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Supplementary material to

ADVANCEMENTS IN PHYTOMASS-DERIVED ACTIVATED CARBON FOR APPLICATIONS IN ENERGY STORAGE SYSTEMS

Kalyani Palanichamy[1], Banuprabha Thakku Rangachari[2], Sridhar Jayavel[3,*], Aravind Dhandapani[4], and Varagunapandiyan Natarajan[5]

[1]Department of Chemistry, DDE, Madurai Kamaraj University, Madurai-625021, Tamil, Nadu, India.
[2]Department of Chemistry, Mary Matha College of Arts and Science, Periyakulam, Tamil, Nadu, India.
[3]Department of Biotechnology, DDE, Madurai Kamaraj University, Madurai-625021, Tamil, Nadu, India.
[4]University Science Instrumentation Centre, Madurai Kamaraj University, Madurai-625021, Tamil Nadu, India
[5]Department of Chemical Engineering, King Khalid University, Abha, 61421, Saudi Arabia

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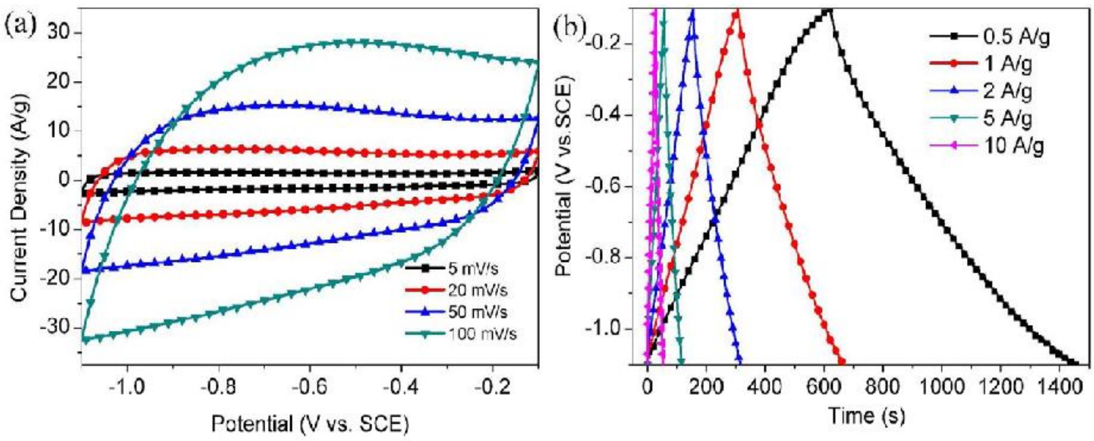

Figure S1. (a) CV of celtuce leaf AC at various scan rates (b) GCD at various current densities [45].

* Email: jsridharbiotech@mkuniversity.ac.in

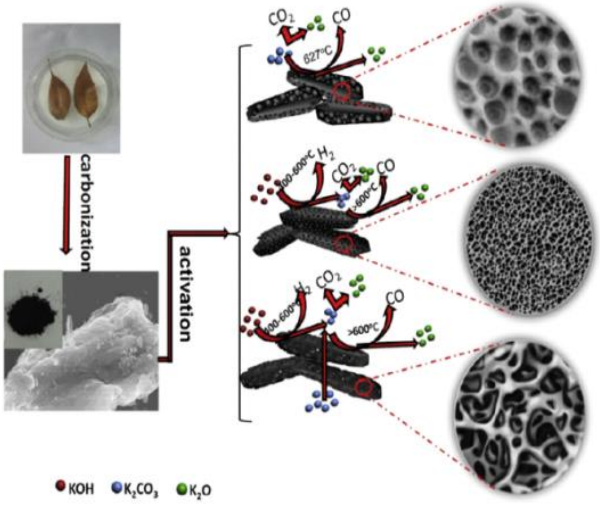

Figure S2. Activation of fallen leaves of Fraxinus chinensis by KOH and/or K_2CO_3 [46].

