Electronic Supplementary Information

Boosting Rate Performance of Primary Li/CF_x Batteries through Interlayer Conductive Network Engineering

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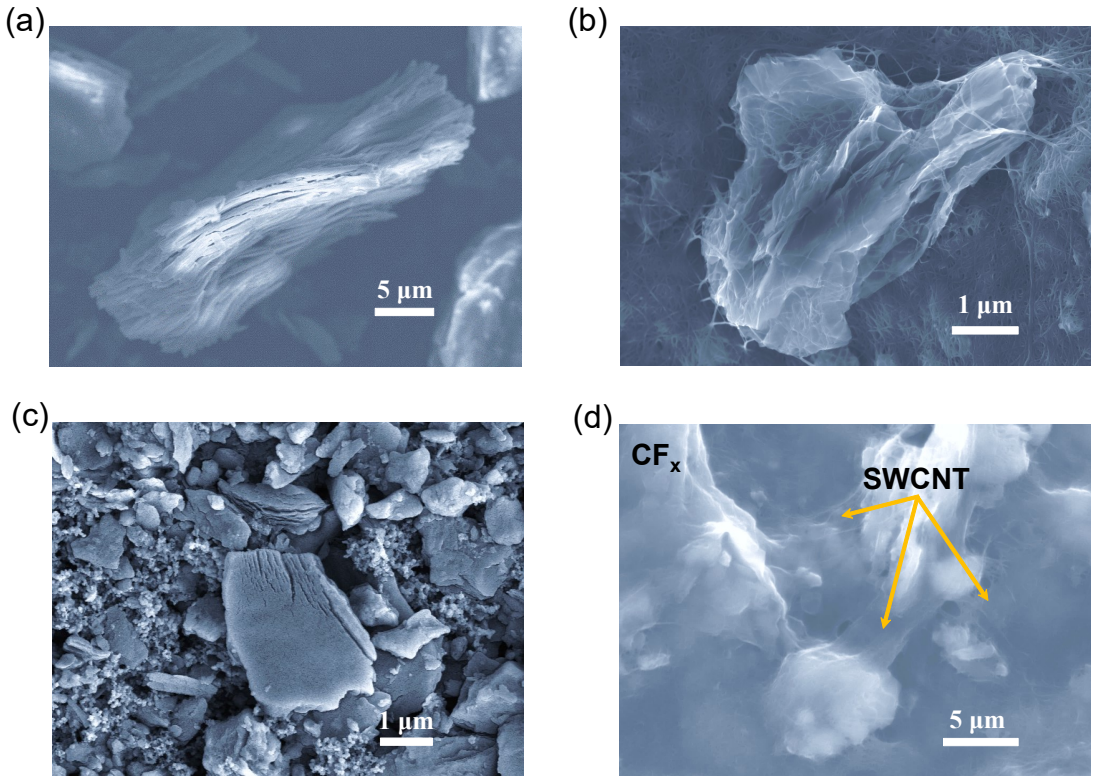

Fig. S1 SEM image of (a) pristine CF_x, (b) CF_x with SWCNT incorporated, (c) CF_x/Super P composite and (d) CF_x/SWCNT sample fabricated with conventional slurry mixing method.

