

Electronic Supplementary Information

Controlled synthesis of cobalt carbonate/graphene composites with excellent supercapacitive performance and pseudocapacitive characteristics

Mohammad Akbari Garakani^a, Sara Abouali^a, Biao Zhang^a, Zheng-Long Xu^a, Jiaqiang Huang^a, Jian-Qiu Huang^a, Elham Kamali Heidari^a, Jang-Kyo Kim^{a*}

^a Department of Mechanical and Aerospace Engineering, The Hong Kong University of Science and Technology, Clear Water Bay, Kowloon, Hong Kong

*Email: mejkkim@ust.hk

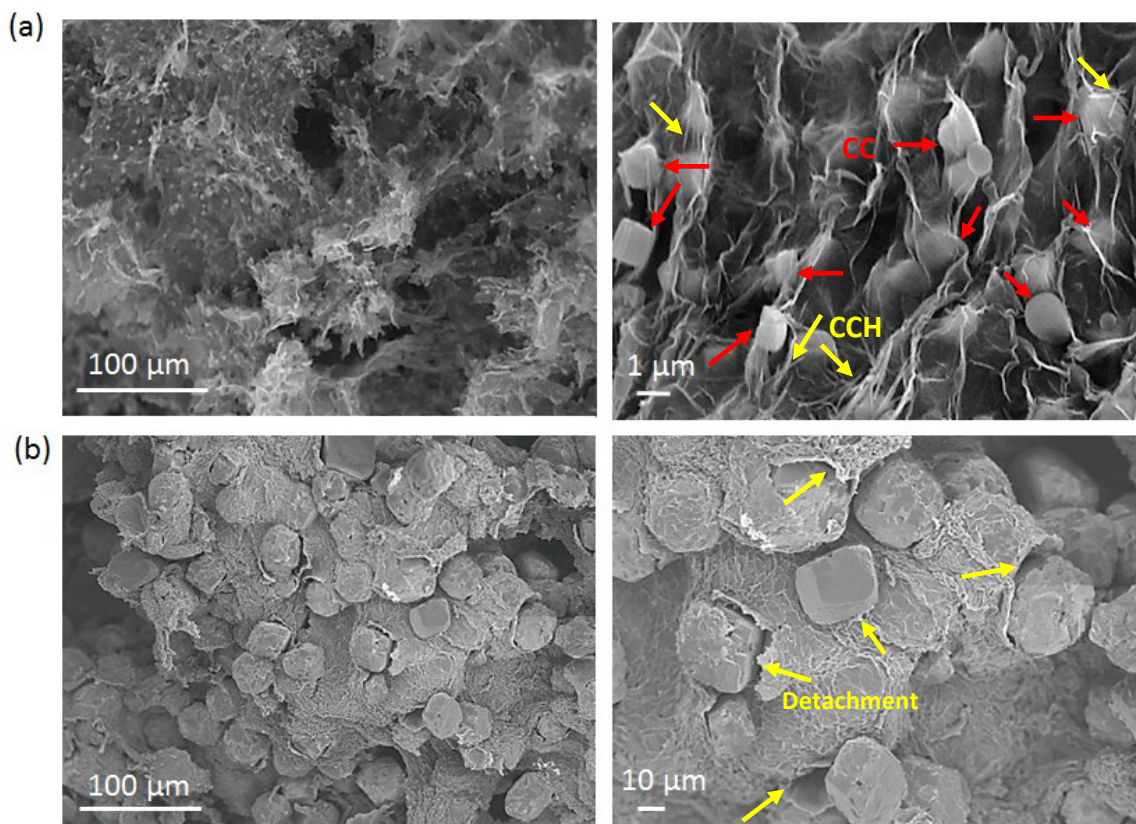


Fig. S1 SEM images of (a) CC/GA-1 and (b) CC/GA-3 composites.