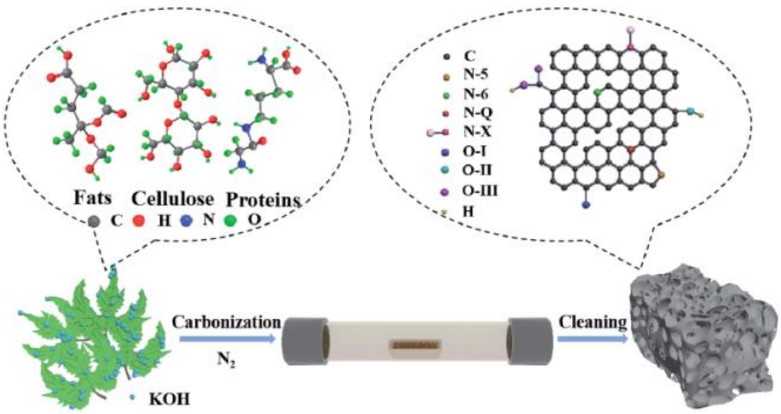

Figure S3. Diagram of the nettle leaf derived porous carbons [47].

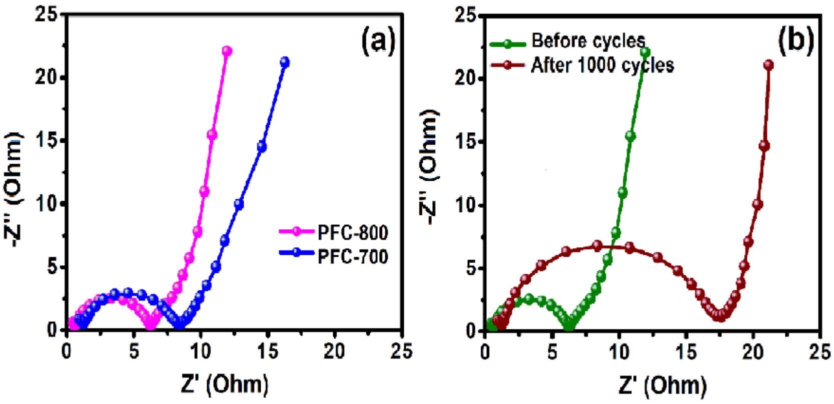

Figure S4. EIS of the modified electrode [49].

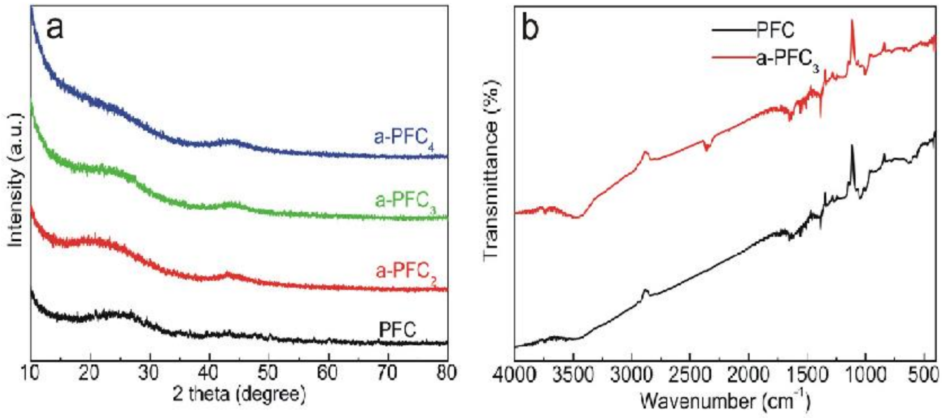

Figure S5. XRD and FTIR patterns of a-PFCs [50].

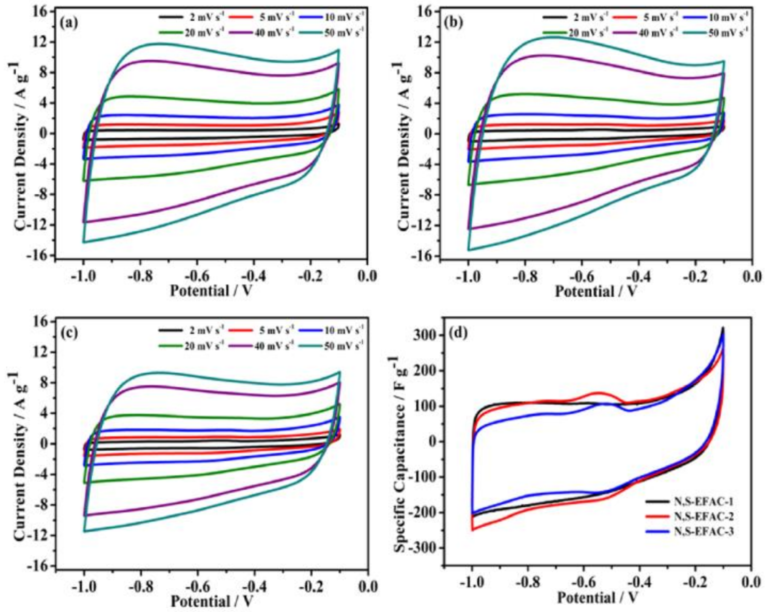

Figure S6. CV curves at different scan rates and Comparison of N, S-ELAC-x at 2 mV/s [51].

