

Supporting Information

Flexible and High-temperature Insulation High Entropy Ceramic-based Fiber Membrane for Thermal Runaway Protection of Lithium-ion Batteries

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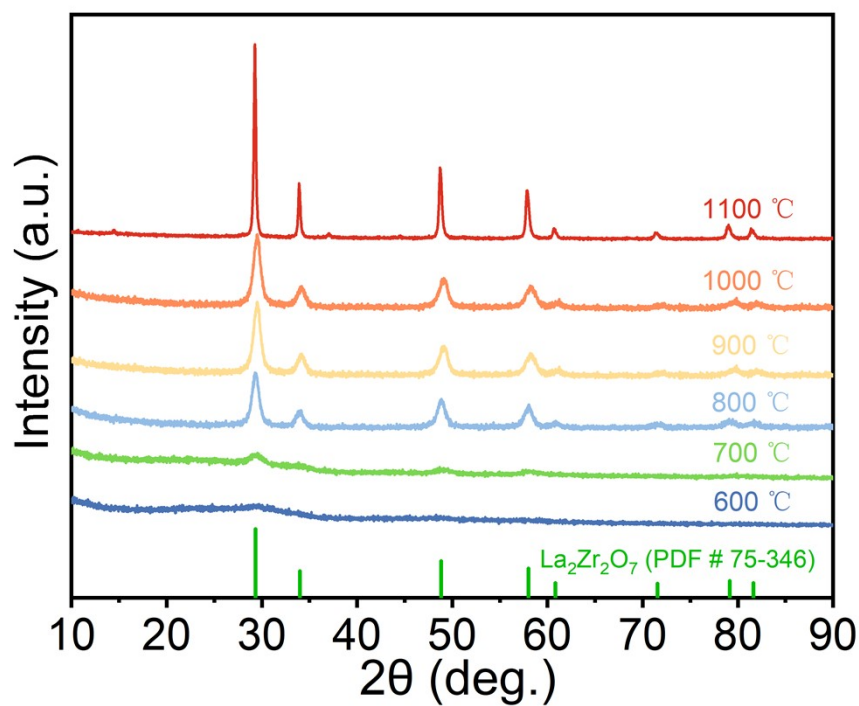


