

Electronic Supplementary Information

An air-assisted activation strategy for porous carbon spheres, and its enhanced electrochemical performance

Huaqing Xuan,^a Yiliang Wang,^a Gaoxing Lin,^a Fan Wang,^a Lin Zhou^a, Xiaoping Dong^{a*} and Zhi Chen^{b*}

^a Department of Chemistry, School of Sciences, Zhejiang Sci-Tech University, 928 Second Avenue, Xiasha Higher Education Zone, Hangzhou, China.

Fax: +86 571 86843228; Tel: +86 571 86843228; E-mail: xpdong@zstu.edu.cn

^b College of Materials Science and Engineering, China Jiliang University, 258 Xueyuan Street, Xiasha Higher Education Zone, Hangzhou310018, China.

Fax: +86 571 86835738; Tel: 189 690 29559; E-mail: zchen@gmail.com

Table S1 The enhancement of calculated specific capacitance in CV results at the scan rate of 50 mV s⁻¹

1

Sample	Capacitance (F g ⁻¹)
AACS-1	114
AACS-2	126
AACS-3	133
AACS-4	149
AACS-5	174
AACS-6	206

Table S2 The comparison of structure and performance of different porous carbon materials

Carbon source	Activating agent	S_{BET} ($\text{cm}^2 \text{g}^{-1}$)	Capacitance (F g^{-1})	Electrolyte	Ref
RF resin	Air	2178	212	KOH	--
FDU-15	KOH	1410	200	KOH	22
RF resin	ZnCl_2	2437	204	KOH	23
Firewoods	Steam	1131	120	Acidic	25
ACFs	NaOH	3291	187	IL	12
Glucose	ZnCl_2	2500	196	KOH	38
Eggplant	--	950	121	Li_2SO_4	37
Cotton stalk	H_3PO_4	1481	114	Et_4NBF_4	24

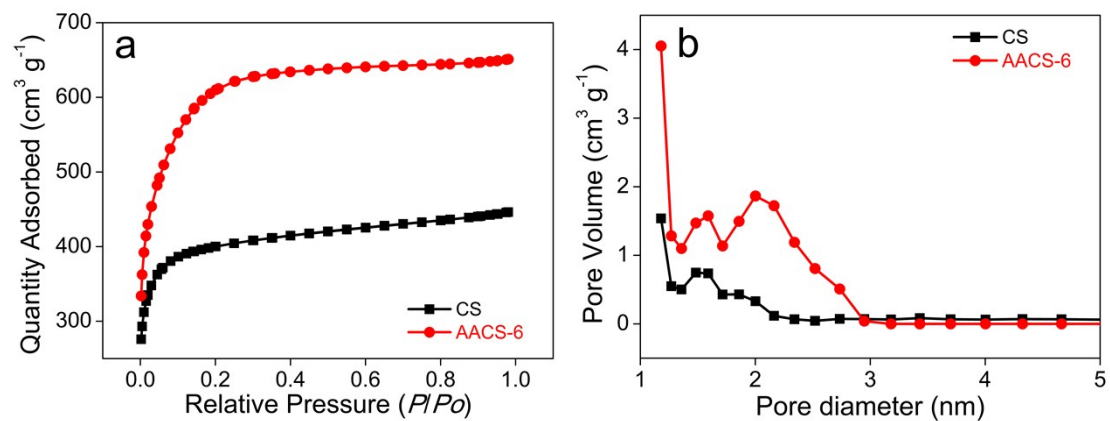


Fig. S1 N₂ adsorption-desorption isotherm (a) and the pore size distribution curves (b) of AACS-6 and

CS.

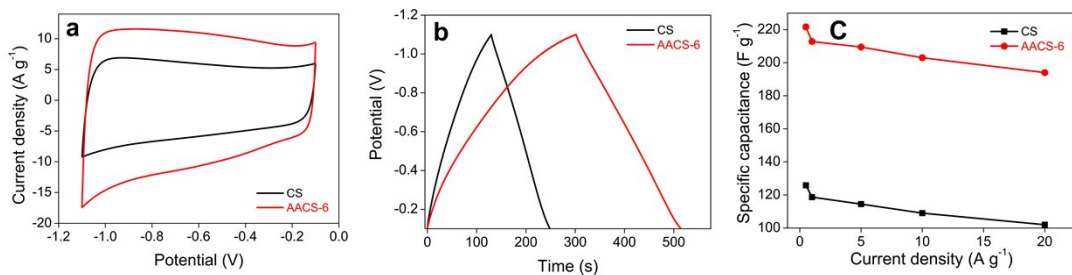


Fig. S2 Electrochemical capacitive behaviors of AACS-6 and CS. (a) CV measurements at the scan rate of 50 mV s^{-1} ; (b) Galvanostatic charge-discharge profiles at the current density of 1 A g^{-1} ; (c) Specific capacitance measured at different scan rates.