Supplementary Information

Tailored Li$_4$Ti$_5$O$_{12}$ Nanofibers with Outstanding Kinetics for Lithium Rechargeable Batteries

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**Fig. S2.** SEM image of electrospun Li$_4$Ti$_5$O$_{12}$ nanofibers after calcination at (a) 700 °C and (b) 800°C

**Fig. S3.** The electrochemical performance of Li$_4$Ti$_5$O$_{12}$ nanofibers and Li$_4$Ti$_5$O$_{12}$ nanoparticles; (a) the initial galvanostate charge/discharge curves at 0.1C. (b) Cycle performance at 0.1C
**Fig. S4.** SEM image of as-prepared Li$_4$Ti$_5$O$_{12}$ nanoparticles by solid-state reaction.
**Fig. S5.** Nyquist plots of electrospun Li$_4$Ti$_5$O$_{12}$ nanofibers and Li$_4$Ti$_5$O$_{12}$ nanoparticles.
**Fig. S6.** SEM images of (a) as-prepared Li$_4$Ti$_5$O$_{12}$ nanofibers electrode and (b) Li$_4$Ti$_5$O$_{12}$ nanofibers electrode after 50 cycles.
Table S1. BET surface area and pore concentration of Li$_4$Ti$_5$O$_{12}$ nanoparticles and nanofibers.