Electronic Supplementary Information

Biomineralized Sn-based multiphasic nanostructures for Li-ion battery electrodes

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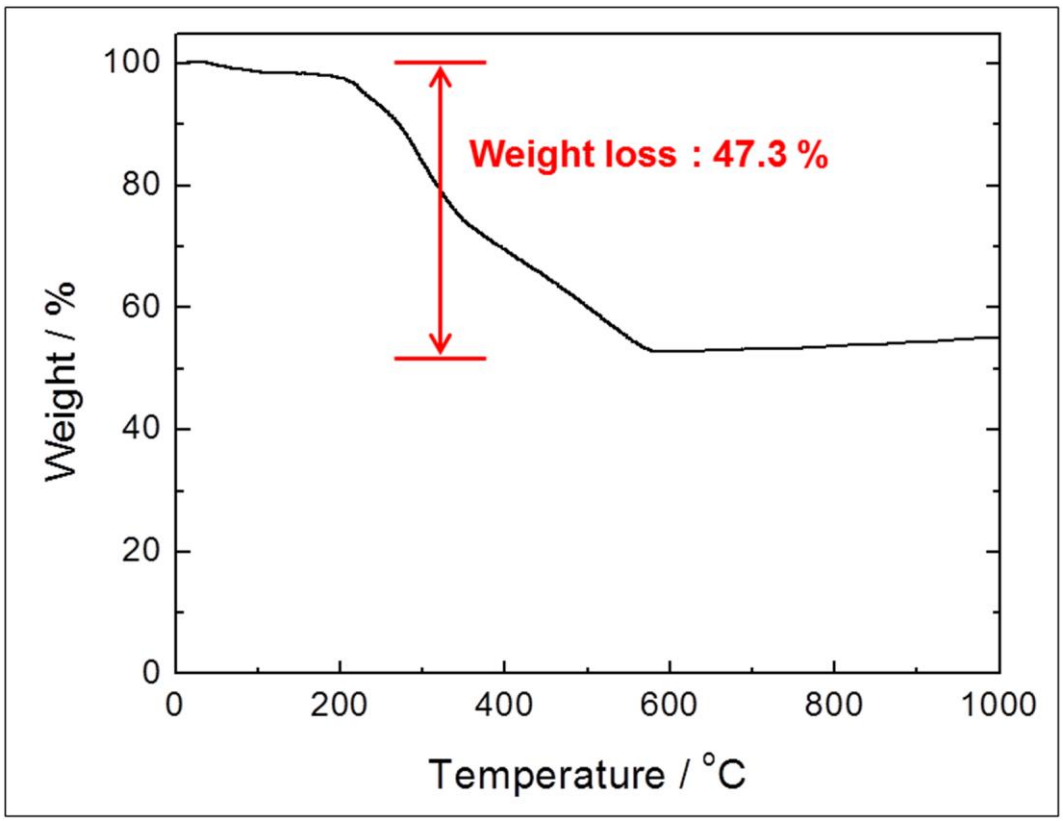

Fig. S1 TGA curve of RT-SnO_2 rods in air.

