Journal of Materials Chemistry A

Electronic Supplementary Information

Co_3O_4/Porous Electrospun Carbon Nanofibers as Anodes for High Performance Li-ion Batteries

Sara Abouali,[a] Mohammad Akbari Garakani,[a] Biao Zhang,[a] Hui Luo,[a] Zheng-Long Xu,[a] Jian-Qiu Huang,[a] Jiaqiang Huang[a] and 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

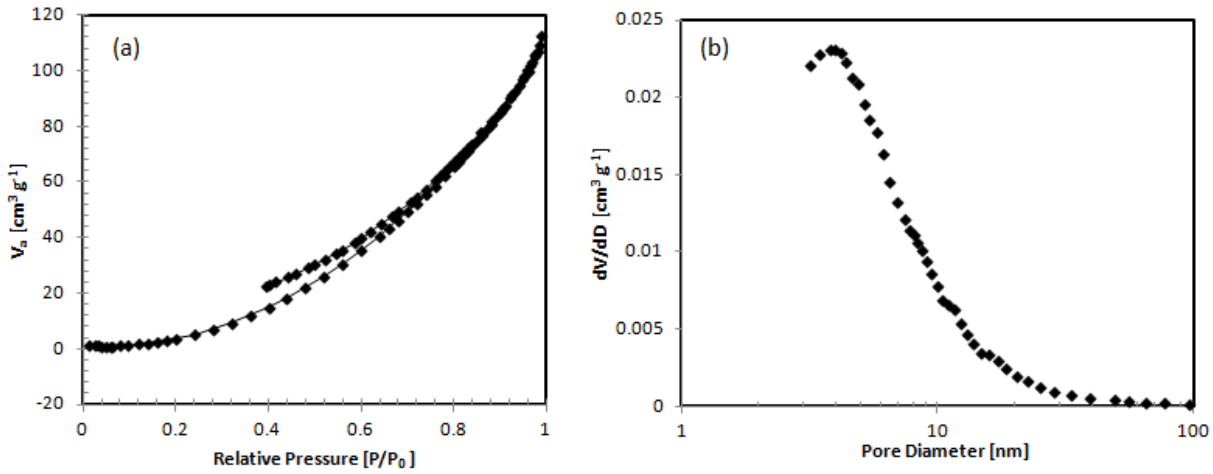

Fig. S1 (a) Nitrogen adsorption/desorption isotherm curves and (b) pore size distribution of PCNF.

Table S1. Pore size distribution of PCNF

Pore Diameter Range [nm]	Pore Volume [$cm^3\ g^{-1}$]	Distribution [%]
Under 6	0.06197	31.40
6-8	0.02665	13.50
8-10	0.01882	9.53
10-12	0.01556	7.88
12-16	0.01550	7.86
16-20	0.01305	6.61
20-80	0.03550	17.98
Over 80	0.01033	5.23

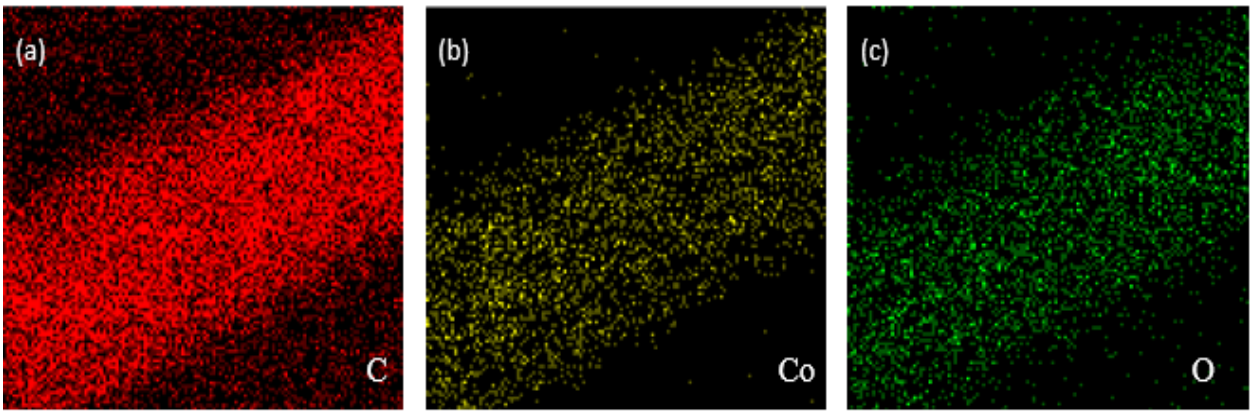

Fig. S2 Elemental maps of (a) carbon; (b) cobalt and (c) oxygen in a single nanofiber containing cobalt acetate after stabilization at 250 °C for 90 min in air.