Fig. S1. XRD patterns of LSGESZ-SiO₂ fiber

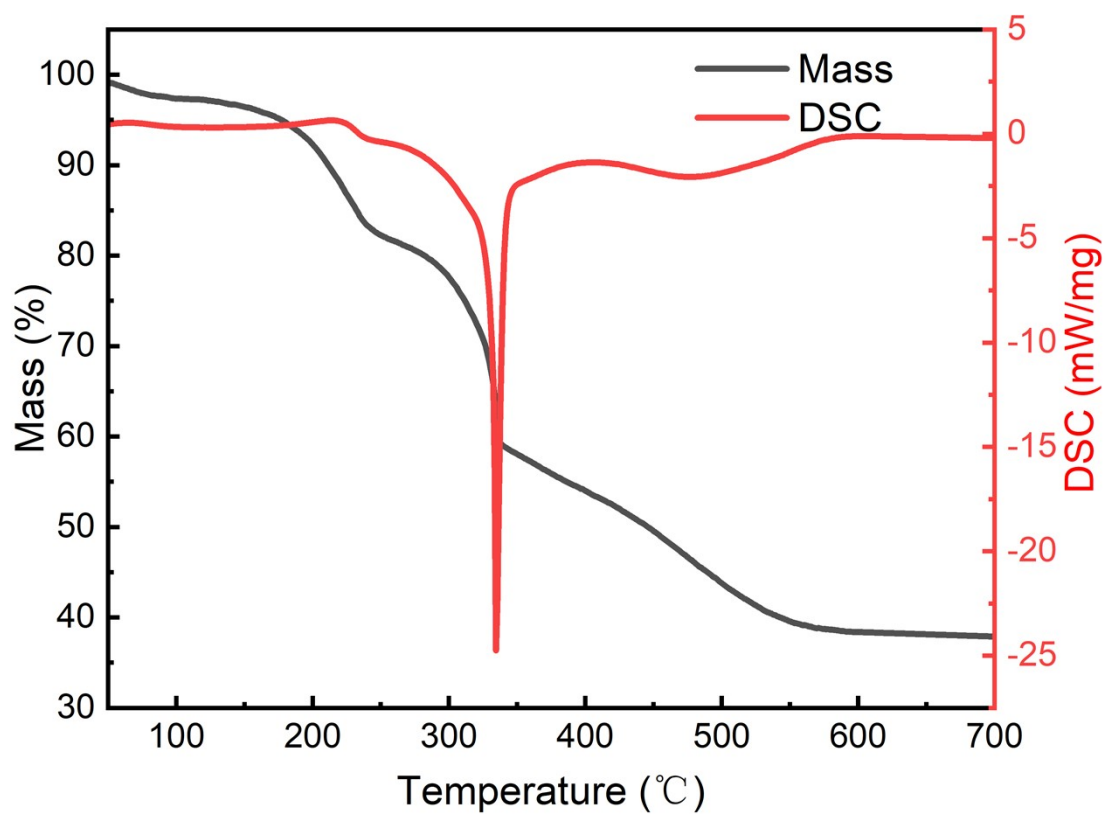


Fig. S2. Thermogravimetric experiment of LSGESZ-SiO₂ fiber

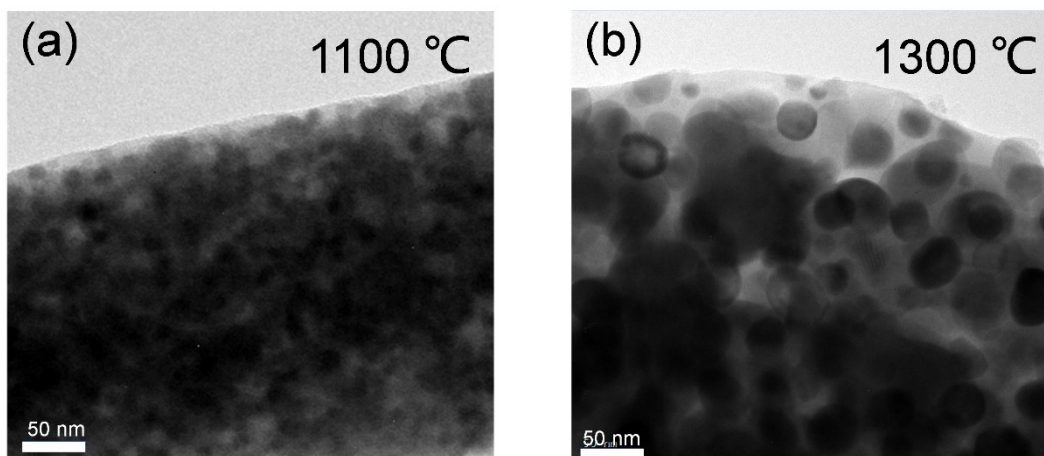


Fig. S3 TEM image of fiber at (a) 1100 °C and (b) 1300 °C sintering temperature

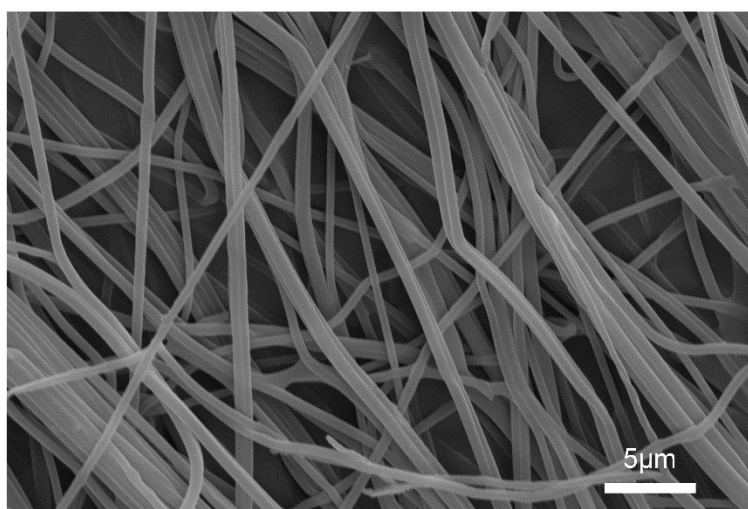


Fig. S4. SEM of LSGESZ-SiO₂ membrane after flame spray gun burning

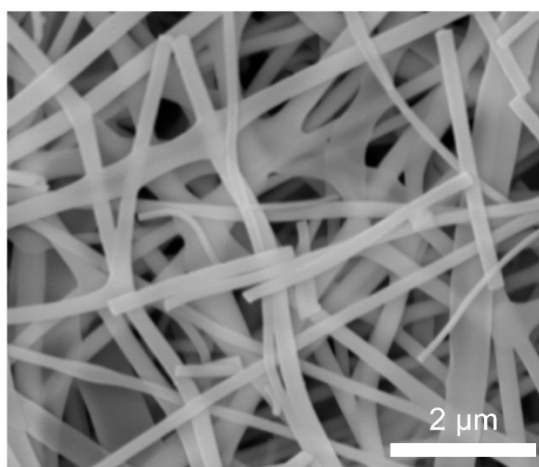


