Supporting Information

In situ Conversion of Sub-4 nm $Co(OH)_2$ Nanosheet Arrays from Phytic Acid-derived $Co_3(HPO_4)_2(OH)_2$ for Superior High Loading Supercapacitors

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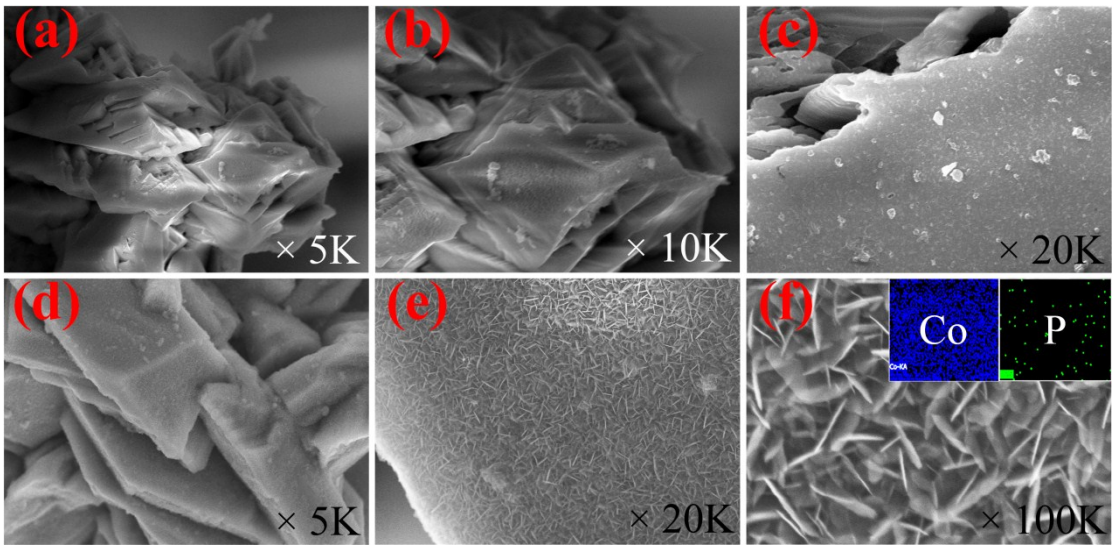

Fig. S1. SEM images of (a-c) CP@CoF, (d-f) C@CoF and (inset of f) EDS mapping of C@CoF.

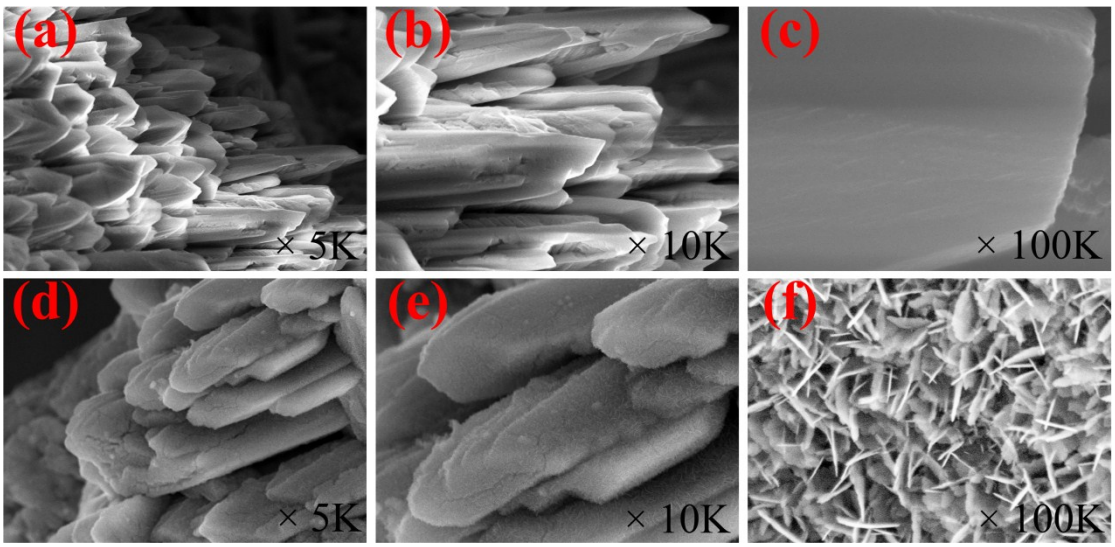

Fig. S2. SEM images of (a-c) NCP@CoF, (d-f) NC@CoF.