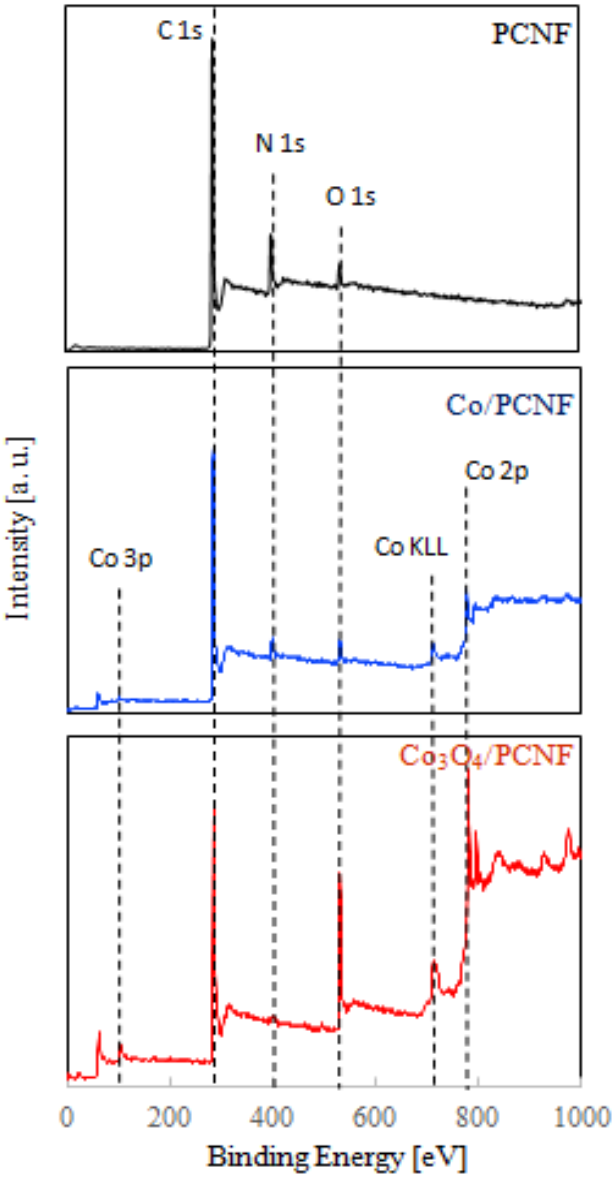

Fig. S3 General XPS spectra of PCNF, Co/PCNF and Co_3O_4/PCNF samples.

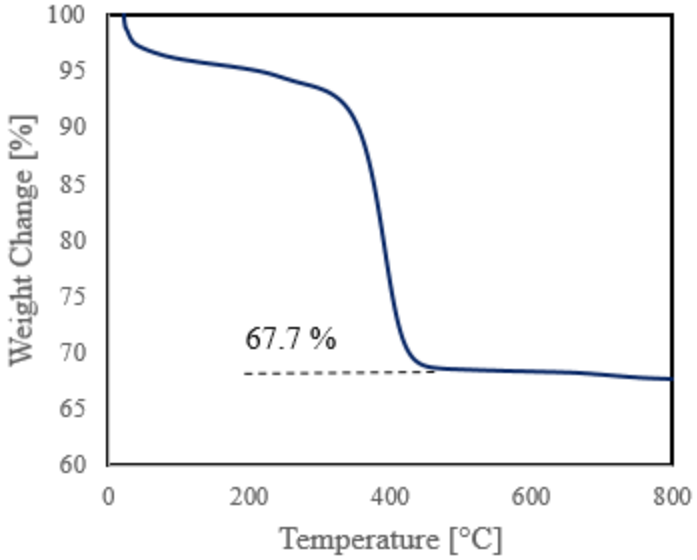

Fig. S4 TGA curve of Co_3O_4/PCNF.

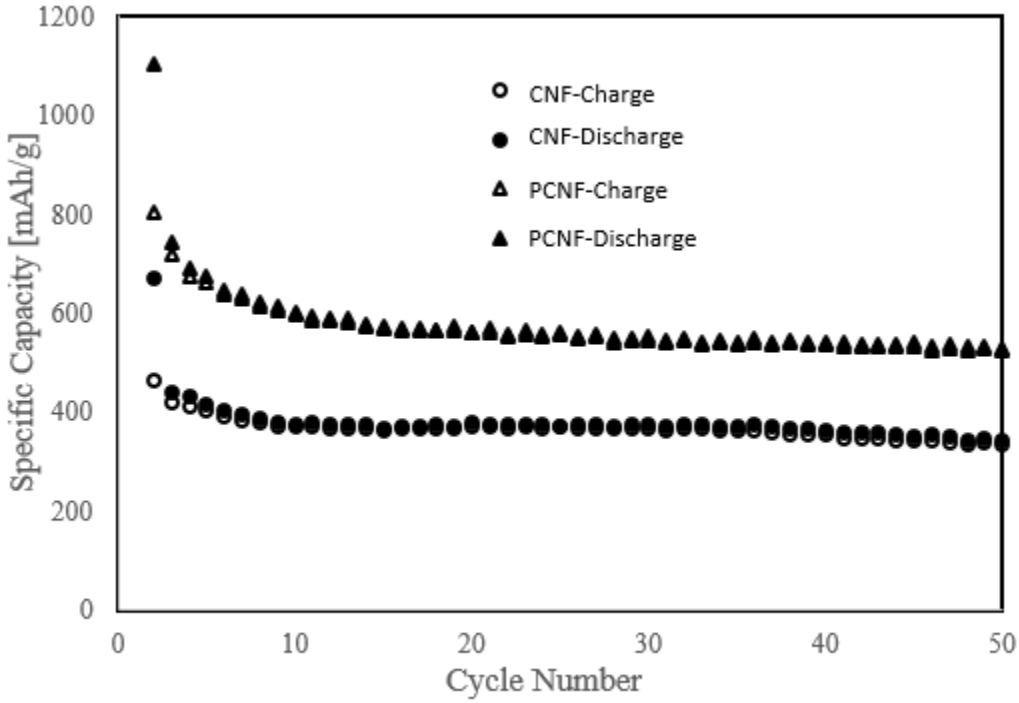

Fig. S5 Cyclic performance of neat CNF and PCNF electrodes at a current density of 0.1 A g^{-1}.