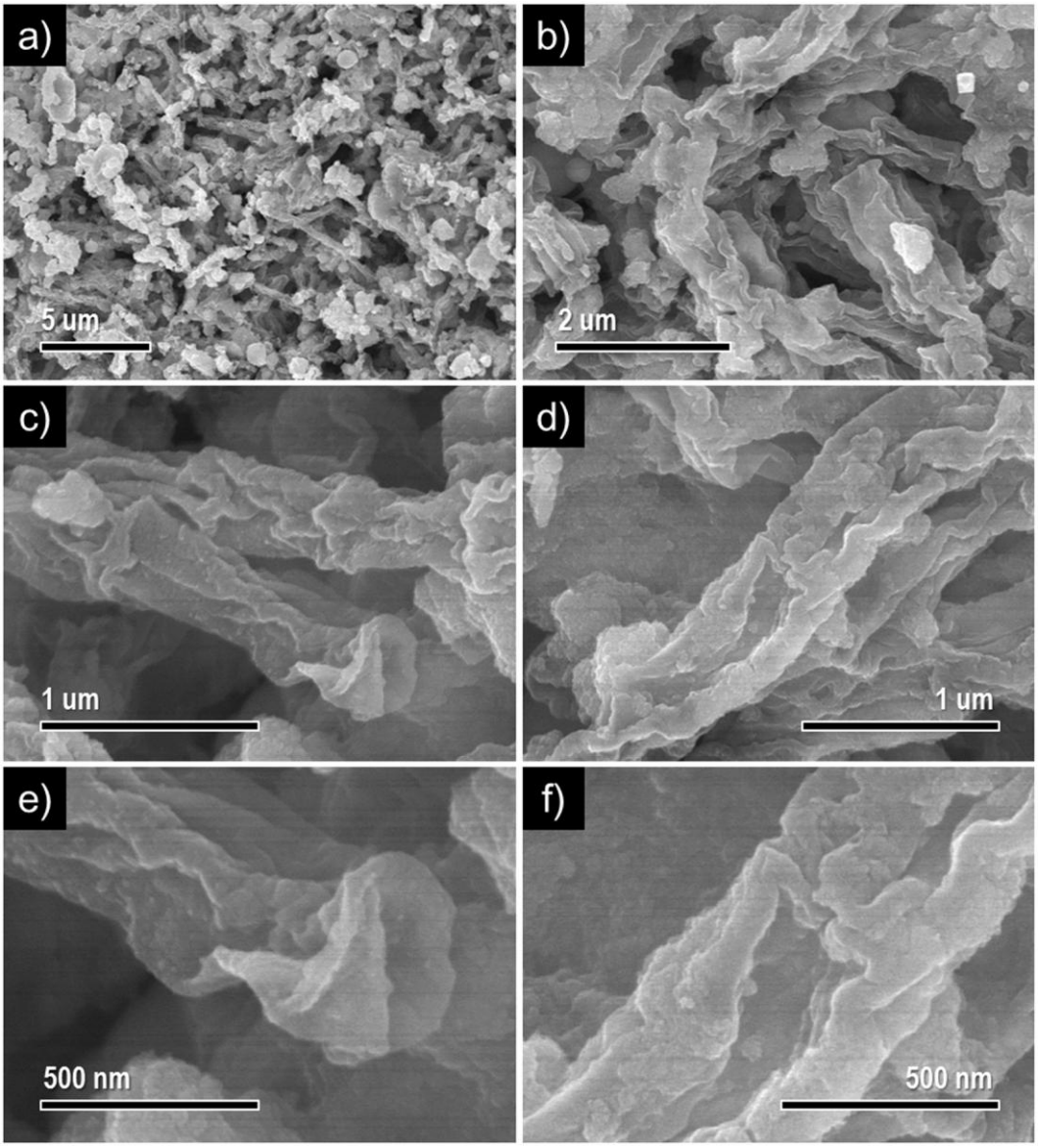

Fig. S2 FESEM images of H400 rods showing the shrunken rod shape and hollow nature.

