The mass ratio capacitance C_m(F·g^{-1}) can be calculated by Equation (2-1):

$$C_m = \frac{I \times \Delta t}{m \times \Delta v} \#(S1)$$

Equation (2-2) is the basic expression for calculating the energy density Es (Wh·kg^{-1}) in the symmetric two-electrode system:

$$E_s = \frac{C_m \times \Delta V^2}{2 \times 3.6} \#(S2)$$

The power density Ps (W·kg^{-1}) in the two-electrode test was calculated by equation (2-3):

$$P_s = \frac{3600 \times E_S}{\Delta t} \#(S3)$$

The contributions of surface-controlled and diffusion-controlled processes to the total charge storage are distinguished by equation (2-4):

$$I = k_1 V + k_2 V^{1/2} \quad (S4)$$

where V is the scanning rate in mV·s^{-1}; I is the peak current in the CV curve in A·g^{-1}; and k_1 and k_2 are constants. $k_1 V$ is the diffusion-controlled process contribution and $k_2 V^{1/2}$ is the surface-controlled process contribution.

Table S1 Electrochemical properties of some plant-derived carbon materials

Material	Activator	Specific capacitance (F·g^{-1})	Electrolyte	Energy density (Wh·kg^{-1})	Power density (W·kg^{-1})	Cycling stability	Reference
Soybean shells	KOH	339 (1 A·g^{-1})	6 mol·L^{-1} KOH	39.1	2495.5	80% 10000 cycles	44
Cashew nut husk	KOH	305.2 (1 A·g^{-1})	6 mol·L^{-1} KOH	11.2	400	97.1% 4000 cycles	45
Peanut shell	KOH	575.7 (0.5 A·g^{-1})	6 mol·L^{-1} KOH	22.2	319.97	93.8% 10000 cycles	46
Mung bean husk	KOH	353 (1 A·g^{-1})	6 mol·L^{-1} KOH	20.4	872	97.4% 10000 cycles	47
Willow catkin	KOH	298 (0.5 A·g^{-1})	6 mol·L^{-1} KOH	21.0	180	99.7% 10000 cycles	48
Lotus stamen	KOH	322.8 (0.5 A·g^{-1})	3 mol·L^{-1} KOH	24.1	490	90.2% 10000 cycles	49
Sword bean shells	KOH	369 (1 A·g^{-1})	6 mol·L^{-1} KOH	12	375	95.7% 10000 cycles	50
Soybean dregs	KOH	246.2 (0.5 A·g^{-1})	1 mol·L^{-1} Et_4NBF_4	44.27	2656	92.72% 10000 cycles	51
Eucalyptus bark	KOH	483.5 (0.5 A·g^{-1})	1 mol·L^{-1} Na_2SO_4	21.7	168.9	83.1% 10000 cycles	52
Mung bean sprouts	KOH	370 (0.5 A·g^{-1})	6 mol·L^{-1} KOH	14.15	50	94.2% 5000 cycles	53
Edamame shell	KOH	301 (0.5 A·g^{-1})	6 mol·L^{-1} KOH	37.6	200	96.68% 12000 cycles	This work