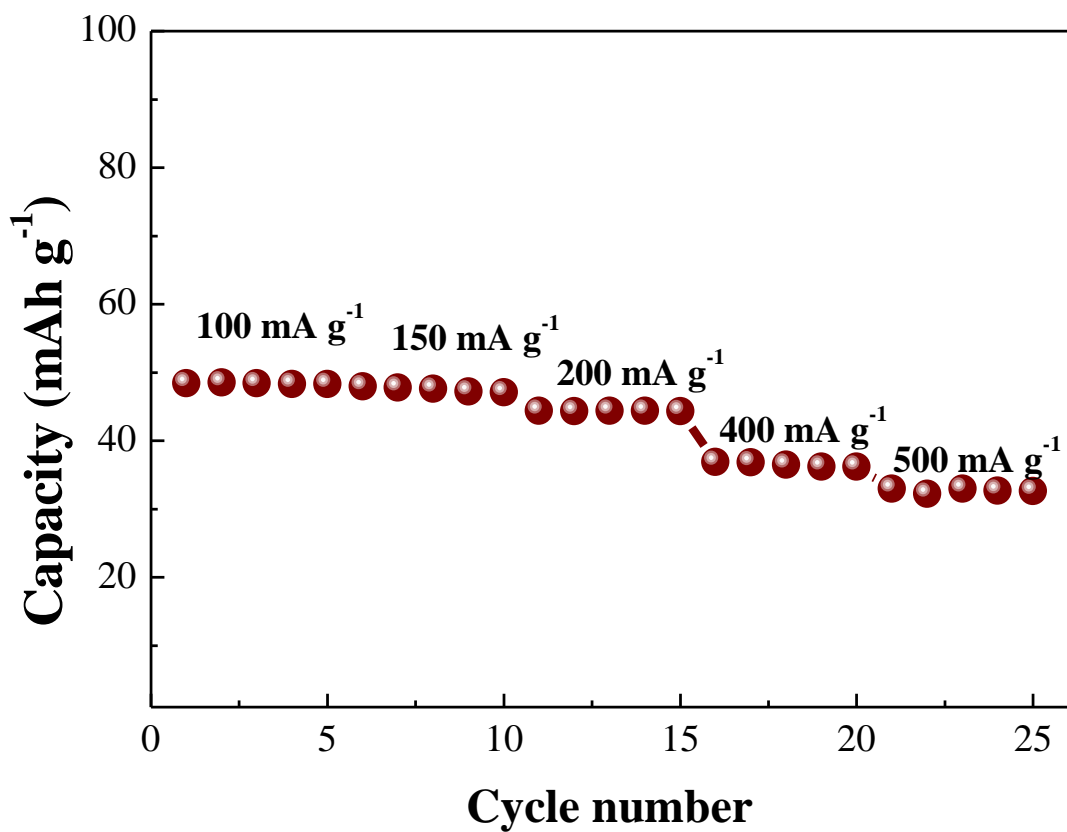
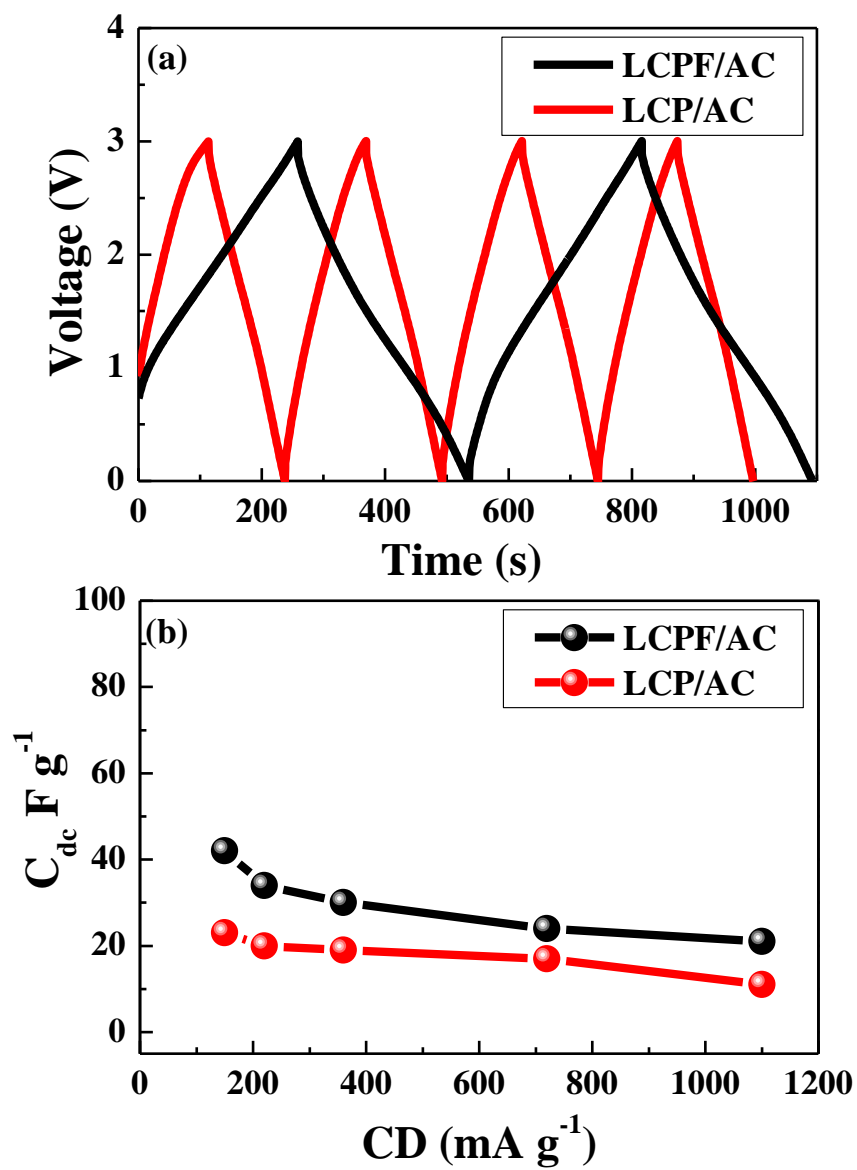


