

Supporting information:

Solid polymer electrolytes with flexible framework of SiO₂ nano-fibers
for highly safe solid lithium batteries

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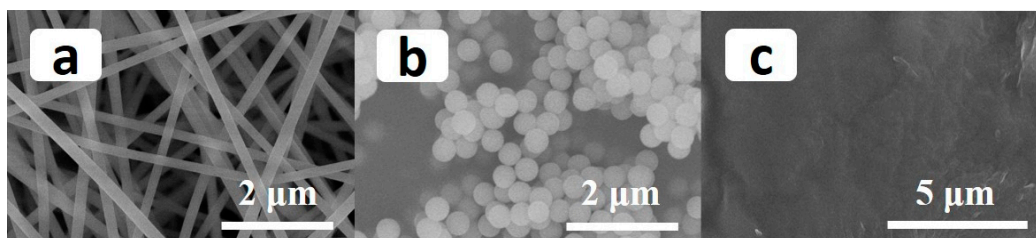


Fig. S1. SEM images of (a) the well-organized framework of 3D SiO₂ NFs, (b) the SiO₂ particles. (c) Top view image of PLS

with a smooth surface.

The top-view SEMs of 3D SiO₂ NFs, SiO₂ particles and PLS are shown in Fig. S1. The frameworks of 3D SiO₂ NFs consist of nano-fibers in diameter of approximately 200 nm. In contrast, SiO₂ particles in diameter of approximately 250 nm are prepared, of which SEM images are shown in Fig. S1b.

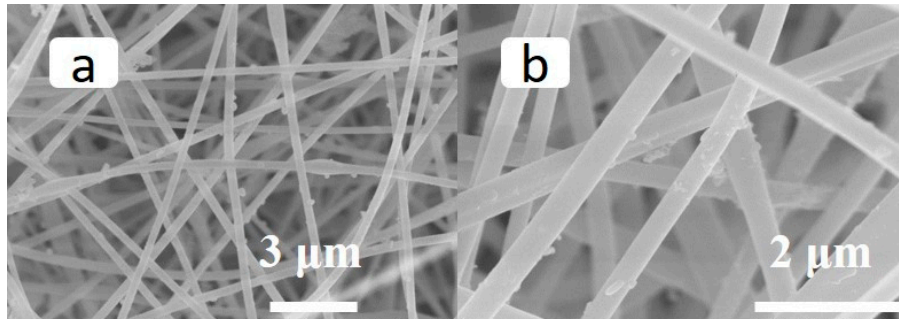


Fig. S2. SEMs of PLS/3D SiO₂ NFs after heated with alcohol burner.

After being heated with alcohol burner, the melted PEO is absent while the structure of 3D SiO₂ NFs maintains. This feature is beneficial to avoiding short circuit at elevated temperatures.