

Electronic supplementary information

Graphitic carbon balanced between high plateau capacity and high rate capability for lithium ion capacitor

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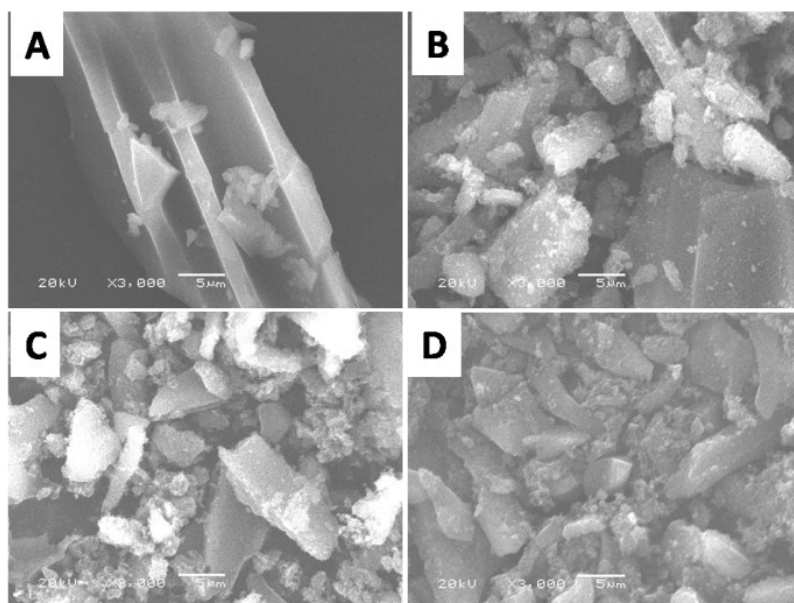


Fig. S1. SEM images of A) C400, B) GC900, C) GC1000 and D) GC1100.

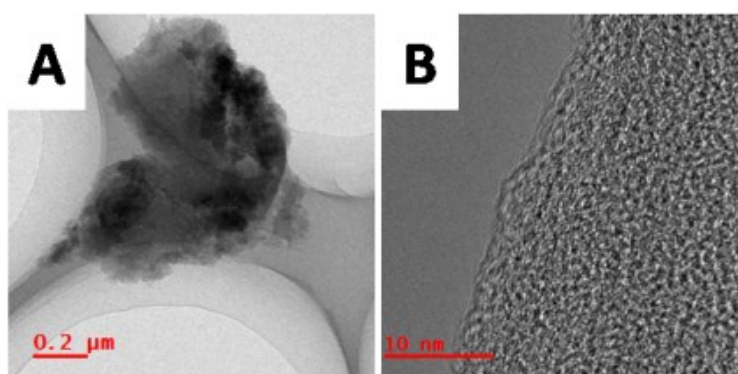


Fig. S2. A) TEM image of C400. B) HRTEM image of C400.

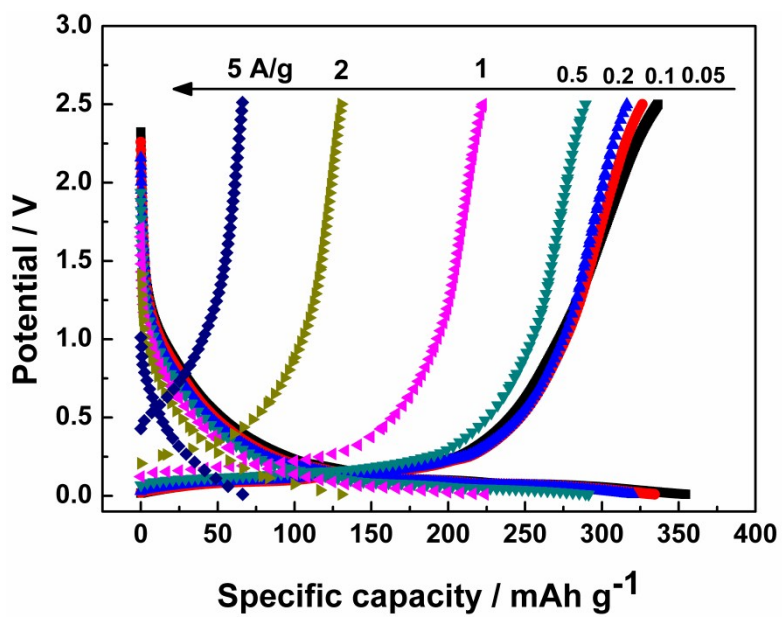


Fig. S3. GCD curves of GC1100 at different current densities.

Table S1 Comparison of the results in our work with other biomass derived carbon in LIBs.

Biomass	Synthetic method	Reversible capacity (mAh g⁻¹)	Initial Coulombic efficiency	Stable plateau (<0.2 V)	References
Coir pith	Activation (KOH, 850 °C)	917 (100 mA g ⁻¹)	44 %	No	29
Olive stones	Activation (Steam)	220 (74.4 mA g ⁻¹)	35 %	No	30
Cherry tones	Activation (ZnCl ₂ , 500 °C)	415 (74.4 mA g ⁻¹)	49 %	No	30
Pinecone hull	Charring (800 °C)	321 (10 mA g ⁻¹)	48.6 %	No	31
Coconut oil	Flame deposition	741 (100 mA g ⁻¹)	50 %	No	32
Egg yolk	Catalysis (KOH+Fe(NO ₃) ₃ , 1000 °C)	770 (500 mA g ⁻¹)	62 %	No	33
Egg white	Mesoporous silica template (650 °C)	1780 (100 mA g ⁻¹)	57 %	No	34
Wheat straw	Graphitization (2600 °C)	407 (0.1 C)	62.9 %	Yes	23
Sisal fibers	Catalysis (Ni(NO ₃) ₂ , 1100 °C)	354 (50 mA g ⁻¹)	53 %	Yes	Our work