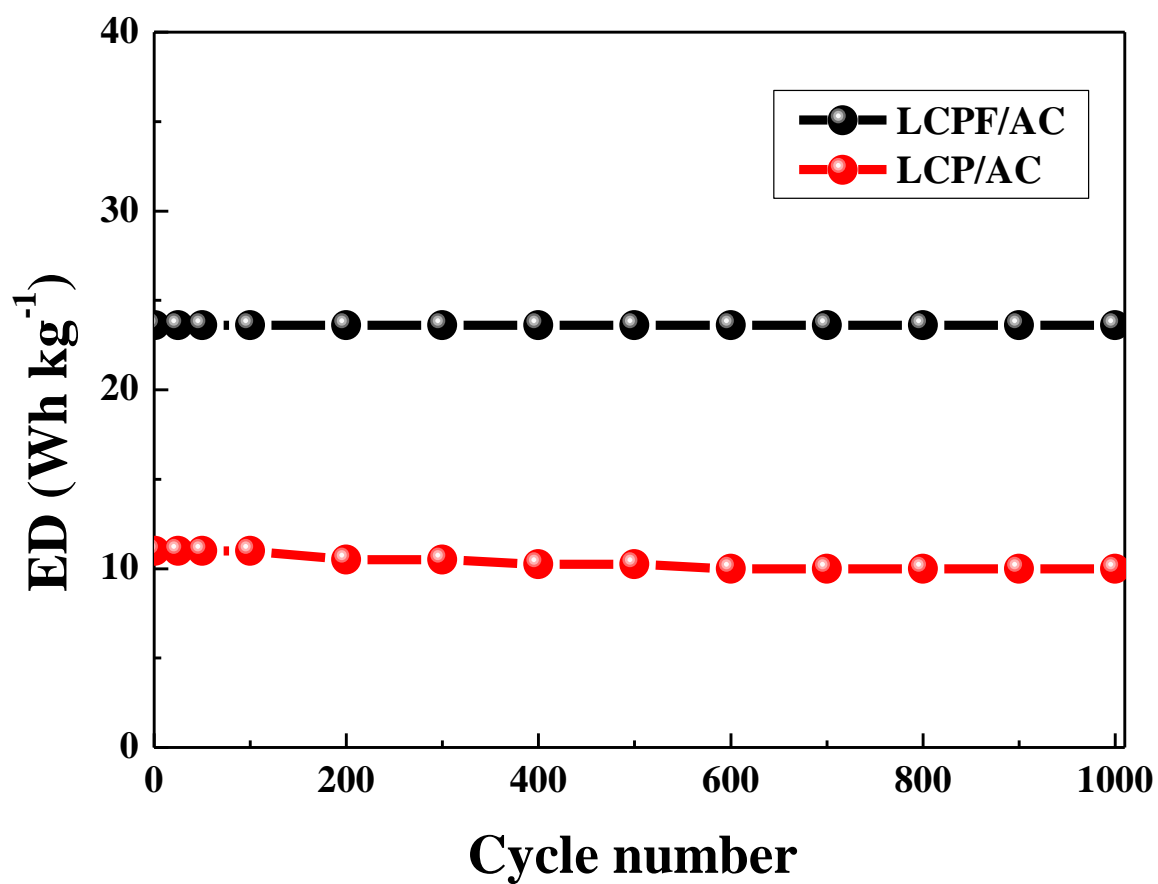
**Supporting Information**



