**Supporting Information** 

## Mechanically-compliant and lithium dendrite growth-suppressing

## composite polymer electrolytes for flexible lithium-ion batteries

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Figure S1. Mechanical bending after 1<sup>st</sup> cycle: (a) CPE; (b) GPE.

**Figure S2.** Linear sweep voltammograms of CPE and GPE on a working electrode of stainless-steel and a counter and reference electrode of lithium metal.

Figure S3. FE-SEM photographs (surface) of: (a) CPE; (b) GPE after the 16<sup>th</sup> cycle.

Figure S4. Variation in AC impedance spectra  $(1^{st} \rightarrow 50^{th} \text{ cycle})$  of cells assembled with: (a) CPE; (b) GPE.



(a)



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(a)



(b)

**Figure S3.** FE-SEM photographs (surface) of: (a) CPE; (b) GPE after the 16<sup>th</sup> cycle.



Figure S4. Variation in AC impedance spectra  $(1^{st} \rightarrow 50^{th} \text{ cycle})$  of cells assembled with: (a) CPE; (b) GPE.