Supporting Information

Directional Synthesis of Tin Oxide@Graphene Nanocomposites via a One-Step Up-Scalable Wet-mechanochemical Route for Lithium ion Batteries

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Fig. S1 SEM images of SG-WB (a) and GO (b).
Fig S2. SEM images of SnO$_2$-WB (a), (b), SG-W (c), the back-scattered electron analysis image of SG-W (d), SG-DB (e), and SG-WB (f).
**Fig S3.** the 1\textsuperscript{st}, 2\textsuperscript{nd} and 3\textsuperscript{rd} cycle charge-discharge profiles at a current density of 100 mA g\textsuperscript{-1} in the voltage range 0.01~2.5 V for SnO\textsubscript{2}-WB (a), and commercial SnO\textsubscript{2} powder (b), respectively.

**Fig S4.** Nyquist plots of SG-WB electrode (a), SG-DB electrode (b), and SG-W electrode (c) after 50 cycles.