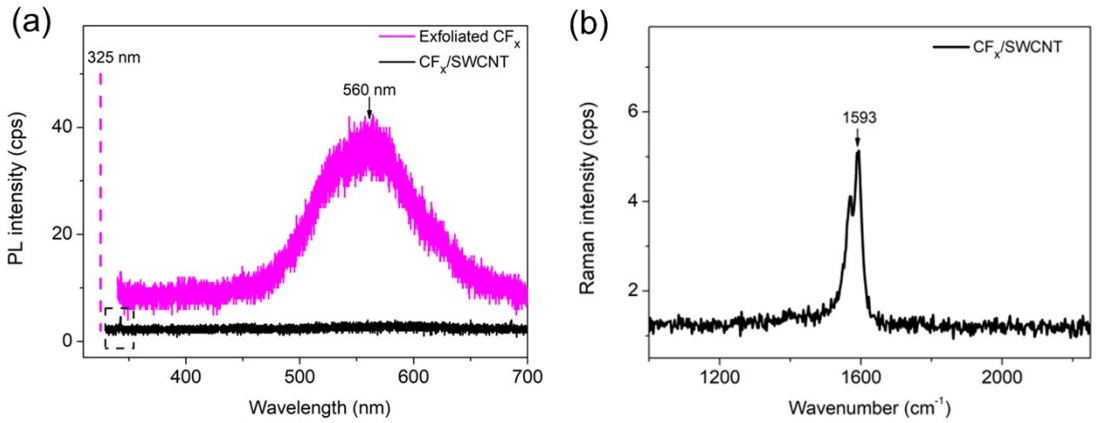

Fig. S2 (a) PL spectra of exfoliated CF_x and CF_x/SWCNT hybrid film under 325 nm laser excitation with 15× NUV lens. Incident power density is 5.9 kW/cm^2; (b) Raman spectrum of CF_x/SWCNT under 325 nm excitation.

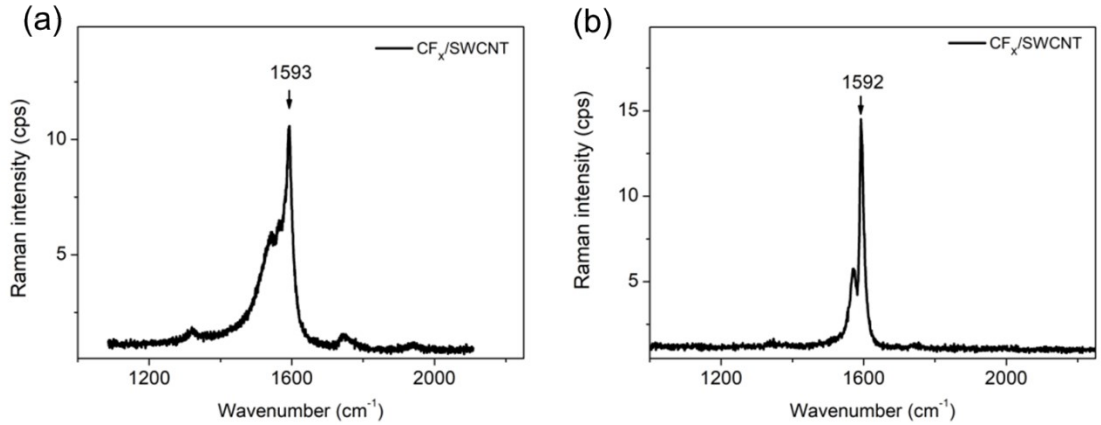

Fig. S3 Raman spectrum of CF_x/SWCNT under 633 nm (a) and 532 nm (b) excitation, corresponding to amplification of CF_x/SWCNT spectra in Fig. 2a.

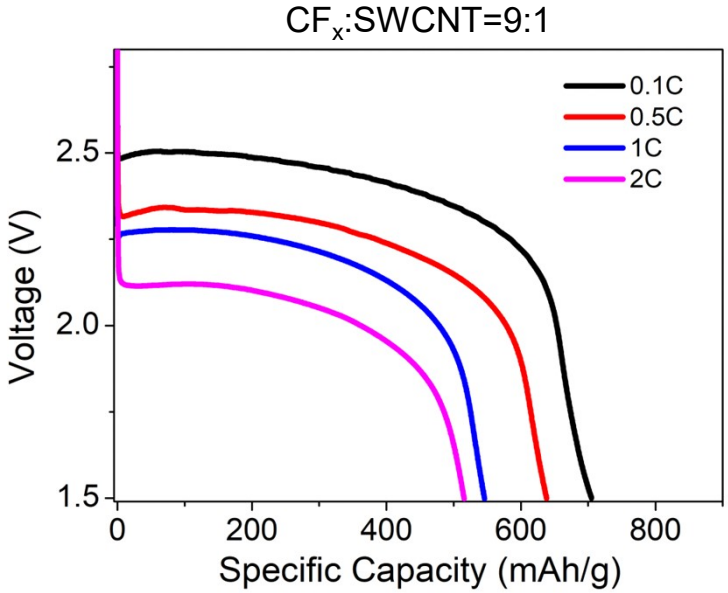

Fig. S4 Galvanostatic charge-discharge curve of Li/CF_x battery based on SWCNT cathode under different discharge rates. In this case, weight ratio of CF_x to SWCNT is ~9:1.

Table S1 EDX results of exfoliated CF_x.

Elements	Line	Mass%	Atom%
C	K	40.92±0.47	52.27±0.60
F	K	59.08±1.06	47.73±0.86