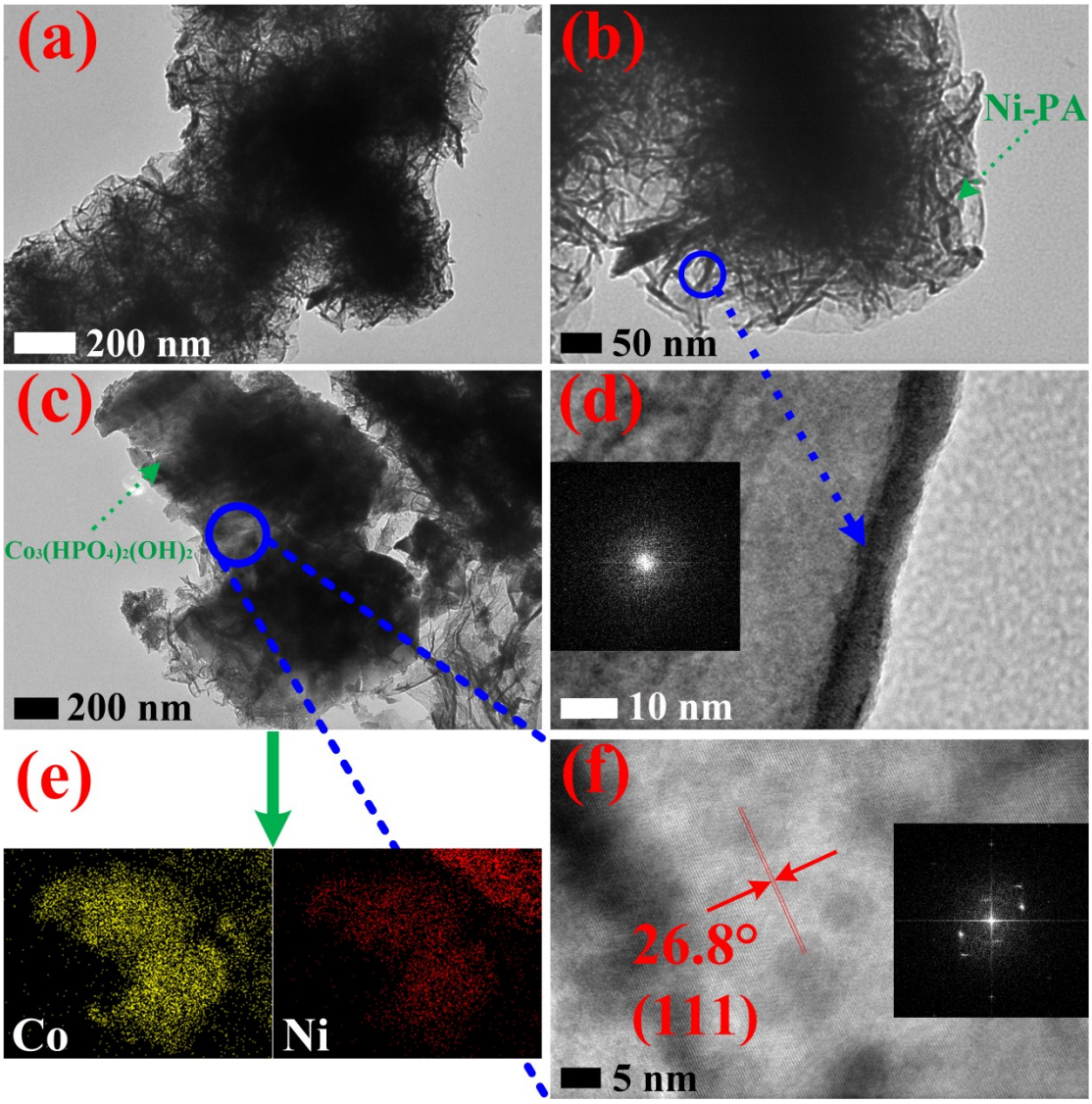

Fig. S3. TEM tests of SNCP@CoF: (a-b) Images of Ni-PA nanofilms covered $Co_3(HPO_4)_2(OH)_2$ blocks, (c) Image of exposed $Co_3(HPO_4)_2(OH)_2$ blocks and Ni-PA nanofilms at the edge of blocks, (d) HR-TEM and SAED (inset) of Ni-PA nanofilms, (e) EDS mapping of SNCP@CoF (corresponding to Fig.S3c), (f) HRTEM images and SADE (inset) of $Co_3(HPO_4)_2(OH)_2$ blocks.

