Supplementary Information

Fibrous All-in-One Monolith Electrodes with a Biological Gluing Layer and Membrane Shell for Weavable Lithium-Ion Batteries

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- Supporting Figures: Figs. S1 to S8
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Other Supplementary Materials for this manuscript include the following:
Movie S1 to S4.
Supporting Figures

Figure S1. XRD results of (a) LFP/C-rGO and (b) LTO/rGO. TGA curves of (c) LFP/C-rGO and (d) LTO/rGO.
Figure S2. Coating quality of active materials on carbon fiber with active materials. (a) LFP/C-rGO and (b) commercial LFP.

Figure S3. Morphology of active materials on carbon fiber coated by (a) dip-coating and (b) die-coating method. (c) Thickness of active layer by varying tube-diameter in die-coating process.
**Figure S4.** Morphology of porous PVDF membrane deposited on the active layer of the fiber with different coating velocity.

**Figure S5.** Cross-section SEM images showing (a) structure of all-in-one electrode thread and (b) outer porous membrane layer.
Figure S6. Charge-discharge curves of fiber full battery with a battery yarn twisted with a cathode and anode threads. The length of the full fiber battery is 4 cm.

Figure S7. Bending radius for the repeated bending test.
Figure S8. Knitting needles and a weaving loom used in this study.
Captions for Movies S1 to S4

**Movie S1.** Twist weaving of electrode threads

**Movie S2.** Movie of bending test at a bending diameter of 12.66 mm for 1000 cycles.

**Movie S3.** Knitting of the fiber battery connected to regular knitting wools.

**Movie S4.** Weaving process of the fiber battery connected to regular knitting wools using a small household loom.