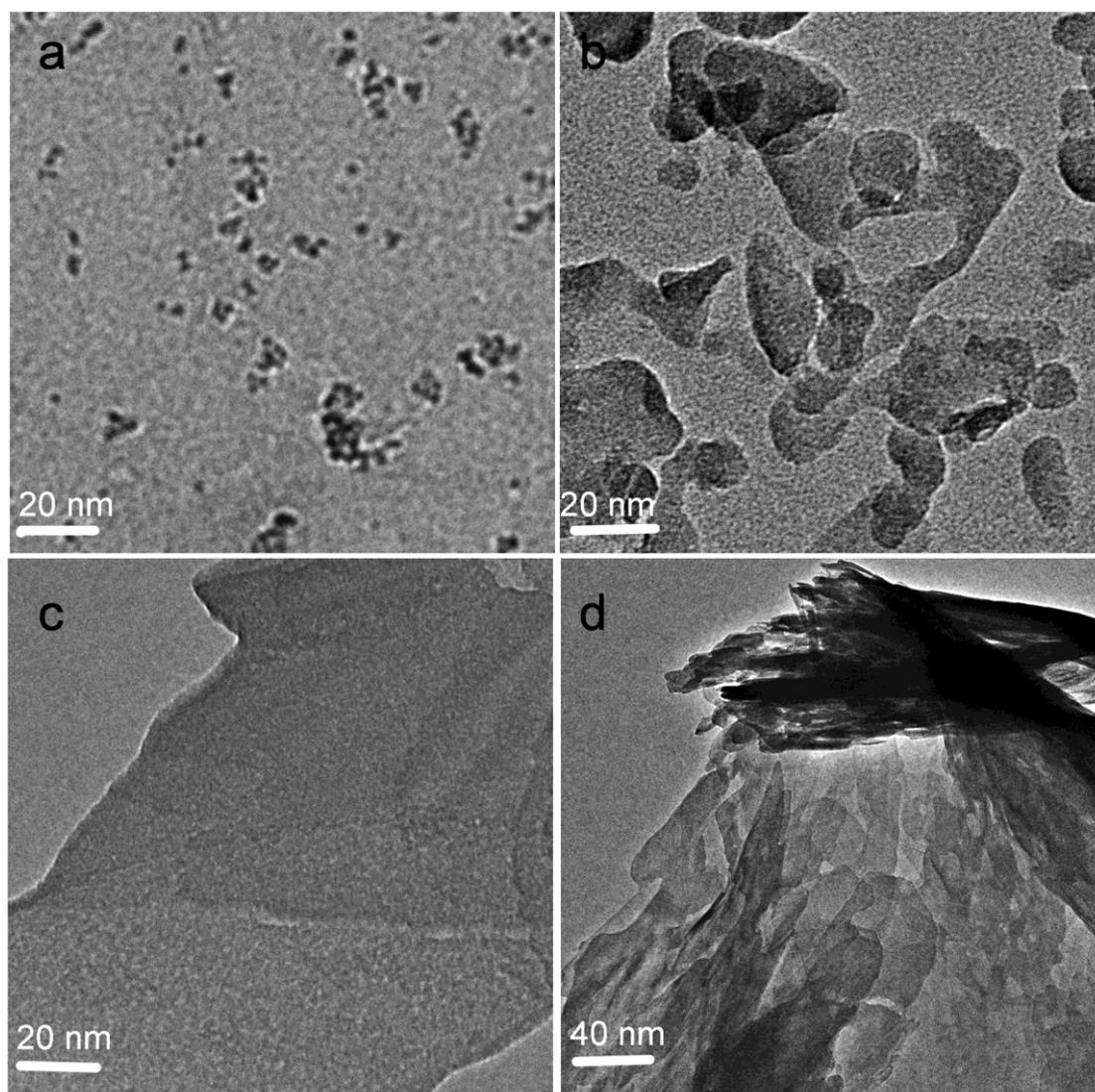
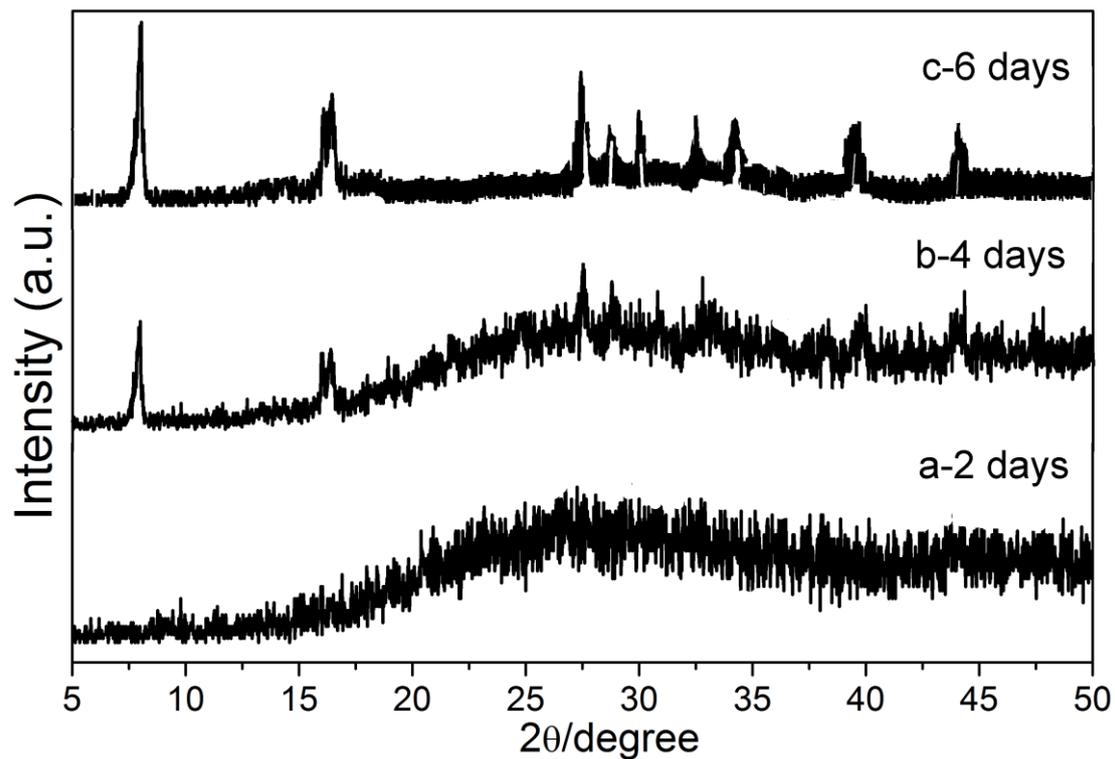


