Electronic Supplementary Material (ESI) for Journal of Materials Chemistry A.

ESI:

Nanostructured tin electrodeposited in ionic liquid for use as anode for Li-ion batteries

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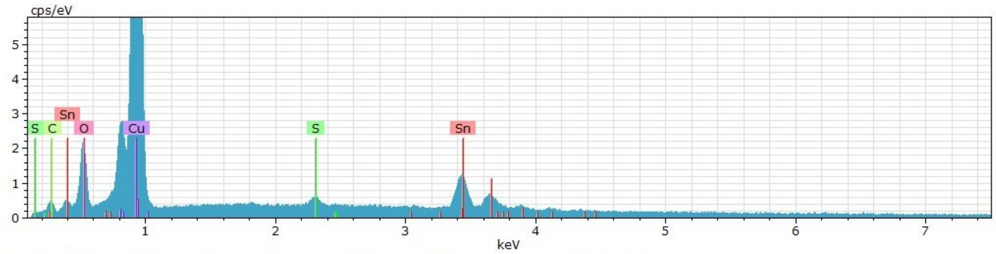

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El AN  Series  unn. C norm. C Atom. C Error (1 Sigma)
               [wt.%]  [wt.%]  [at.%]           [wt.%]
-----------------------------------------------------
Cu 29 K-series  75.09   83.09   66.14             2.45
O   8 K-series   4.92    5.44   17.21             0.79
C   6 K-series   2.65    2.94   12.37             0.63
Sn 50 L-series   7.20    7.97    3.40             0.26
S  16 K-series   0.51    0.56    0.88             0.05
-----------------------------------------------------
        Total:  90.37  100.00  100.00
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Figure S1 EDS data of Cu foil after being immersed in aqueous plating solution (consisted of 0.01 M $SnSO_4$ and 0.25 M H_2SO_4) for 8 h.

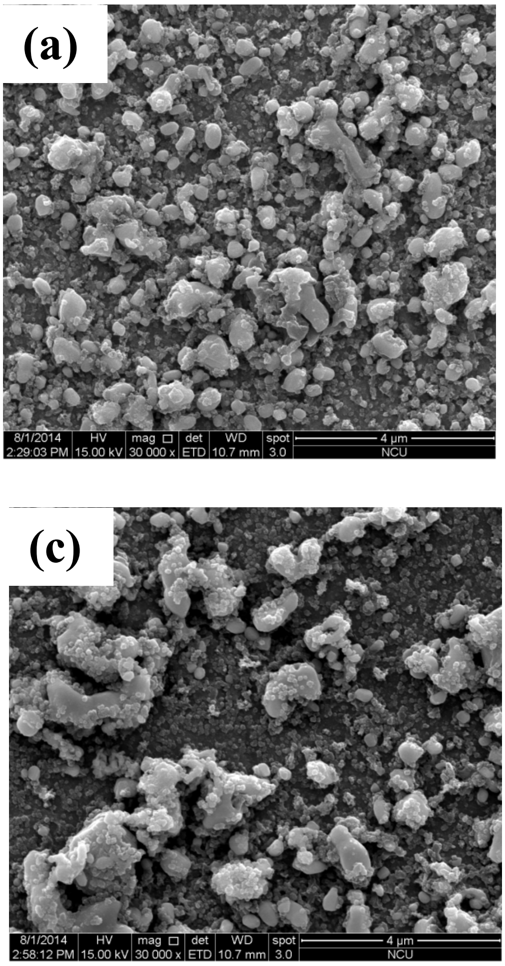

Figure S2 SEM micrographs of Sn electrodes after 50 charge-discharge cycles. (a) is deposited at -1.2 V in IL plating solution, (b) is deposited at -2.4 V in IL plating solution, and (c) is deposited in aqueous solution.

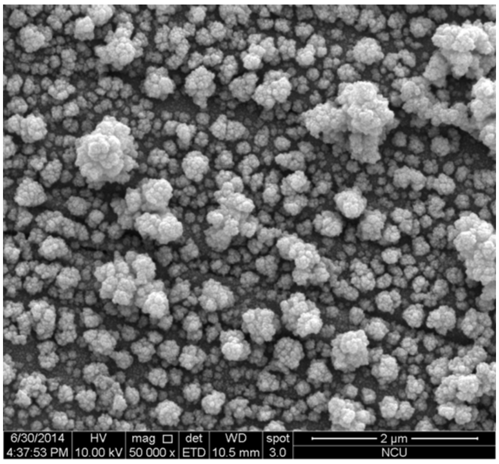

Figure S3 SEM micrograph of a Sn-Cu binary electrode electrodeposited in IL plating solution.