Supplementary information

Flexible and Lightweight Lithium-ion Batteries based on Cellulose Nanofibrils and Carbon Fibers

Huiran Lu[1], Johan Hagberg[1], Göran Lindbergh[1], and Ann Cornell[1,2,*]

[1] Applied Electrochemistry, Department of Chemical Engineering, KTH Royal Institute of Technology, SE-100 44 Stockholm, Sweden.
[2] Wallenberg Wood Science Center, KTH Royal Institute of Technology, SE-100 44 Stockholm, Sweden.
* Correspondence: amco@kth.se; Tel.: +46-879-08-172

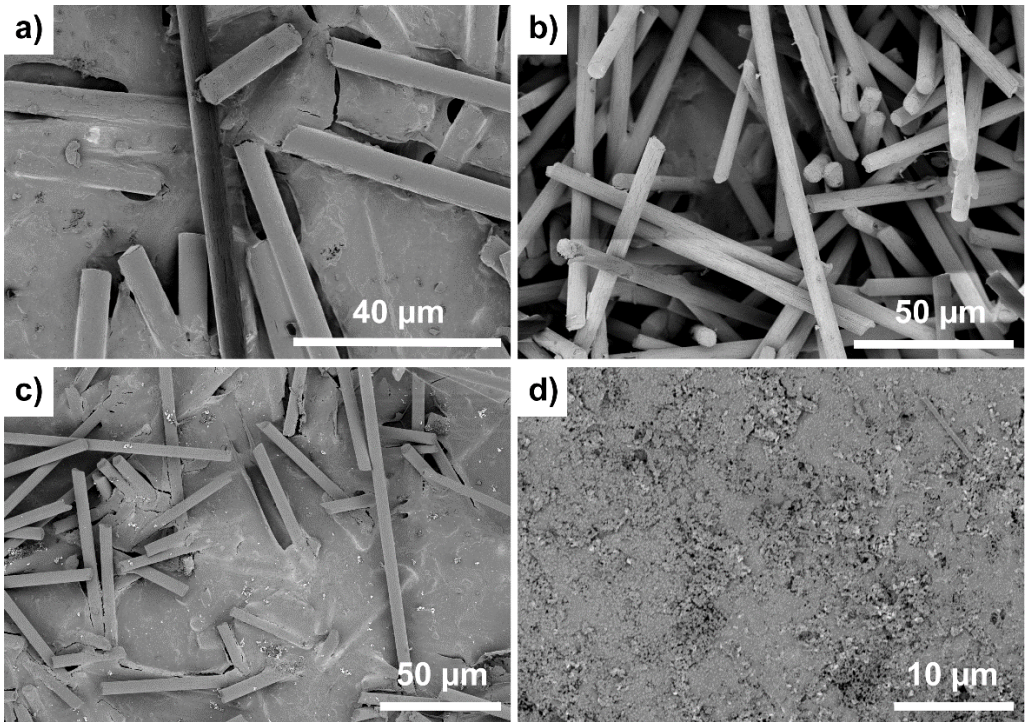

Figure S1. SEM images of the flexible electrodes after 4000 times repeated bending and consecutive cycling: (a) Smooth side and; (b) Rough side of the CF/SPC/CNF electrode; (c) CF layer and; (d) LFP layer of the LFP-CF electrode.

Figure S2. Picture of a lab-scale pouch full cell with a flexible LFP-CF electrode as positive electrode and a CF/SPC/CNF electrode as negative electrode. Cu and Al foils are only used for contacting the carbon fiber current collectors on the edge and lead current out of the pouch. An oversized pouch and Whatman GF/A glass microfiber paper 260 μm was used as separator.

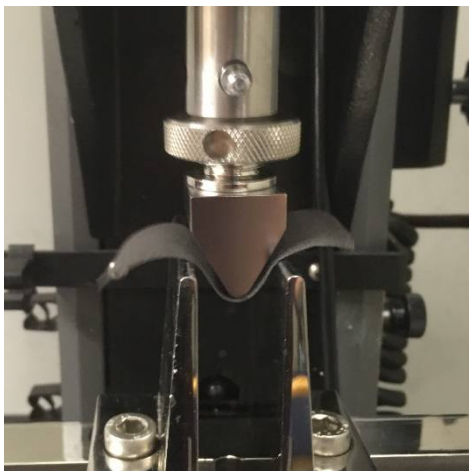

Figure S3. Picture of a CF/SPC/CNF flexible electrode during the there-point bending test repeated 4000 times.