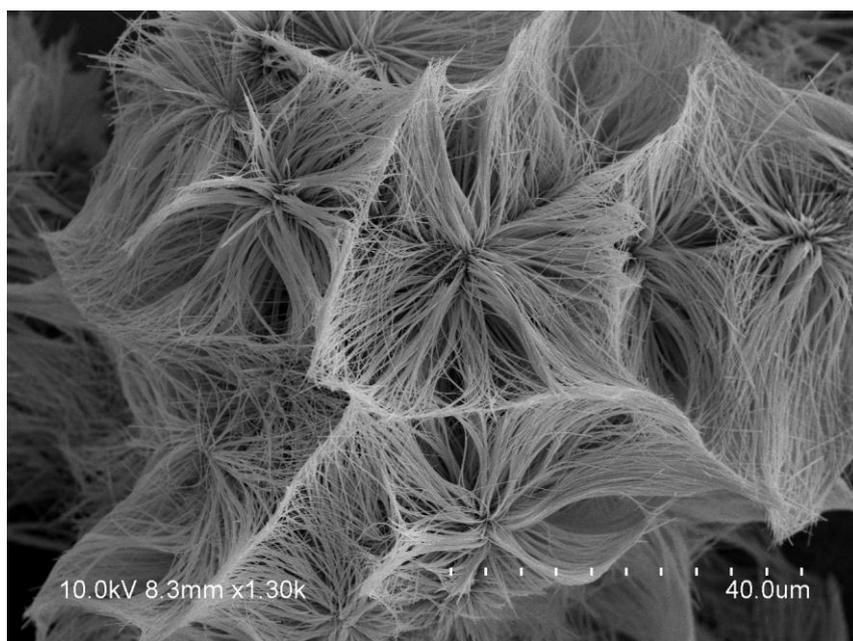
## Electronic supplementary information (ESI)



