

Supporting information

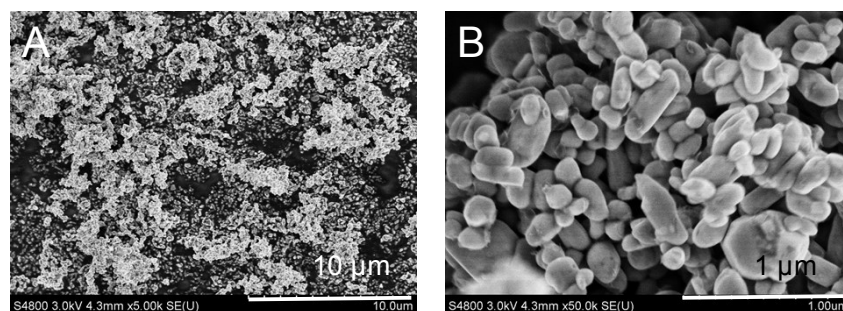


Fig. S1† SEM images of LFP

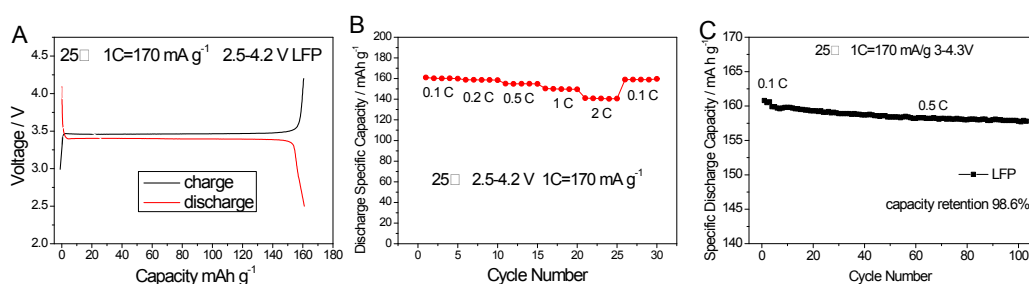


Fig. S2† (A) Initial charge and discharge curves of the LFP at 0.2 C at 25°C (B) Rate performance of LFP at 55°C (C) Cycling performance of LFP at 25°C

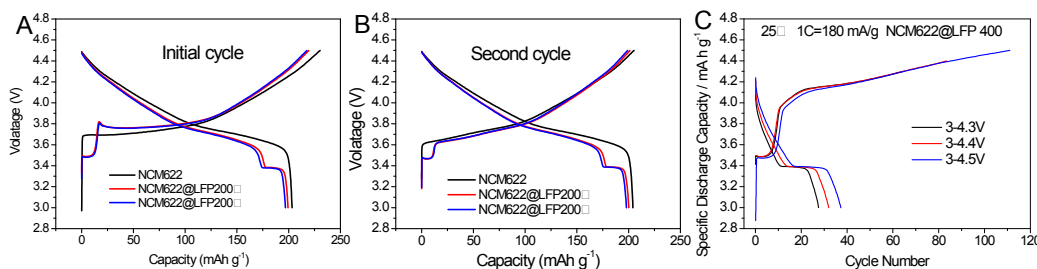


Fig. S3† (A) Initial and (B) second cycle charge and discharge curves of the sample with pristine NCM622, NCM@LFP 100, NCM@LFP 200 at 25°C at a current rate of 0.2C in the voltage range of 3.0-4.3 V, (C) Initial charge and discharge curves of NCM@LFP 400 at 25°C at a current rate of 0.1C in the voltage range of 3.0-4.3 V, 3.0-4.5 V, 3.0-4.5 V

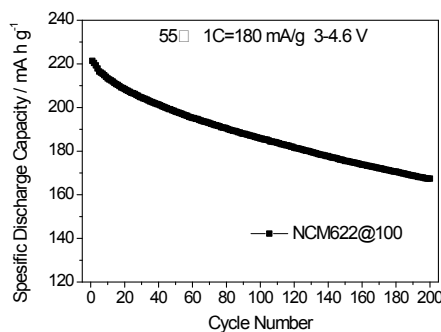


Fig. S4† Cycling performance of NCM622@LFP 100 at 1C in the voltage range of 3-4.6V at 55°C

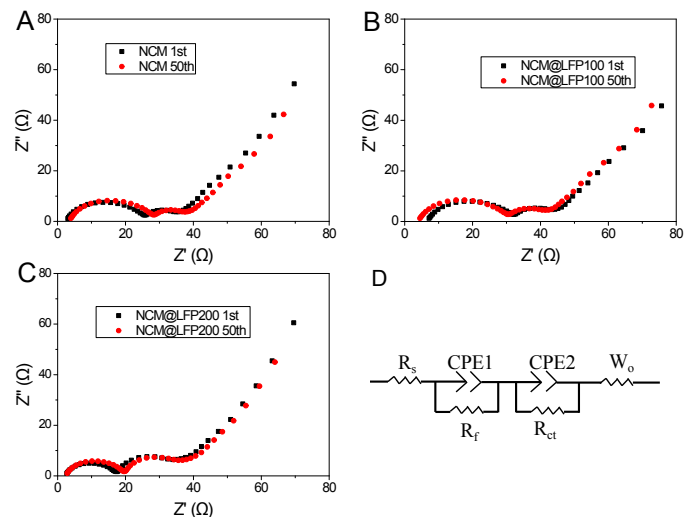


Fig. S5† Nyquist plots of the pristine (A) NCM622 (B) NCM@LFP 100 and (C) NCM@LFP 200 charged at 4.5 V at initial charge cycle and 50th charge cycle, (D) the equivalent circuit model.