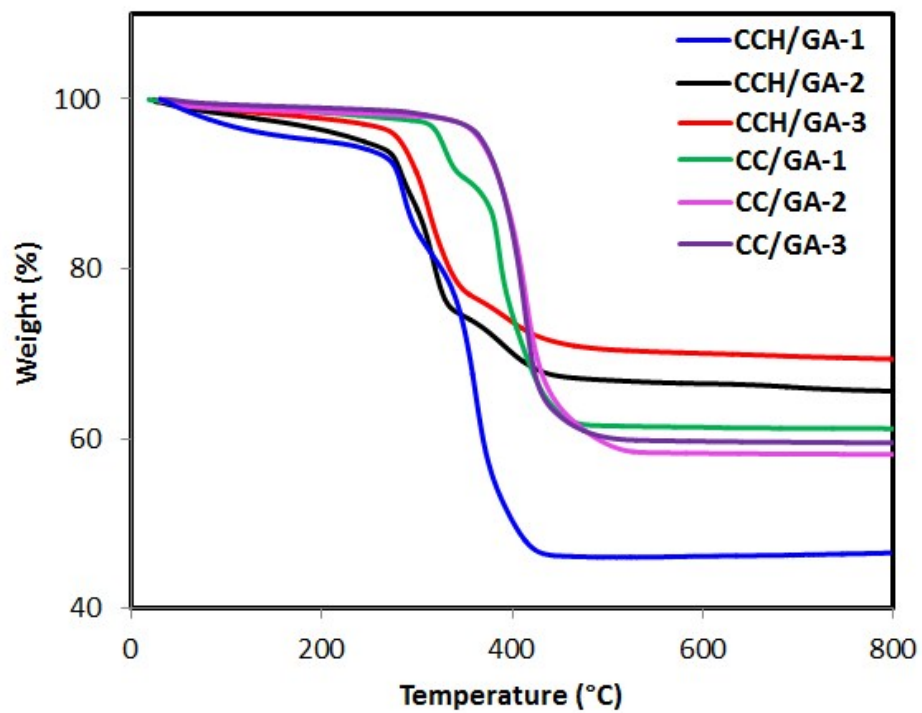


Fig. S2 TGA result of all composites.

Table S1. Impedance parameters of the electrodes calculated from the equivalent circuit.

Electrode	R_s/Ω	R_{ct}/Ω
CCH/GA-0	0.68	0.195
CCH/GA-2	0.51	0.07
CC/GA-1	0.49	0.05

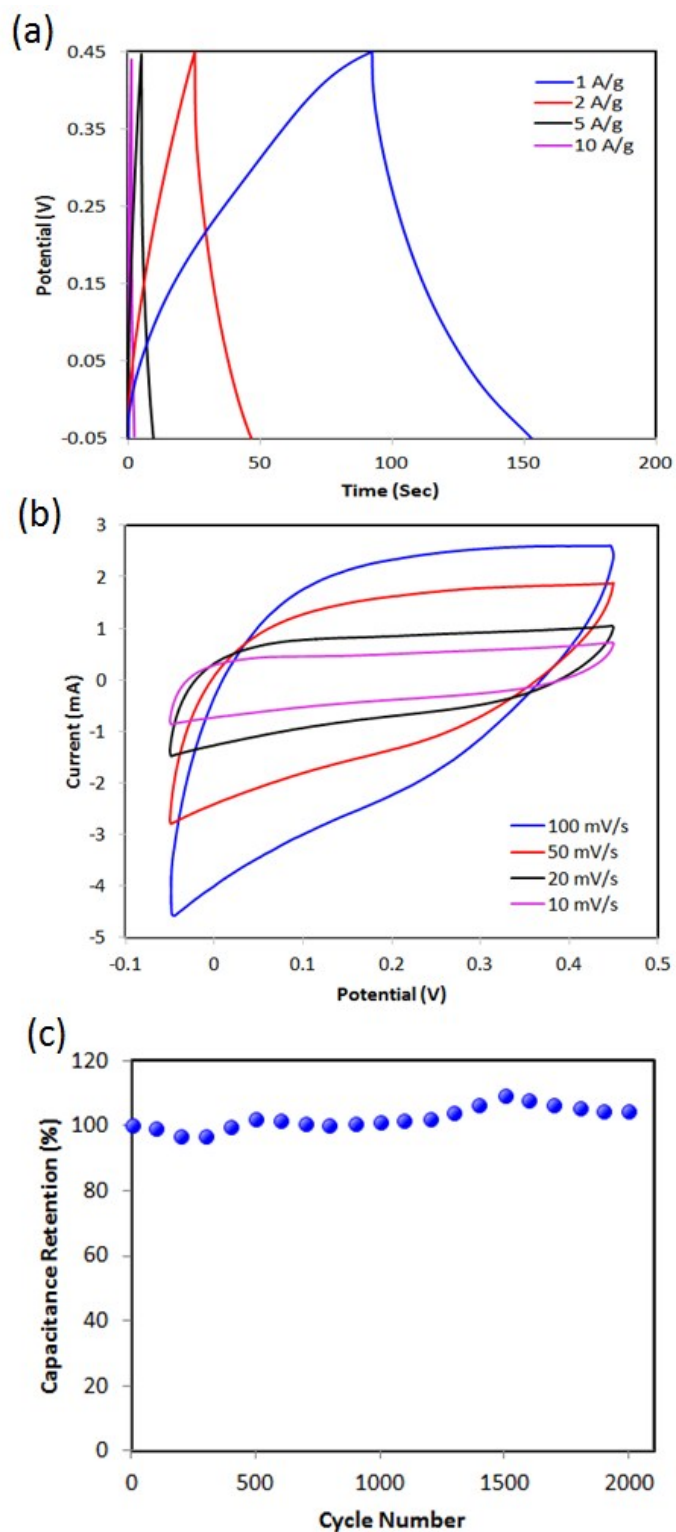


Fig. S3 (a) Typical charge/discharge profiles at different current densities; (b) CV curves at different scan rates; and (c) cyclic stability obtained from the CV test carried out at a scan rate of 100 mV s^{-1} for the optimal composite electrode (CCH/GA-2) in two electrode system.