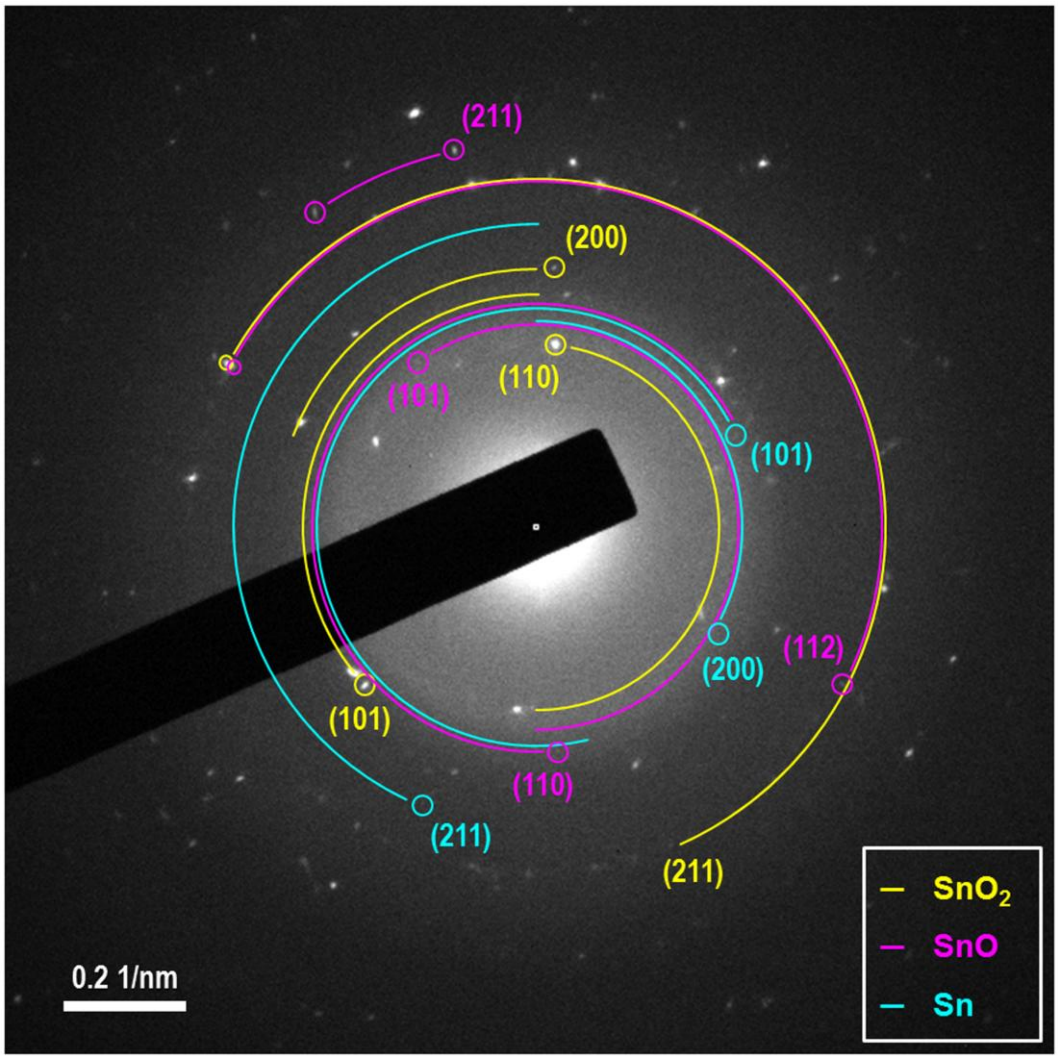

Fig. S3 Enlarged SAED pattern image of Figure 6c proving the crystal structure of H400 rods composed of SnO_2, SnO, and Sn phases.