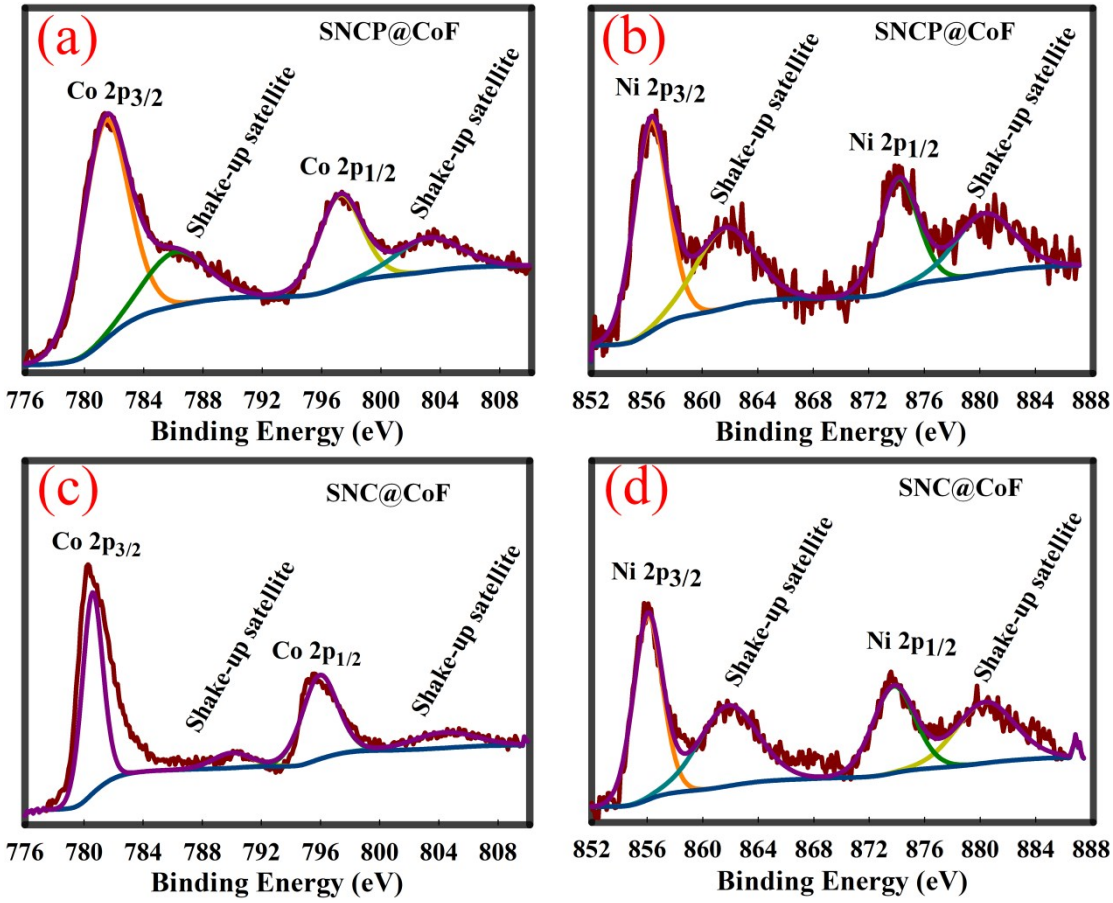

Fig. S4. XPS spectra of (a, b) Co 2p and Ni 2p patterns of SNCP@CoF, (c, d) Co 2p and Ni 2p patterns of SNC@CoF.