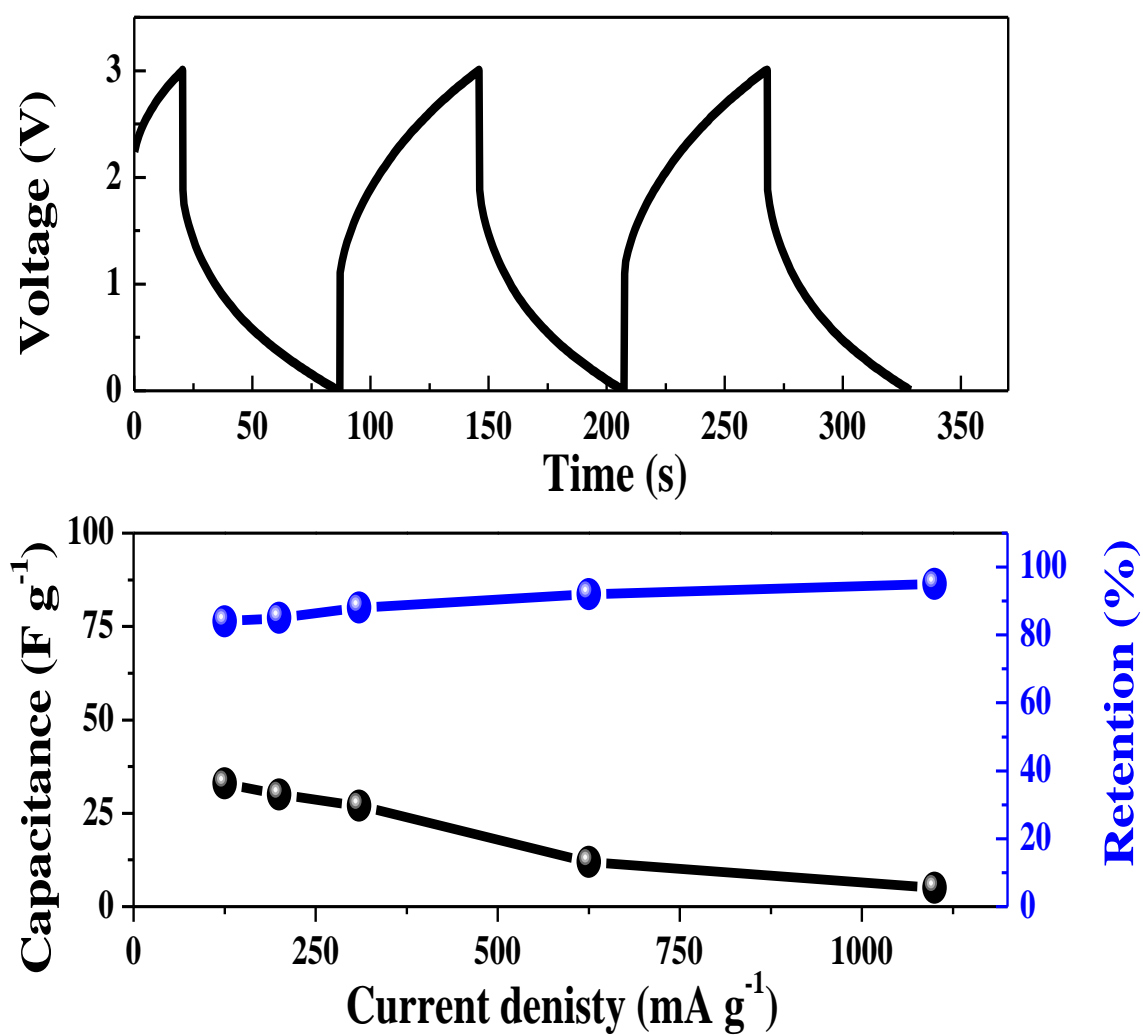
**Fig. S1.** Rate performance of Li<sup>+</sup>/AC cell at different current densities between 2-4 V.



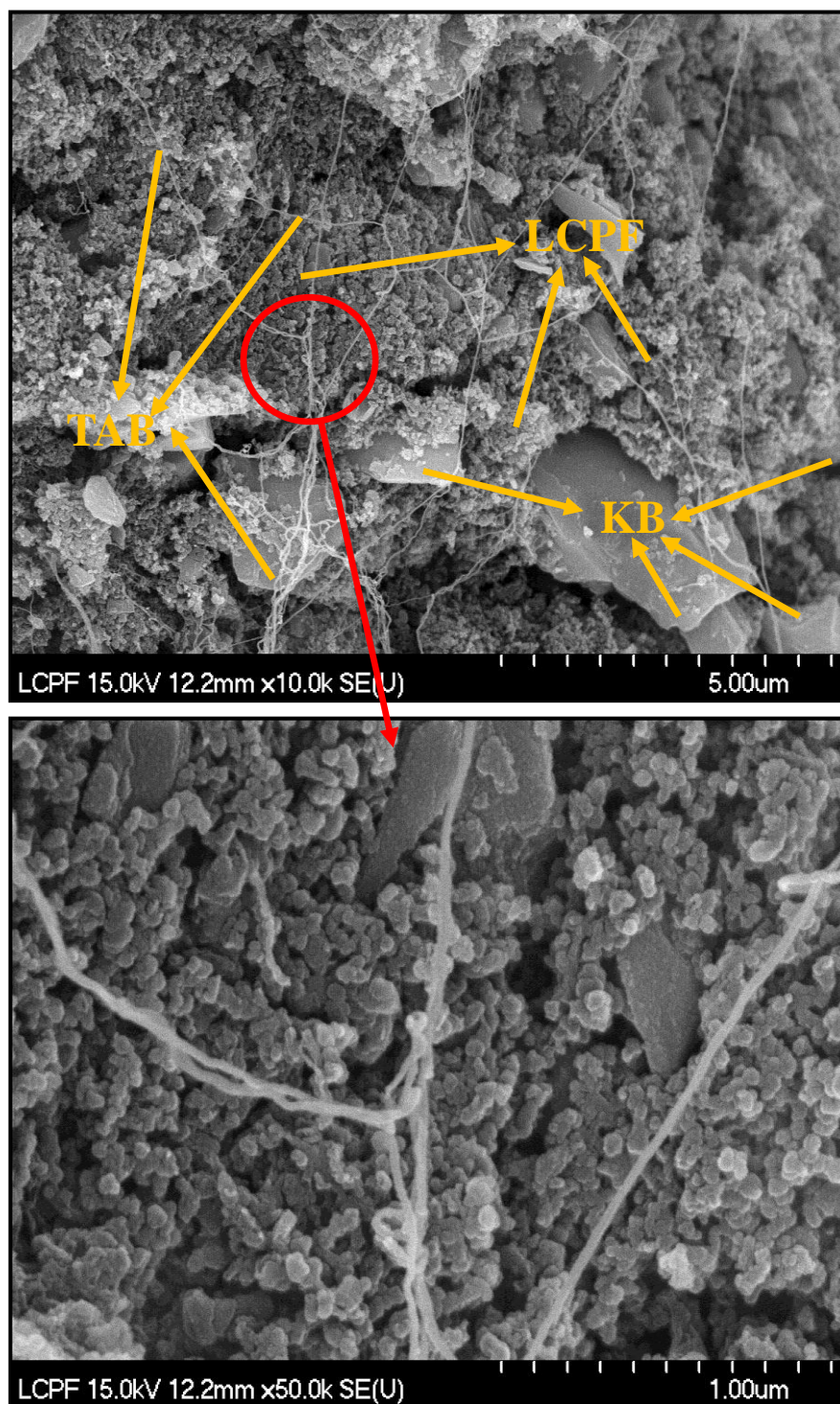
**Fig. S2** (a) Charge discharge curves of LCPF/AC and LCP/AC cells recorded at 150 mA g<sup>-1</sup> current density and (b) Rate performance of LCPF/AC and LCP/AC cells at various current densities between 0-3 V.



**Fig. S3** Variation of ED (Wh kg<sup>-1</sup>) with the number of cycles for LCPF/AC and LCP/AC cells.



**Fig. S4.** (a) Charge discharge curves of AC/AC symmetrical cell measured at 320 mA g<sup>-1</sup> current density and (b) Rate performance of AC/AC at various current densities between 0-3 V.



**Fig. S5.** SEM images of composite electrode containing Li<sub>2</sub>CoPO<sub>4</sub>F (LCPF), ketzen black (KB) and teflonized acetylene black (TAB) after cycling at 1100 mA g<sup>-1</sup> for 30, 000 cycles (a) 10,000x and (b) 100,000x magnifications.