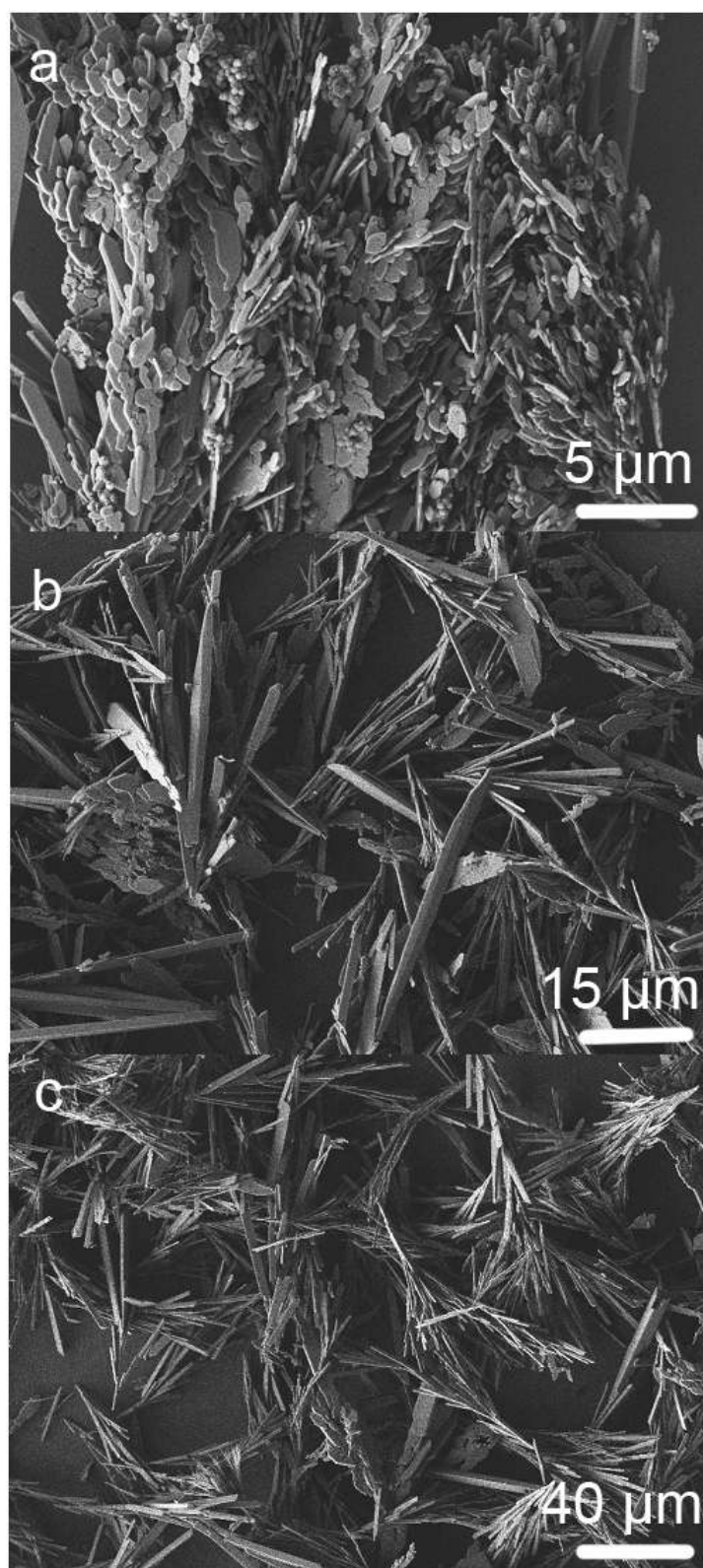
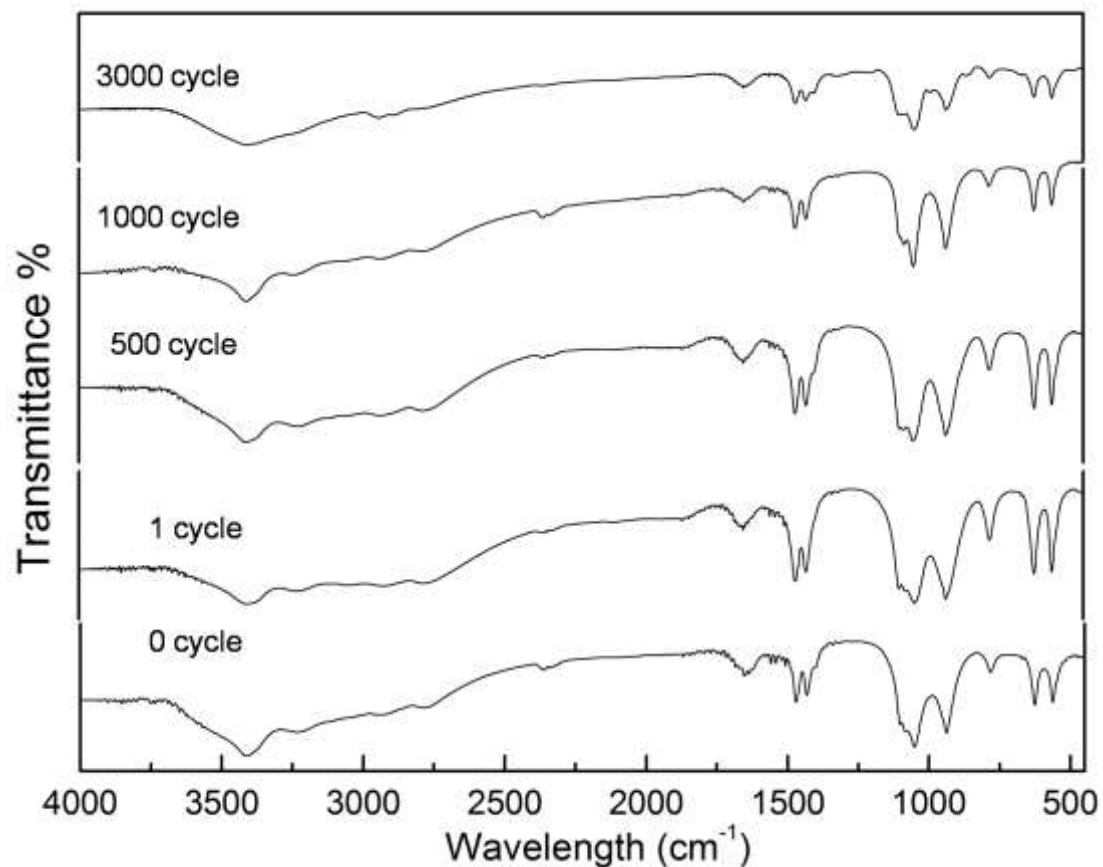


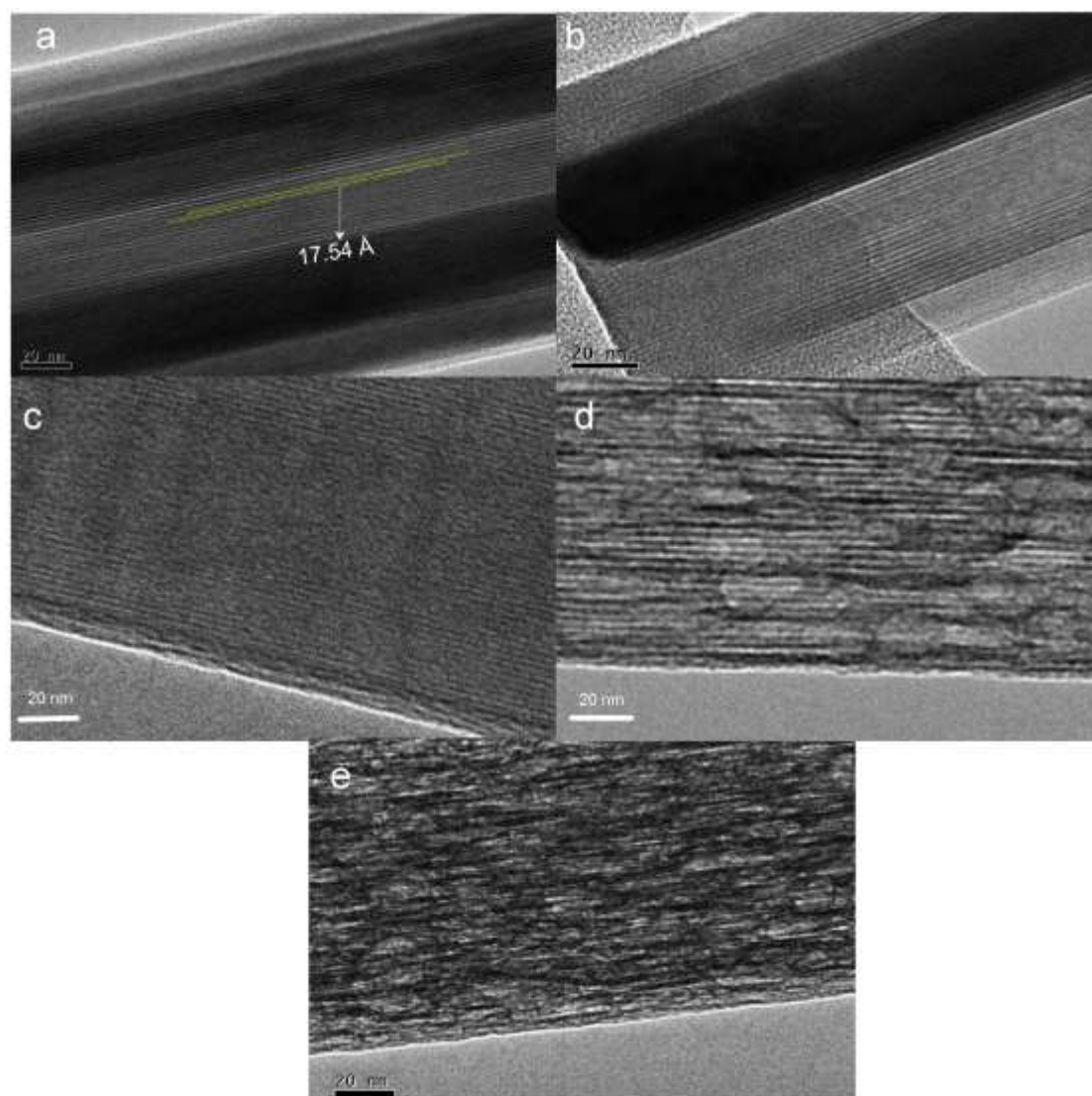
Electronic supplementary information (ESI)



**ESI Figure. 1** The product was synthesized under different hydrothermal conditions, (0.10 g of cobalt nitrate and 0.15 g ammonium tertiary phosphate were added into 20.0 mL of distilled water) (a) 8 h; (b) 16 h; and (c) 32 h.



**ESI Figure. 2** IR measurements of layered  $\text{NH}_4\text{CoPO}_4 \cdot \text{H}_2\text{O}$  microbundles before-0 cycle, and after different charging-discharging cycles-1 cycle, 500 cycle, 1000 cycle, and 3000 cycle.



**ESI Figure. 3** HRTEM measurements of layered  $\text{NH}_4\text{CoPO}_4 \cdot \text{H}_2\text{O}$  microbundles electrodes before (a) 0 cycle, and after different charging-discharging cycles, (b) 1 cycle, (c) 500 cycle, (d) 1000 cycle, and (e) 3000 cycle.