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Electronic Supporting Information

Nanoporous Activated Carbon Material from *Terminalia chebula* Seed for Supercapacitor Application

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1. Additional SEM images

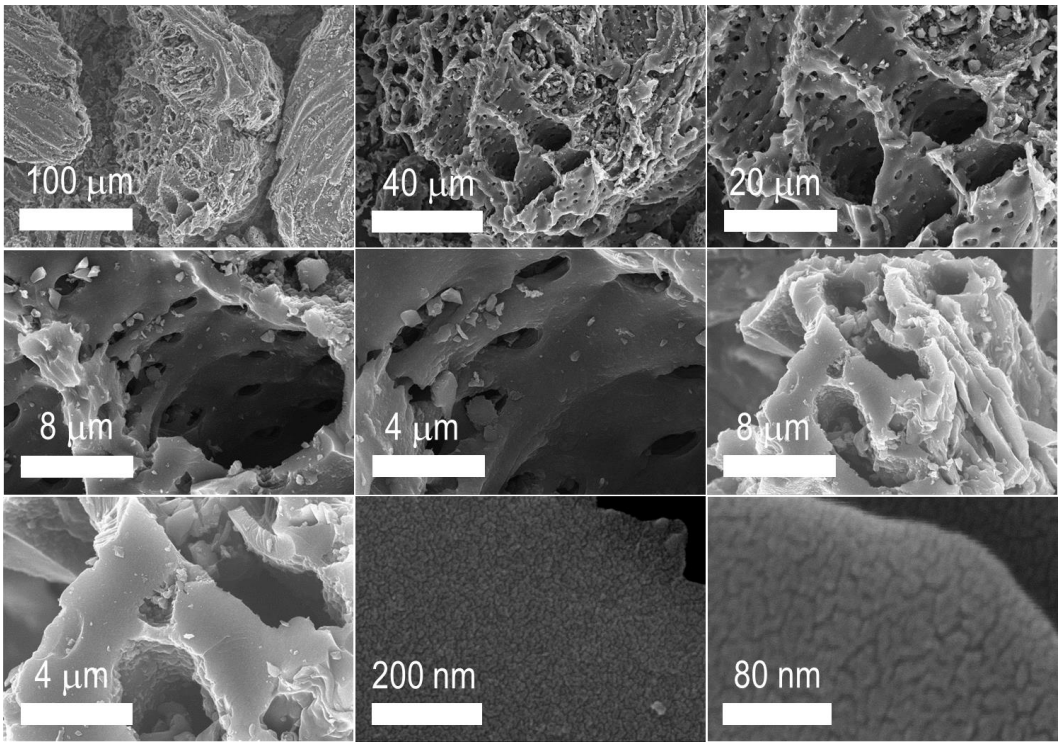

Figure S1. Additional SEM images of the directly carbonized reference sample, HrP_500.