Fig. S5. SEM of LSGESZ-SiO₂ membrane after insulating at 1400 °C for 12 h

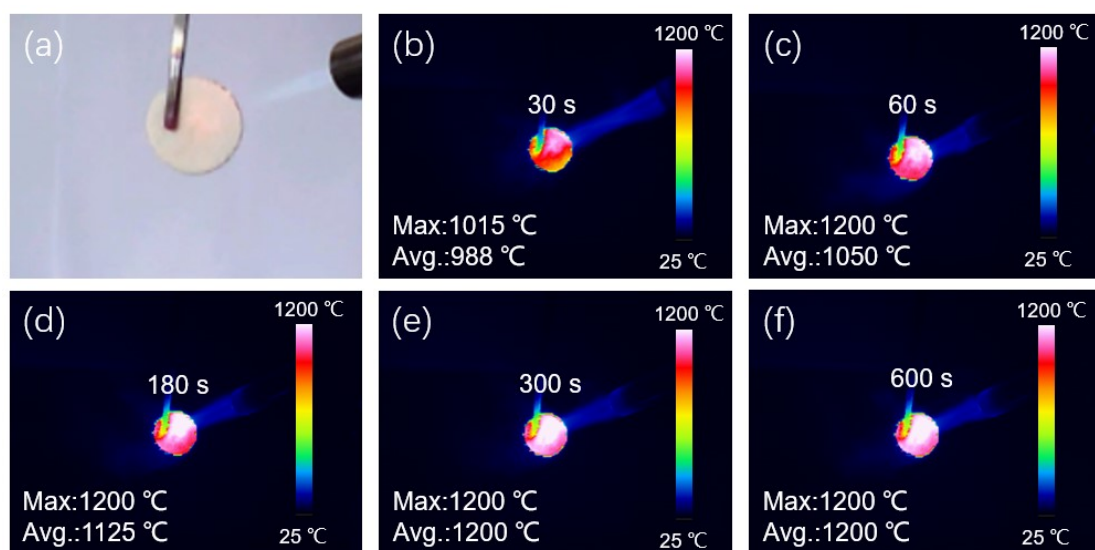


Fig. S6. (a) Schematic representation of flame torch-induced ablation on hot side of the ceramic membranes, Infrared thermal imaging display in different time of (b) 60 s, (c) 120 s, (d) 180 s, (e) 300 s and (f) 600 s.



Fig. S7. Photograph of a 500 g weight placed on the LCGESZ-SiO₂ membrane