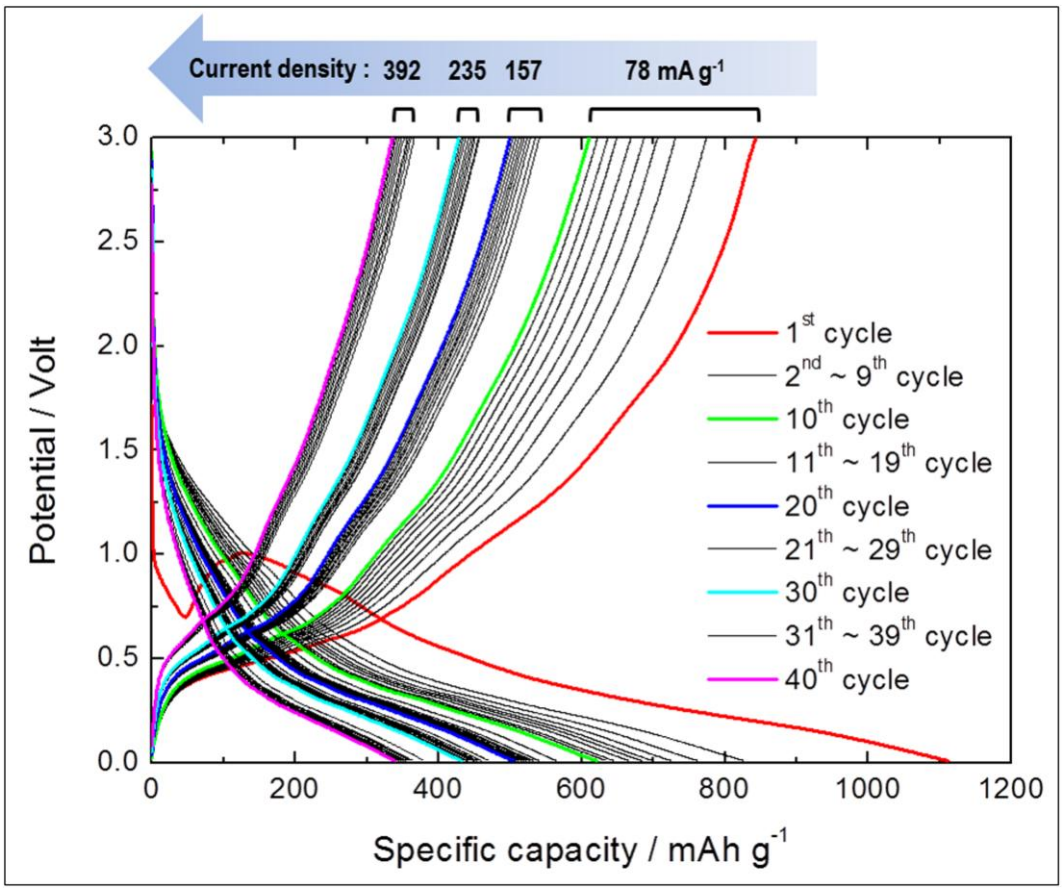

Fig. S4 Plot of galvanostatic charge-discharge curves in the 0.01-3.0 V window (vs. Li/Li^+) in the first ten cycles at a current density of 78 mA g^{-1} and after every 10 cycles at different current densities of 157, 235, and 392 mA g^{-1}, respectively.