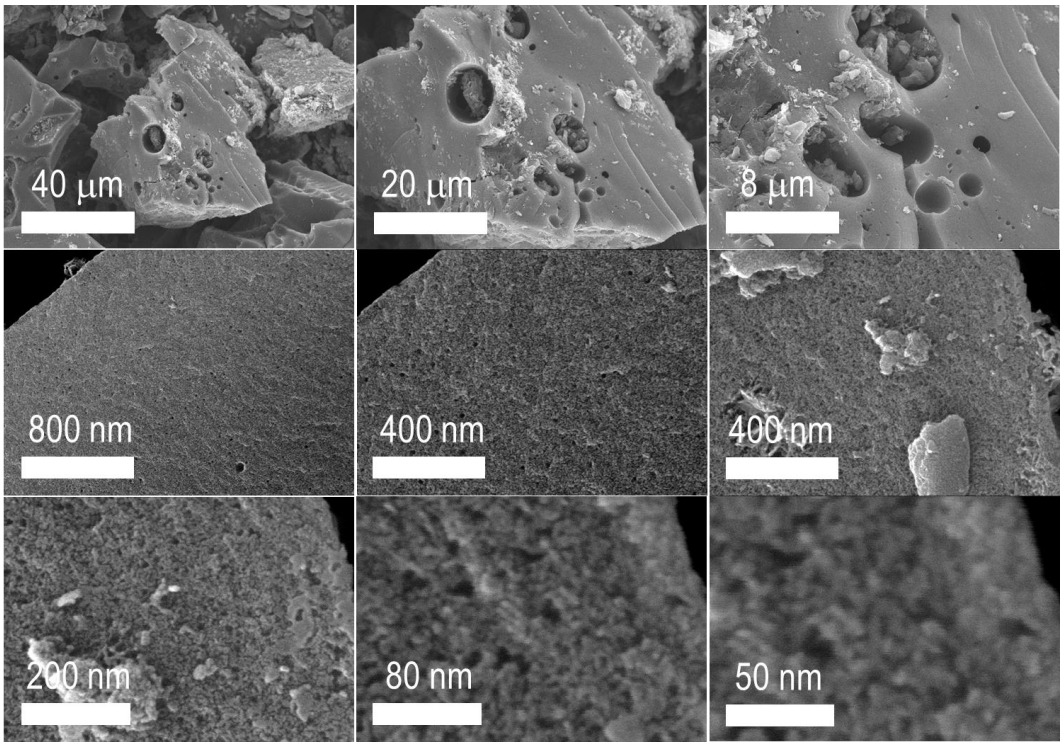

Figure S2. Additional SEM images of Harro carbon carbonized at 400 °C, HrC_Z400.

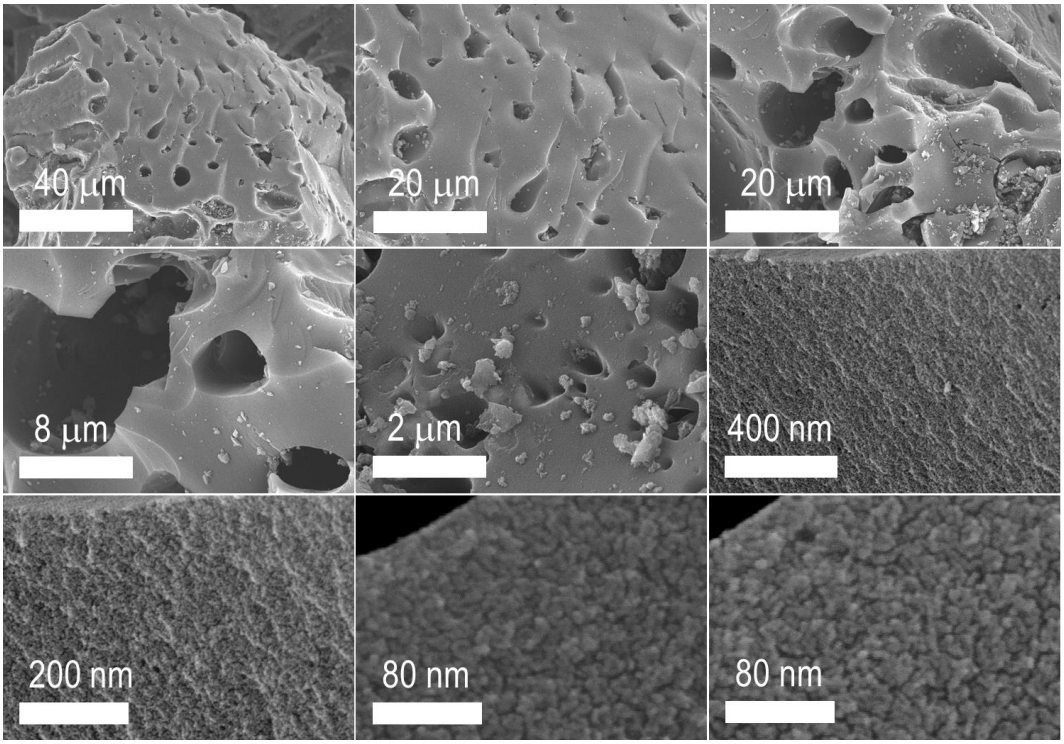

Figure S3. Additional SEM images of Harro carbon carbonized at 500 °C, HrC_Z500.

