Dendritic sulfonated polyethersulfone nanofiber membrane @$LaCoO_3$ nanowires based composite solid electrolyte with facilitated ion transport channels for high-performance all-solid-state lithium metal batteries

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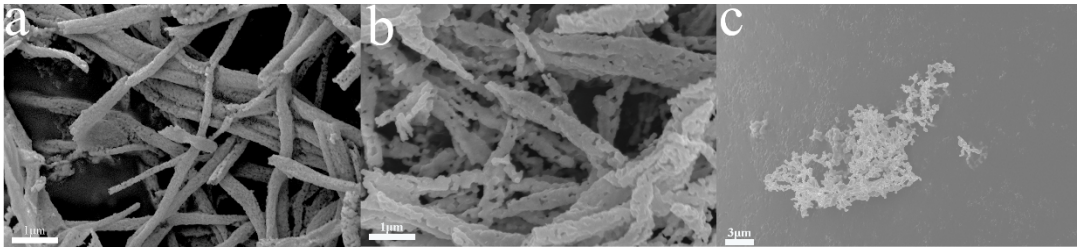

Fig.S1 SEM images of $LaCoO_3$ nanowires at **(a)**700°C, **(b)**800°C and **(c)**1000°C.

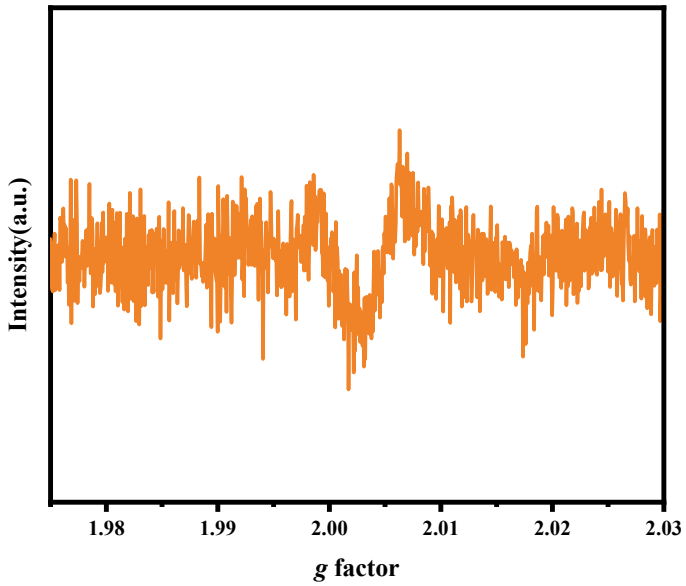

Fig.S2 EPR spectra for $LaCoO_3$ nanowires.

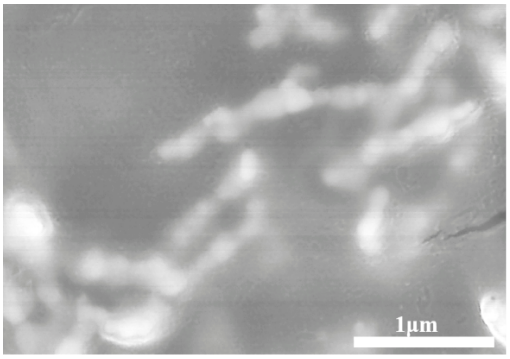

Fig.S3 The surface view of the composite solid electrolyte.

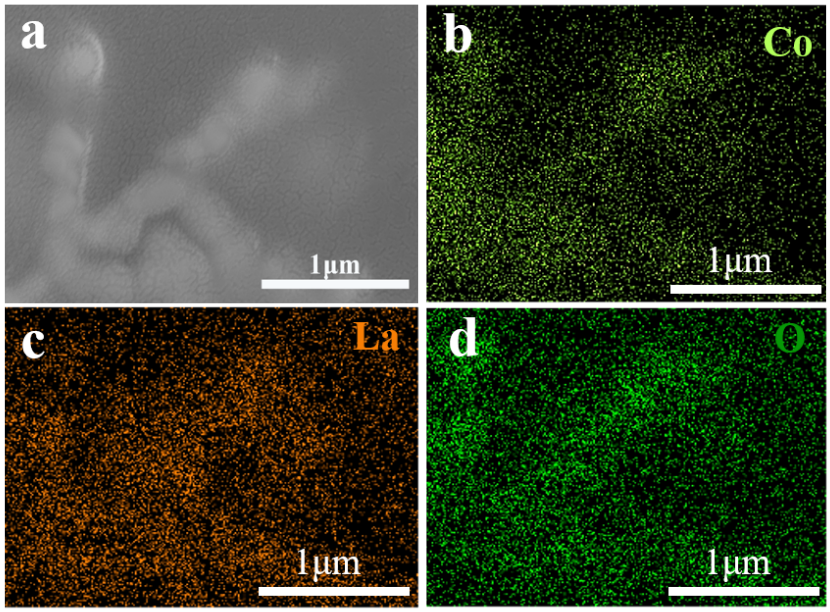

Fig.S4 The SEM **(a)** and the EDS mapping of the**(b)**Co, **(c)**La, **(d)**O of $LaCoO_3$ nanowires in T-SPES-PEO-3$LaCoO_3$ electrolyte.

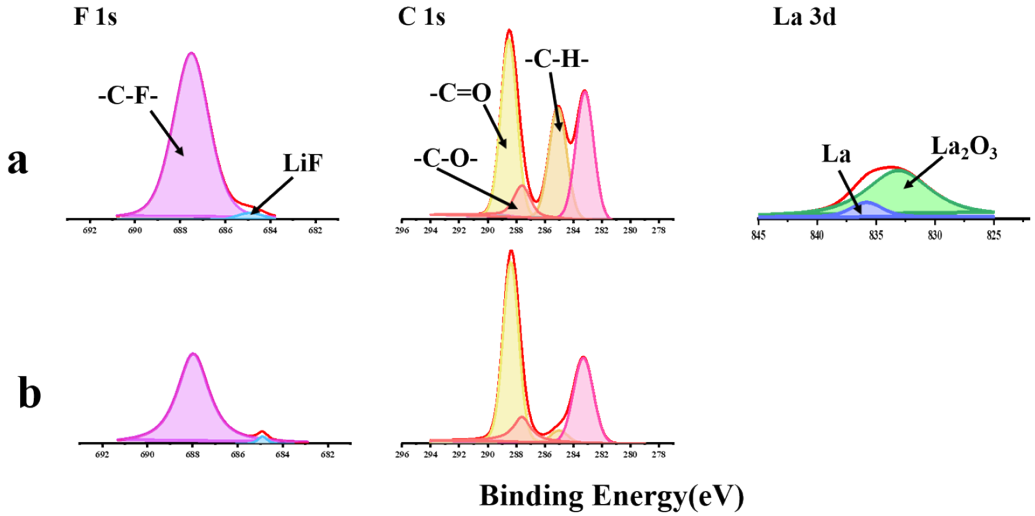

Fig.S5 The XPS of lithium anode of (a) Li/T-SPES-PEO-3$LaCoO_3$/Li battery and (b) Li/PEO/Li battery after cycling at 0.2mAh cm^{-2}.