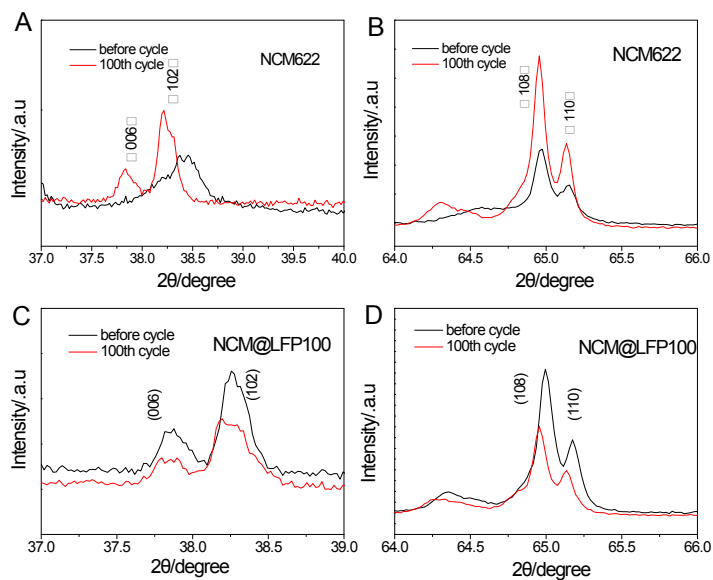


Fig. S6† XRD patterns of different cathodes after 1 and 100 charging-discharging cycles: (A) bare NCM622, (B) NCM@LFP 100

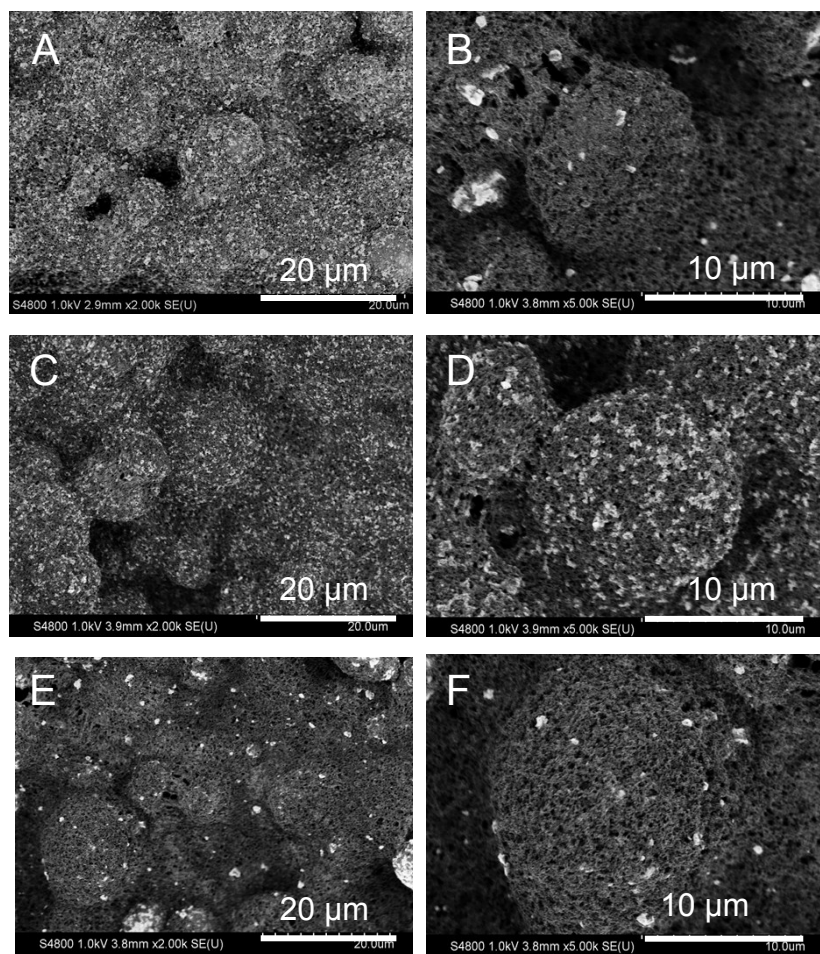


Fig. S7† SEM images of cathodes before charging-discharging process: (A) (B) pristine NCM622, (C) (D) NCM622@LFP 100, (E) (F) NCM622@LFP 200