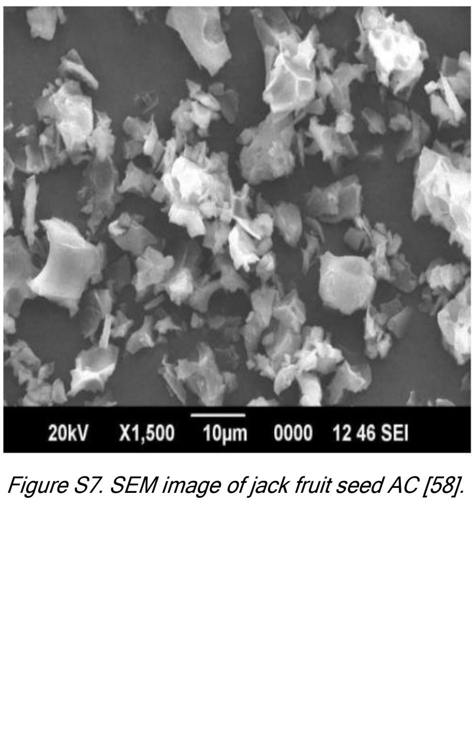

Figure S7. SEM image of jack fruit seed AC [58].

Figure S8. Integral valorization of apple waste ensuring circular economy [60].

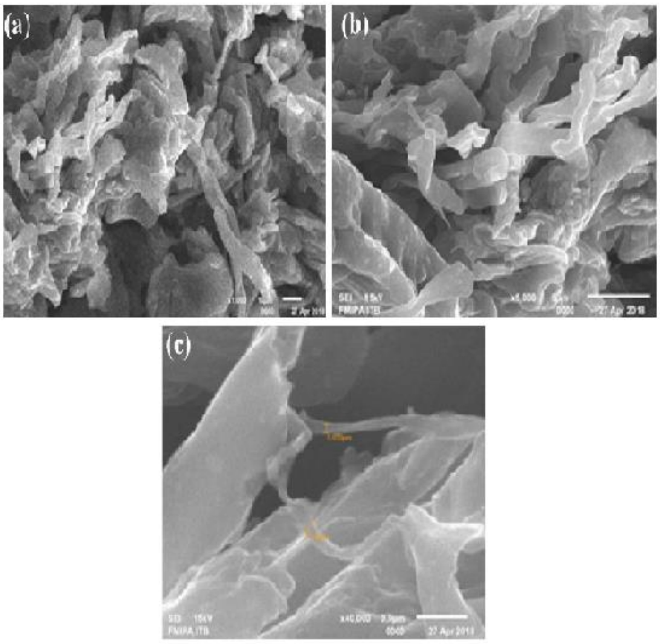

Figure S9. SEM of MN700 at (a) 1000X (b) 5000X and (c) 40000X [62].

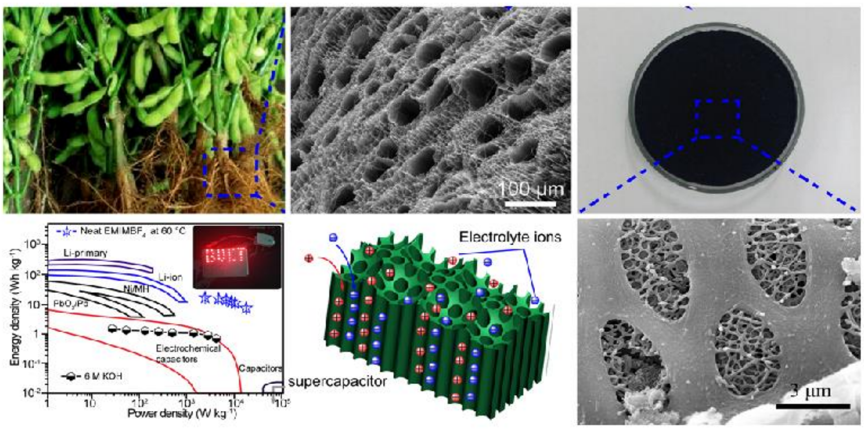

Figure S10. Scheme of preparation of SRPC and application in supercapacitors [66].