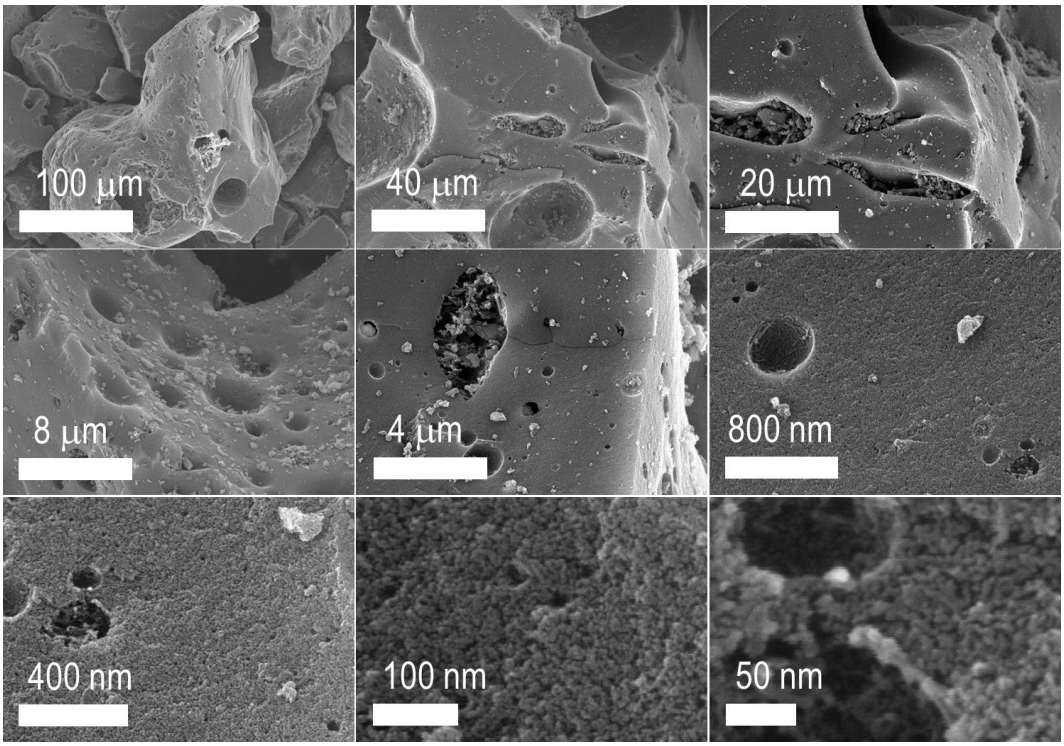

Figure S4. Additional SEM images of Harro carbon carbonized at 600 °C, HrC_Z600.

