Electronic supplementary information (ESI)

Ni-enhanced Co_3O_4 nanoarrays in-situ grown on Cu substrate as integrated anode materials for high-performance Li-ion batteries

Xiaoyu Liu,[ab] Shimou Chen,[b] Jia Yu,[b] Wenlong Zhang,[a] Yajie Dai*[a] and Suojiang Zhang*[b]

[a] School of Electrical and Electronic Engineering, Harbin University of Science and Technology, Harbin, Heilongjiang,150040，PR China.

[b] Beijing Key Laboratory of Ionic Liquids Clean Process, Key Laboratory of Green Process and Engineering, Institute of Process Engineering (IPE), Chinese Academy of Sciences (CAS), Beijing 100190, PR China.

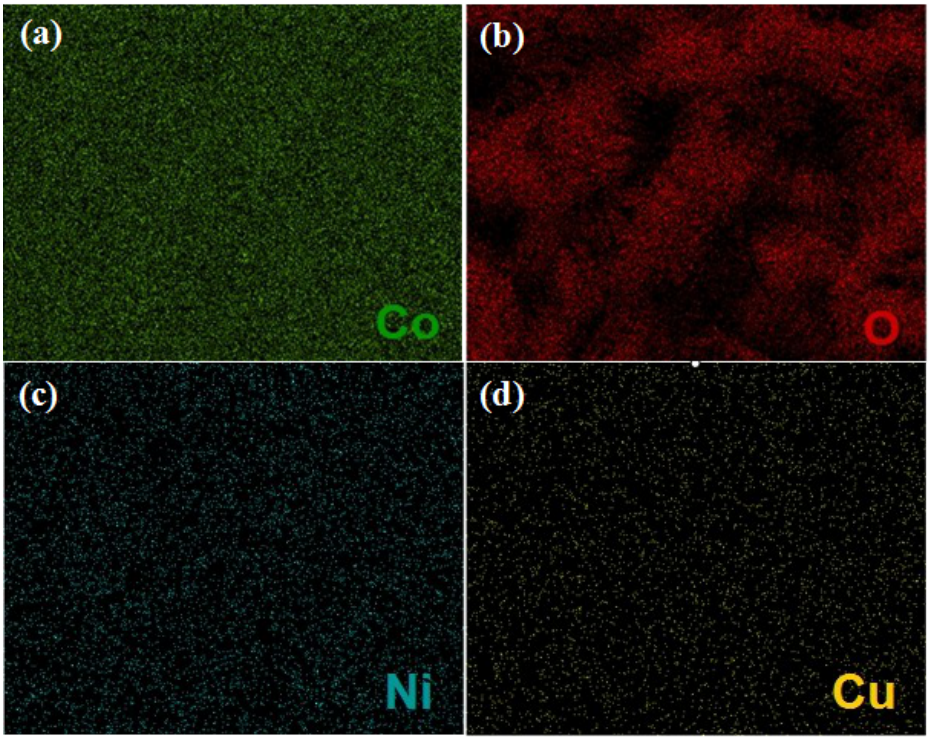

Figure S1 EDS mapping of Co (a), O (b), Ni (c), and Cu (d) from the Co_3O_4-Ni@Cu.

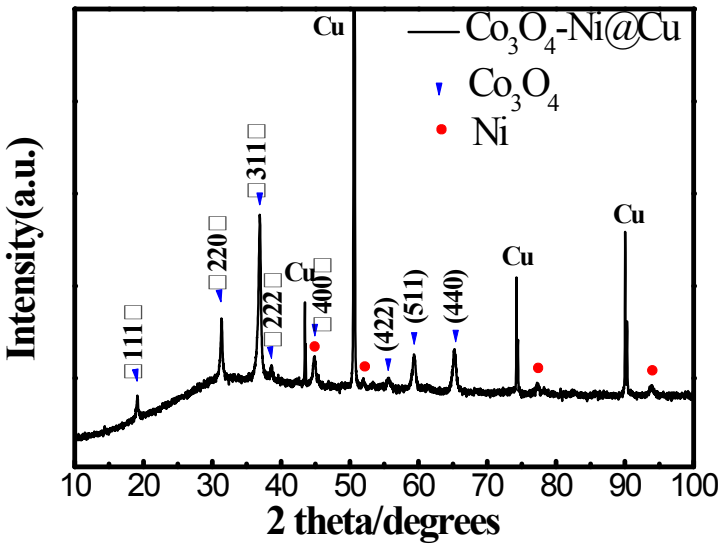

Figure S2 XRD spectrum of Co_3O_4-Ni@Cu nanoarrays.

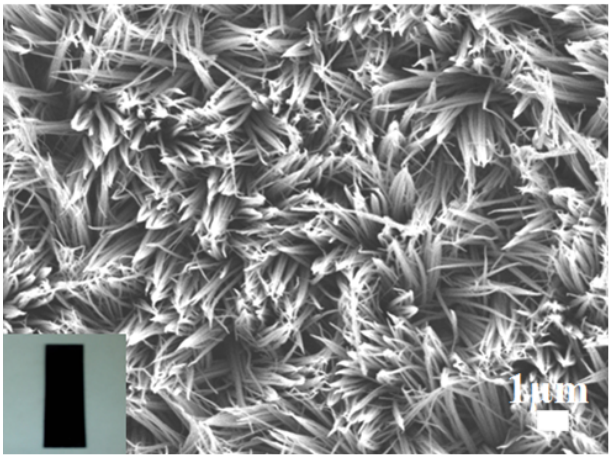

Figure S3 SEM image of Co_3O_4@Cu nanoarrays.

