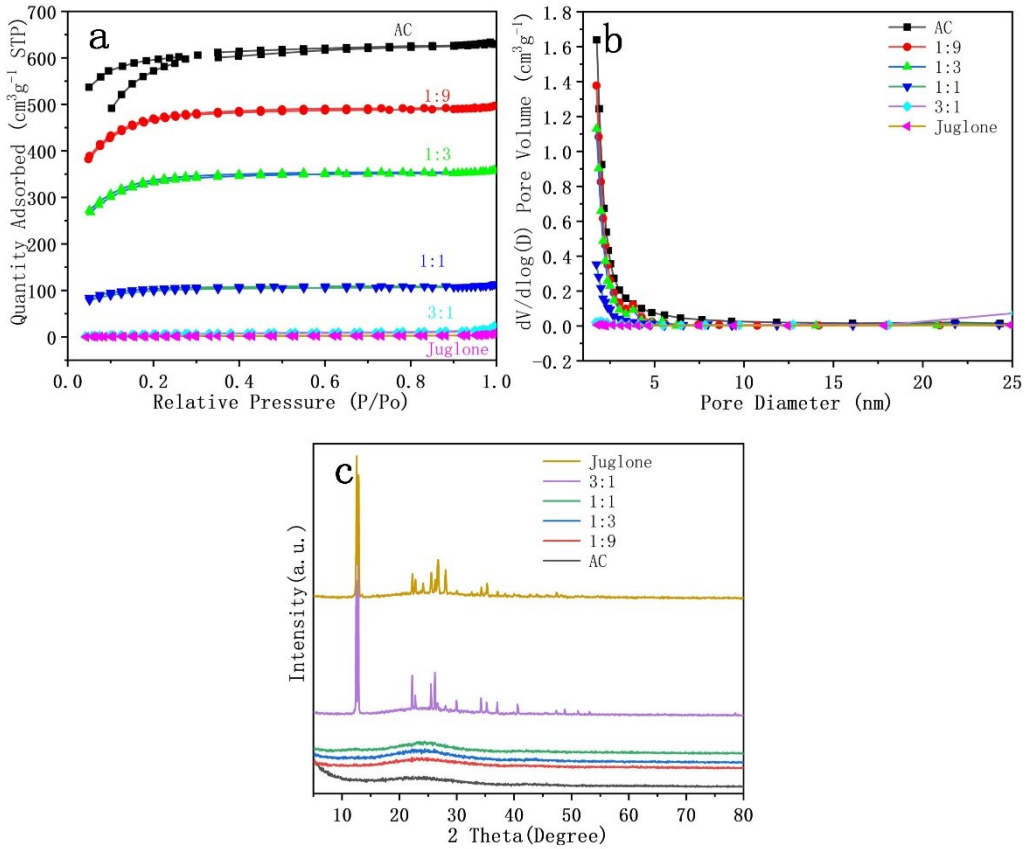

Figure s2. The Nitrogen adsorption-desorption isotherms (a) and the pore size distribution curves (b) and the XRD patterns (c) of AC, 1:9, 1:3, 1:1, 3:1, Juglone samples.

Table s1.

Comparison of values in our work with that reported supercapacitors electrodes materials.

Materials	Test condition	Specific capacitance	Cycle stability(cycle number)	energy density	power density	Ref.
Juglone/AC	0.25 A g^{-1}	265 F g^{-1} 1300 mF cm^{-2}	75%(3000)	9 Wh kg^{-1} 12 Wh kg^{-1}	2 kW kg^{-1} 0.18 kW kg^{-1}	this work
bacteria doped ZnO/sponge	0.2 A g^{-1}	133 F g^{-1}	89%(5000)	18 Wh kg^{-1}	0.096 kW kg^{-1}	[38]
MnO_2 on the carbon fiber	5 mV s^{-1}	130 F g^{-1} 790 mF cm^{-2}	-	-	-	[39]
Juglone/PPY	5 μA cm^{-1}	1.78 mF cm^{-1}	95%(1000)	-	-	[22]
Porous carbon	1 A g^{-1}	279 F g^{-1}	97%(10000)	16.9 Wh kg^{-1}	0.08 kW kg^{-1}	[40]