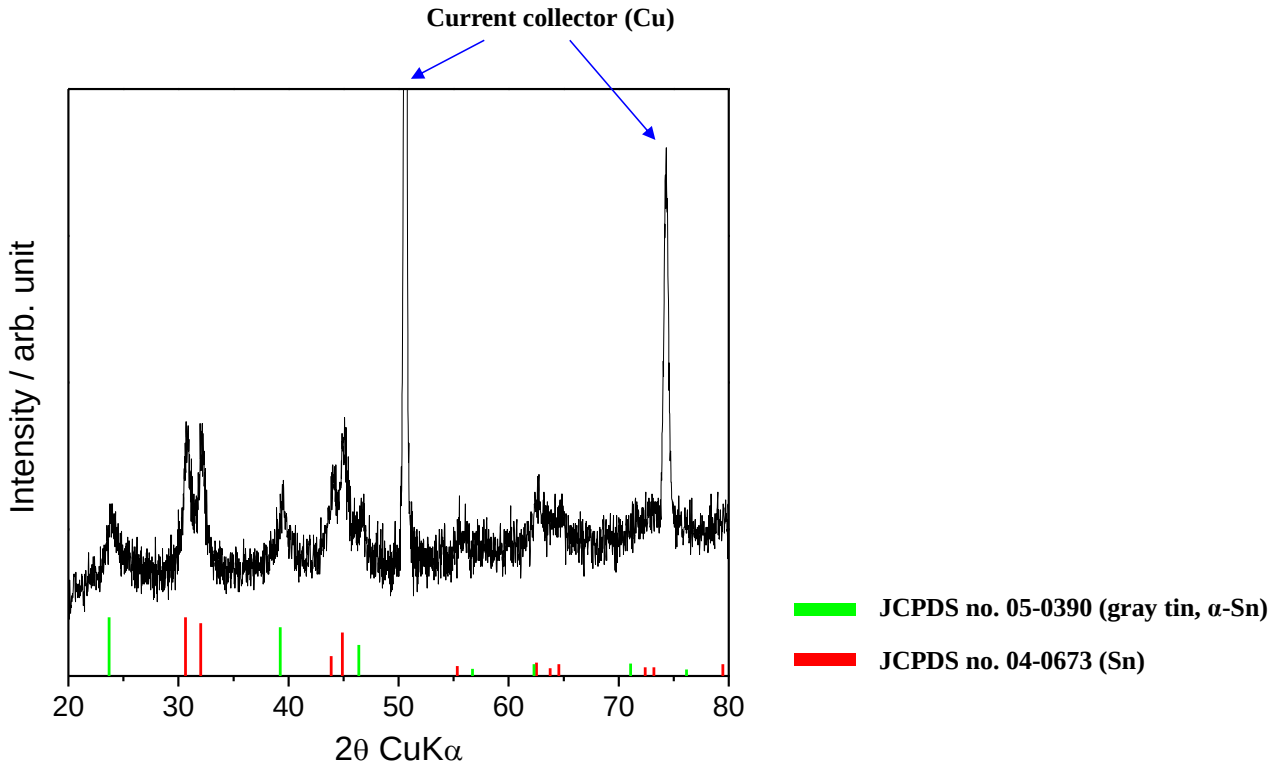

Fig. S5 *Ex-situ* XRD pattern of the H400 rods deposited onto Cu foil current collector, which are in the charged state after cycling.

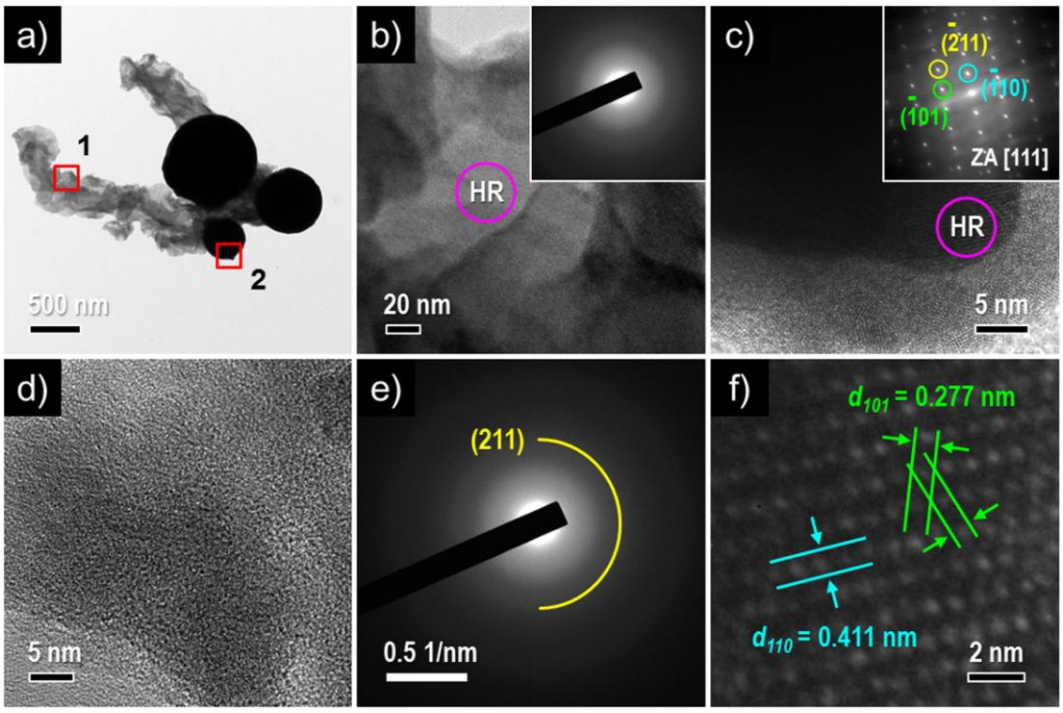

Fig. S6 (a) TEM image of H500 rod. (b, c) High-magnification images taken from the open-square region 1 and 2 of (a), respectively. All upper right insets in (b) and (c) show SAED patterns taken along the [111] zone axis. (d, e) HRTEM image in open-circle zone (HR) of (b) and enlarged SAED pattern of the inset in (b). (f) HRTEM image in open-circle zone (HR) of (c).