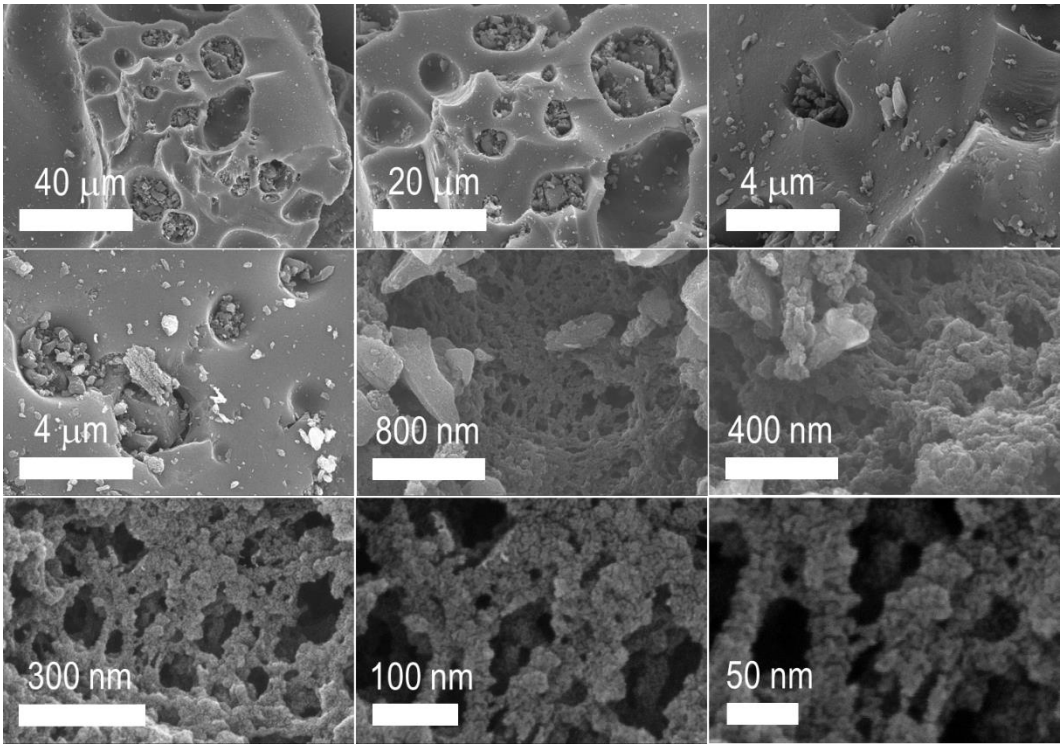

Figure S5. Additional SEM images of Harro carbon carbonized at 700 °C, HrC_Z700.

2. Additional TEM images

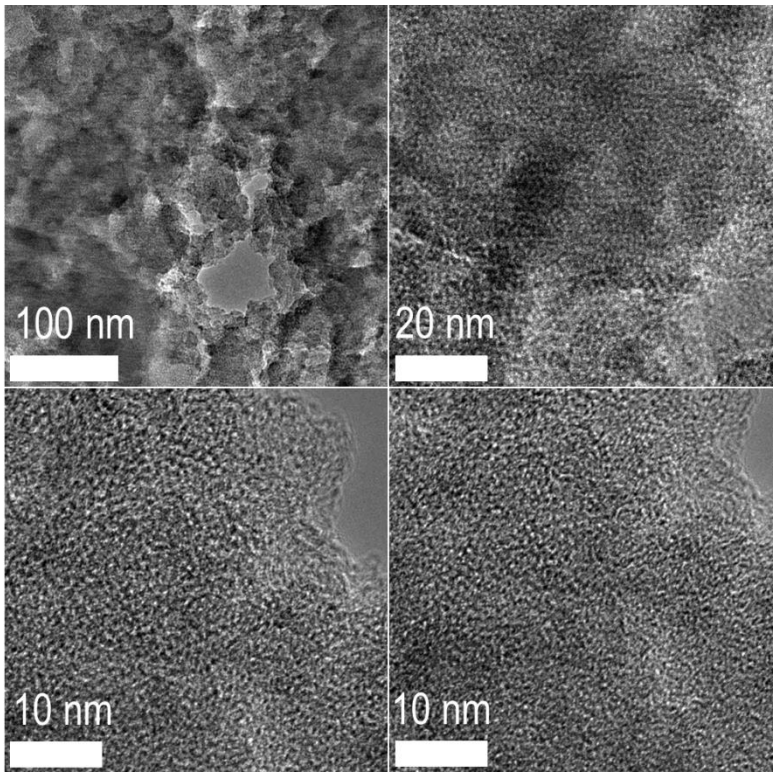

Figure S6. Additional TEM and HR-TEM images of the optimal sample, HrC_Z700.