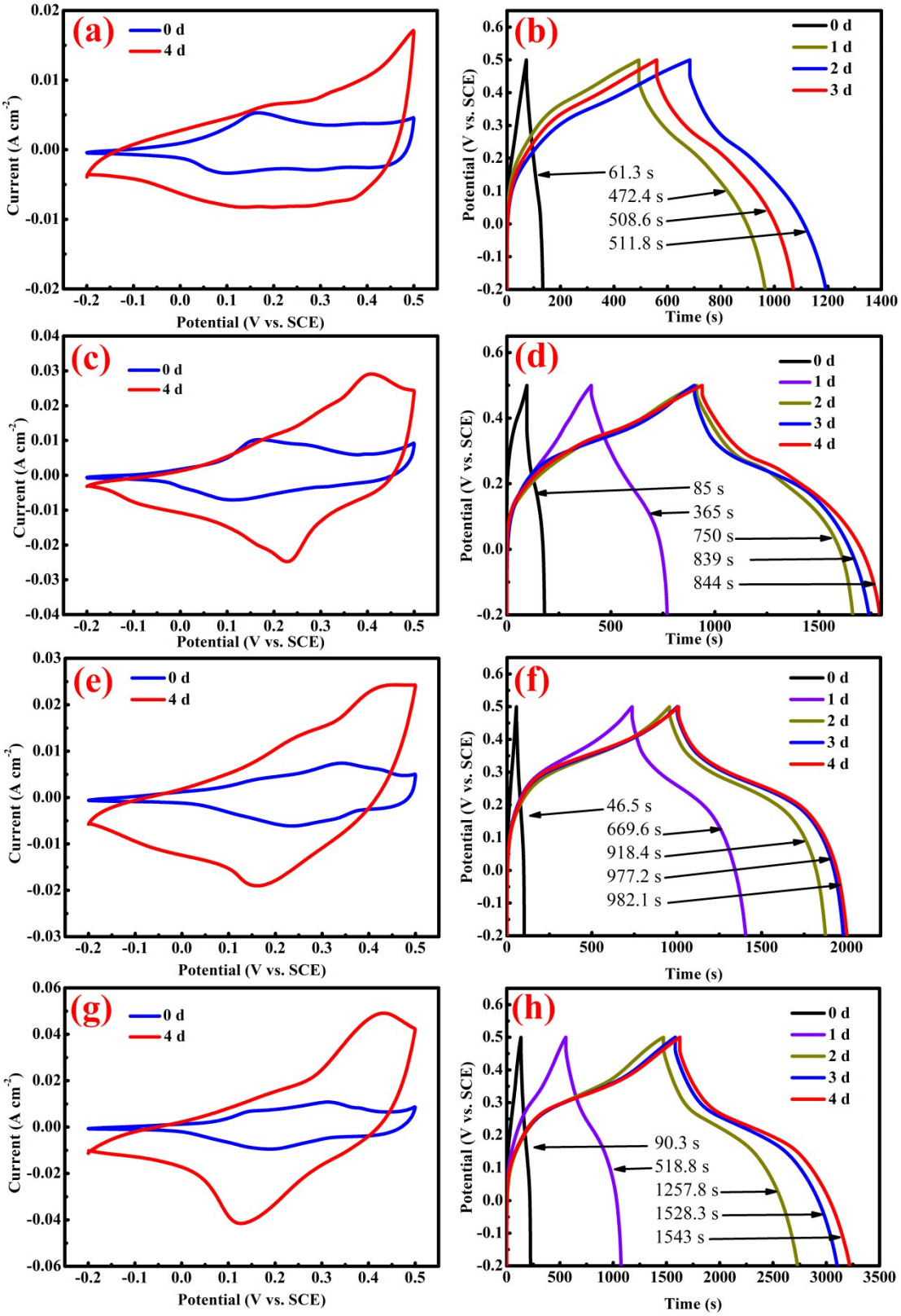

Fig. S5. CV and GCD curves for the effects of conversion durations on those samples: (a, b) CP@CoF, (c, d) SCP@CoF, (e, f) NCP@CoF