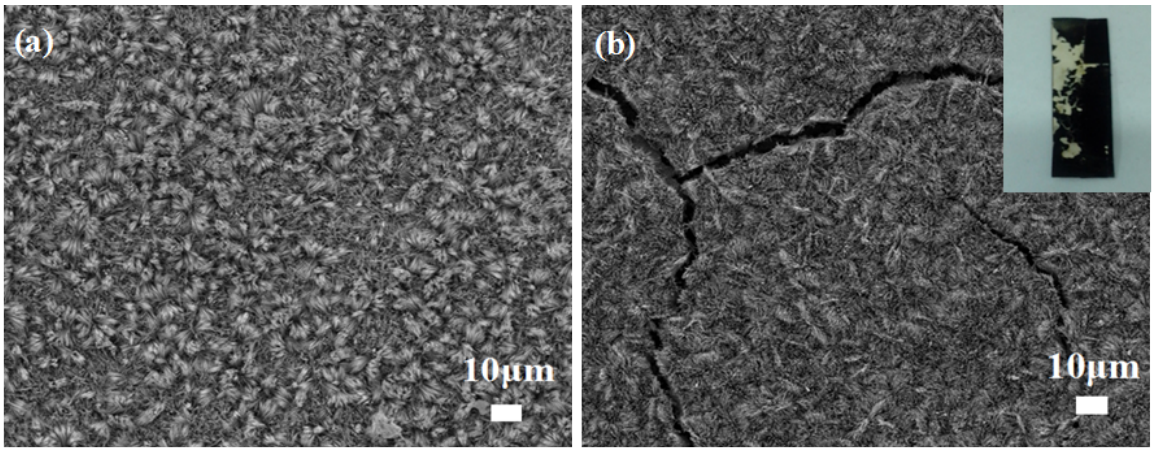

Figure S4 SEM image of Co_3O_4-Ni@Cu nanoarrays with electrodepositing time of (a) 2s and (b) 6000s, respectively. Inset: photographs of the products with an electrodepositing time of 6000s.

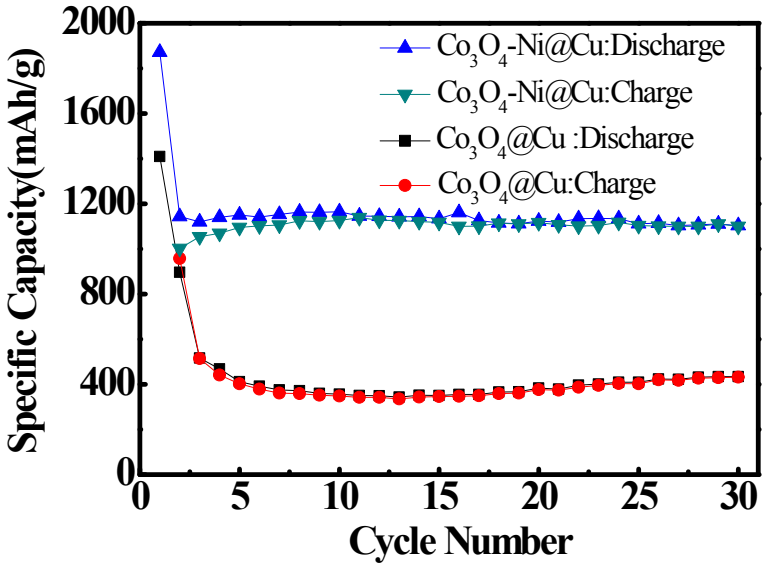

Figure S5 Cycling performance of the Co_3O_4-Ni@Cu nanoarray anodes and Co_3O_4@Cu nanoarray anodes with a current of 0.1 C.

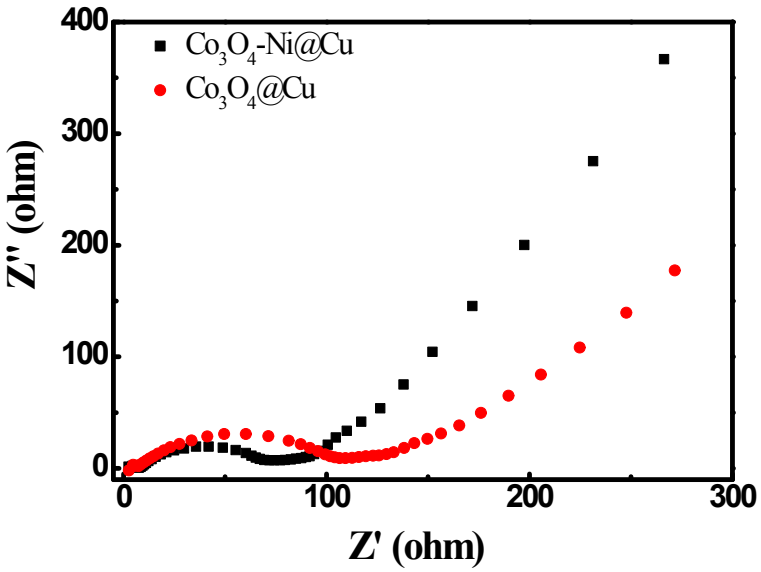

Figure S6 Impedance spectra of Co_3O_4@Cu nanoarray anodes and Co_3O_4-Ni@Cu nanoarray anodes before cycling.