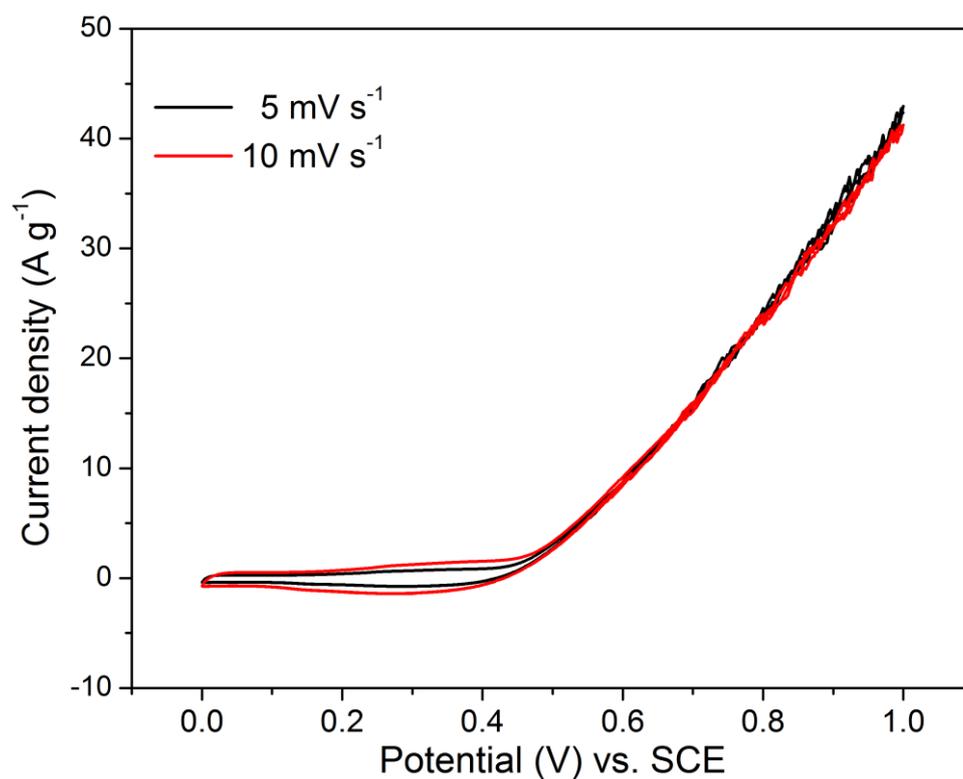
**ESI Figure 1** TEM images of the product was synthesized by (0.28 g cobalt chloride and 0.30 g sodium pyrophosphate were mixed with 20 mL ethylene glycol under different hydrothermal conditions), (a) 2 days; (b) 4 days; (c) 6 days; (d) 8 days.



**ESI Figure 2** XRD patterns of the product was synthesized by (0.28 g cobalt chloride and 0.30 g sodium pyrophosphate were mixed with 20 mL ethylene glycol under different hydrothermal conditions), (a) 2 days; (b) 4 days; (c) 6 days.



**ESI Figure 3.** SEM image of the product ( $\text{Co}_{11}(\text{HPO}_3)_8(\text{OH})_6$  microarchitecture) obtained from 0.28 g cobalt chloride and 0.30 g sodium pyrophosphate were mixed with 20 mL deionized water, which was maintained at 200 °C for six days.



**ESI Figure 4.** Cyclic voltammetry experiments within a 0.0–0.50 V range at a scan rate 5, 10 mV s<sup>-1</sup> were performed on the layered CoHPO<sub>4</sub>·3H<sub>2</sub>O ultrathin nanosheets electrodes in 3.0 M KOH electrolytes at room temperature.