and (g, h) SNCP@CoF.

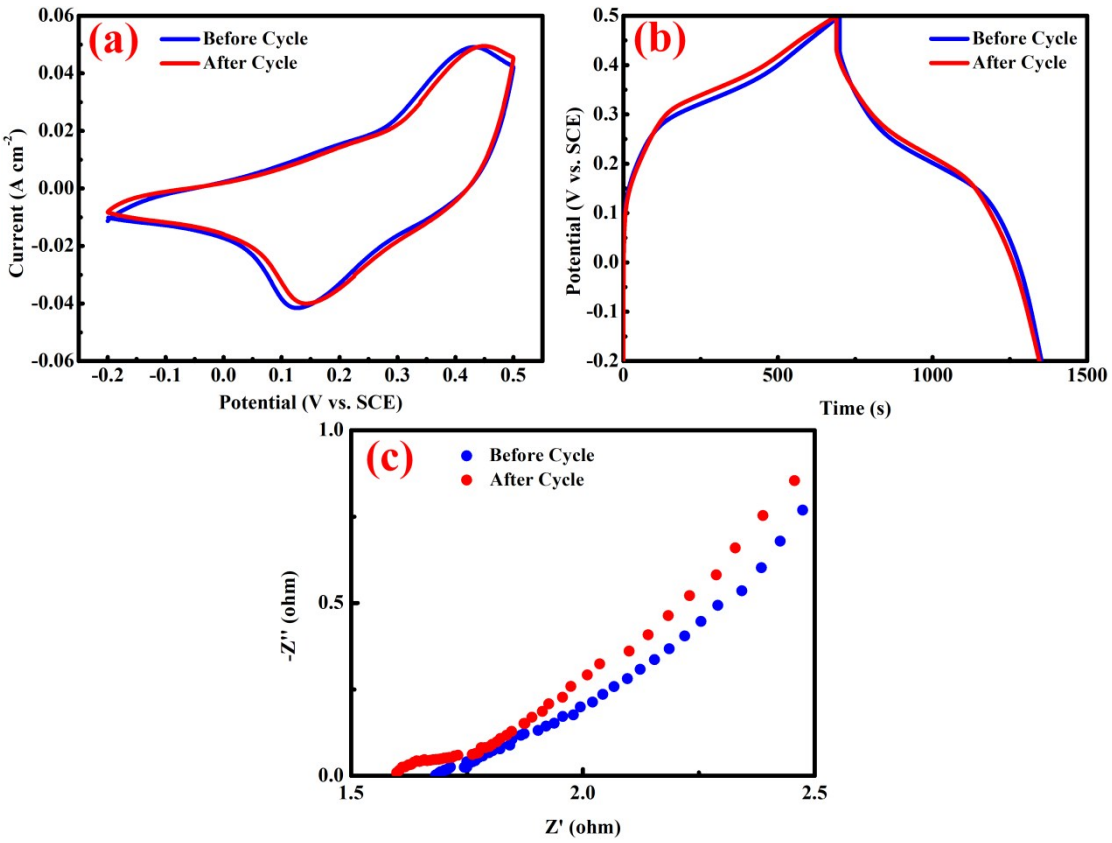

Fig. S6. (a-c) CV, GCD and EIS curves of SNC@CoF electrode before and after 20,000 cycles.