3. FTIR data

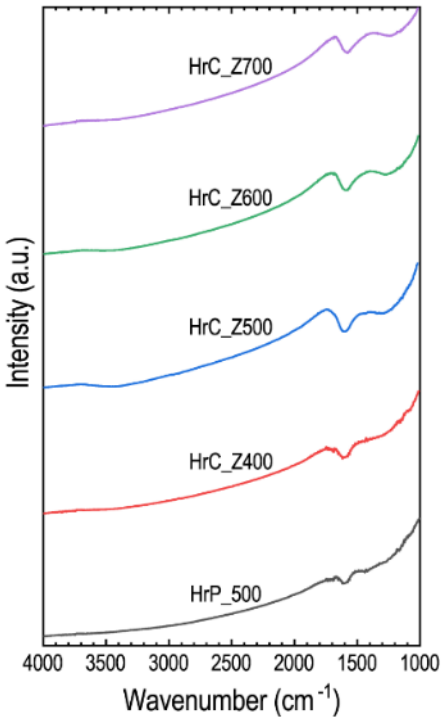

Figure S7. FTIR spectra of the directly carbonized reference sample, HrP_500, and the $ZnCl_2$ activated carbon materials.

4. Additional electrochemical data

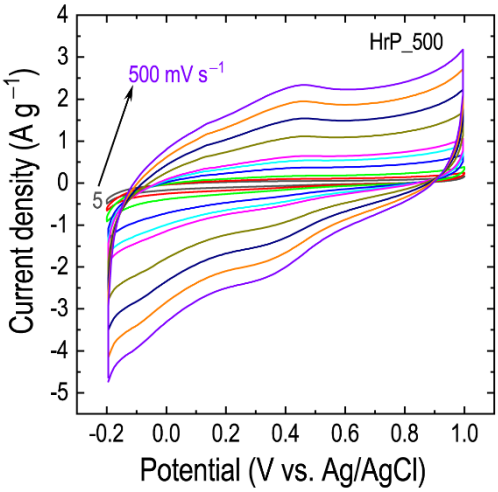

Figure S8. CV profiles of the directly carbonized reference sample, HrP_500 at different scan rates from 5 to 500 mVs^{-1}.

