Supporting information

Rational fabrication of hybrid structure of SnO\textsubscript{x} sandwiched between TiO\textsubscript{2} and carbon based on the complementary merits of SnO\textsubscript{x}, TiO\textsubscript{2} and carbon, and its improved lithium storage properties

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**Fig. S1** The TEM mapping images of different elements of TiO$_2$@SnO$_x$@C. It can be seen that the Ti mainly distributes in the middle part of TiO$_2$@SnO$_x$@C. And the C can be seen on the outermost edge of TiO$_2$@SnO$_x$@C. It is suggested that the SnO$_x$ is sandwiched between TiO$_2$ and C coating layer. No obvious contrast between middle and edge can be observed which can be attributed to the thin carbon coating layer.