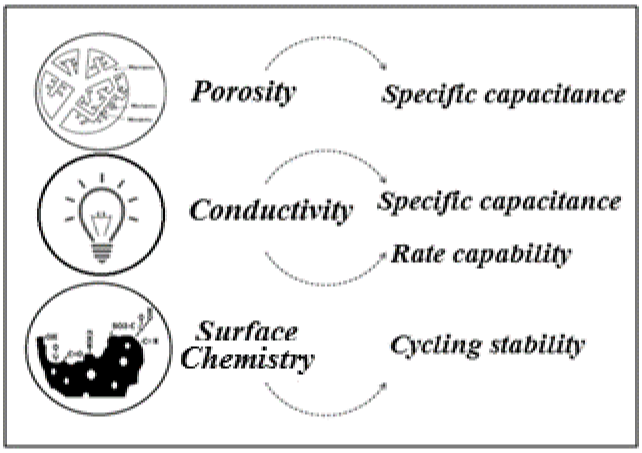

Figure S11. Scheme representing the interplay between the properties of the electrode material and the performance of the capacitor [84].

Table S1. Phytomass precursors from flower of plant for synthesizing electrode materials for capacitors.

S.No	Precursor	Activation	Electrolyte	SBET(m^2/g)	Specific capacitance (F/g)	Reference
1	Rose	KOH/KNO_3	6 M KOH	1980	350	[48]
2	Bougainville (paper) flower	$ZnCl_2$	1 M H_2SO_4	1801	118	[49]
3	Paulownia flower	KOH	1 M H_2SO_4	1159	324	[50]
4	Elm flower	KOH	6 M KOH	2049	275	[51]
5	Albizia flowers	KOH	6 M KOH	2758	406	[52]
6	*Borassus flabelliber* flower (Asian palmyra palm)	H_3PO_4	1M KOH	633	238	[53]

Table S2. Seed of plants as phytomass precursors for synthesizing electrode materials for capacitors.

S. No	Precursor	Activation	Electrolyte	S_{BET} (m^2/g)	Specific capacitance (F/g)	Reference
1	Argan seed shell	KOH	1 M H_2SO_4	2100	259 (O-rich) 355 (N-rich)	[54]
2	Sunflower seed shell	KOH	30 wt% KOH	1371 to 2821	311	[55]
3	Pistachio shells	KOH+CO_2	0.5 M H_2SO_4, 0.5 M Na_2SO_4 & 1M $NaNO_3$	1013 to 2145	25- 47	[56]
4	Cherry stones	KOH	2 M H_2SO_4 1M$(C_2H_5)_4NBF_4/CH_3CN$	1200	174-232 69-120	[57]
5	Jackfruit seed	$ZnCl_2$	1M H_2SO_4 & 1M Na_2SO_4	1028	355	[58]
6	Papaya seed	$ZnCl_2$	1M H_2SO_4	1213	472	[59]

Table S3. Phytomass precursors as of fruit of plant for synthesizing carbon electrode materials for capacitors.

S. No	Precursor	Activation	Electrolyte	SBET (m^2/g)	Specific capacitance (F/g)	Reference
1	Apple waste	CO_2 & KOH	2 M H_2SO_4	2000	290	[60]
2	Orange peel	KOH	3 M KOH	1391	407	[61]
3	Pineapple crown waste	KOH	1 M H_2SO_4	700	150	[62]
4	*Syzygium cumini* fruit (black plum) shells	CO_2	6 M KOH	-	253	[63]
5	*Cucumis melo* (musk melon) fruit peel	KOH	1 M KOH	722	404	[64]

Table S4. Phytomass precursors from root of plant for synthesizing electrode materials for capacitors.

S.No	Precursor	Activation	Electrolyte	SBET (m^2/g)	Specific capacitance (F/g)	Reference
1	Chrysopogon Zizanioides (vetiver) roots	CO_2	6 M KOH	-	294	[63]
2	Tamarisk root	NaCl, $ZnCl_2$	0.5 M Na_2SO_4	484	293	[65]
3	Soyabean root	KOH	6 M KOH	2143	276	[66]