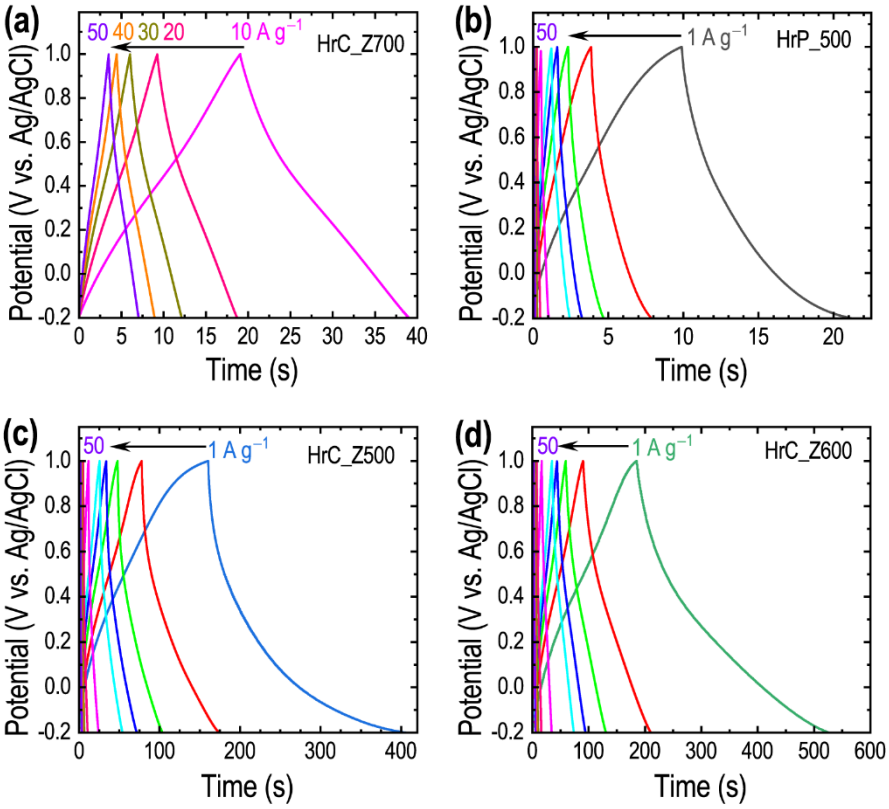

Figure S9. Additional GCD data. (a) GCD profiles of HrC_Z700 at higher current densities from 10 to 50 A g^{-1}, and GCD vs. current density profiles of different samples: (b) HrP_500, (c) HrC_Z500, (d) HrC_Z600.

Table S1. Comparison of the electrochemical supercapacitance performance of Harro seed stone-derived porous carbons with other carbon materials derived from other biomass.

Carbon precursors	Electrolyte	Current density (A g^{-1})	C_s (F g^{-1})	Reference
Harro seed stone ($ZnCl_2$ activated)	1 M H_2SO_4	1	328	This work
Barro seed stone ($ZnCl_2$ activated)	1 M H_2SO_4	1	319	[12]
Date seed (KOH activated)	1 M H_2SO_4	1	386	[14]
Apple-pomace (K_2FeO_4 activated)	6 M KOH	0.5	360	[16]
Tasmanian Blue Gum (KOH activated)	1 M KOH	1	212	[33]
Walnut shell ($KMnO_4$ activated)	6 M KOH	0.5	380	[36]
Lotus leaf (KOH activated)	6 M KOH	0.5	425	[39]
Corn husk (K_2CO_3 activated)	0.5 M H_2SO_4	0.25	225	[65]
American ginseng waste residue (KOH activated)	6 M KOH	0.1	268	[66]
Coconut shell (KOH activated)	0.5 M Na_2SO_4	1	397	[67]
Rotten wood ($ZnCl_2$ activated)	6 M KOH	1	350	[68]
Lotus seed ($ZnCl_2$ activated)	1 M H_2SO_4	1	272.9	[69]
Washnut seed (KOH activated)	1 M H_2SO_4	1	288.7	[70]
Washnut seed ($ZnCl_2$ activated)	1 M H_2SO_4	1	225.1	[71]
Jackfruit seed ($ZnCl_2$ activated)	1 M H_2SO_4	1	261.3	[72]
Pine Sawdust (CO_2 activated)	6 M KOH	1	225	[73]
Citrus bergamia peels (H_3PO_4 and $Mn(NO_3)_2$ activated)	6 M KOH	0.1	289	[74]
Prosopis juliflora wood (KOH activated)	6 M KOH	0.5	588	[75]
Lapsi seed ($ZnCl_2$ activated)	1 M H_2SO_4	1	284.0	[76]
Corncob (KOH activated)	6 M KOH	0.5	382	[77]
Cotton fiber (NaOH activated)	3 M KOH	0.3	222	[78]
Cottonseed hull (KOH activated)	6 M KOH	0.5	304	[79]
Bio-decomposited product (K_2CO_3 activated)	6 M KOH	0.05	209	[80]
Lignocellulose carbon	1 M NaCl	1	172.9	[81]
Biomass-derived lignin	6 M KOH	0.5	348	[82]
Kraft lignin (CO_2 activated)	6 M KOH	0.1	155	[83]
salvia splendens (NaCl activated)	6 M KOH	1	294	[84]
Yeast (Na_2SiO_3 activated)	6 M KOH	0.5	313	[85]
Wood sawdust (KOH activated)	6 M KOH	0.5	225	[86]
Wood	1 M H_2SO_4	0.5	260	[87]
Houttuynia biomass (KOH activated)	6 M KOH	1	473.5	[88]

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