

Supporting Information

Figure S1 to S6 & Table S1 and S2

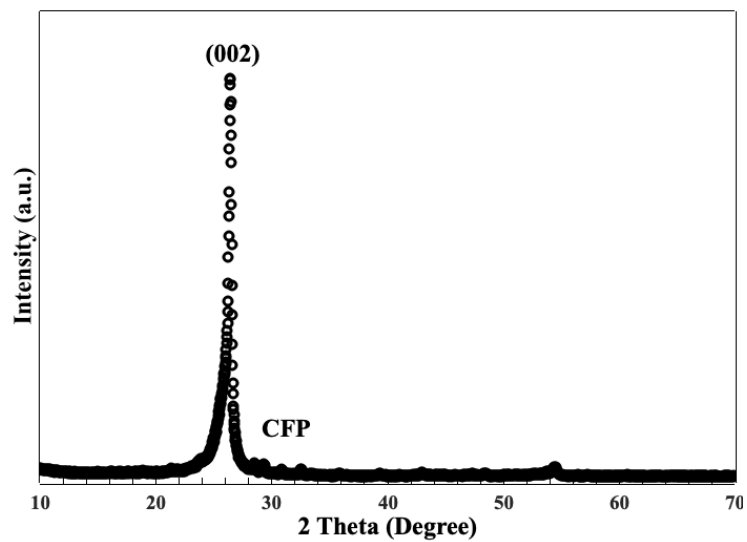


Figure S1. The XRD pattern of CFP.

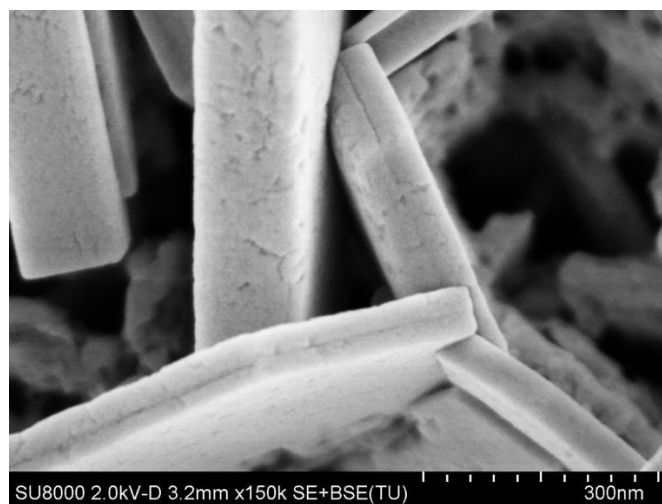


Figure S2. The SEM image after the CV treatment.

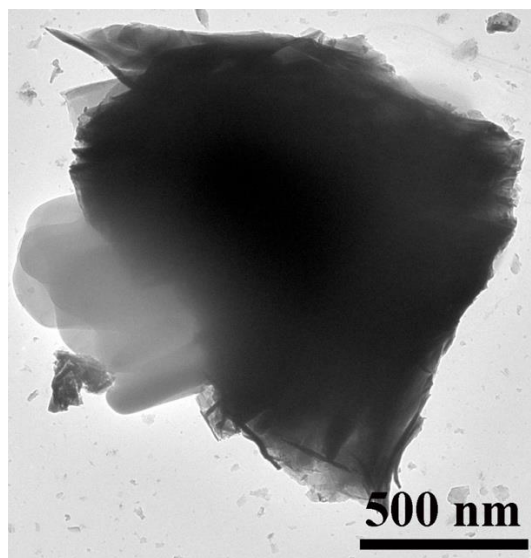


Figure S3. The TEM image after the CV treatment.

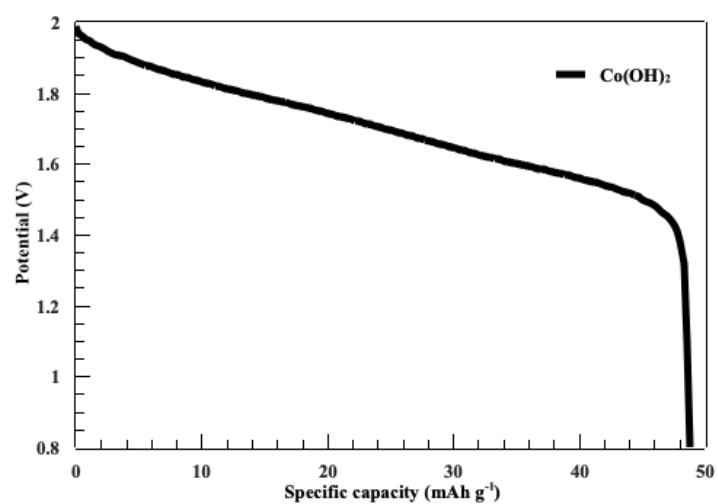


Figure S4. Discharge profiles of $\beta\text{-Co(OH)}_2$ at 0.1 A g^{-1} .

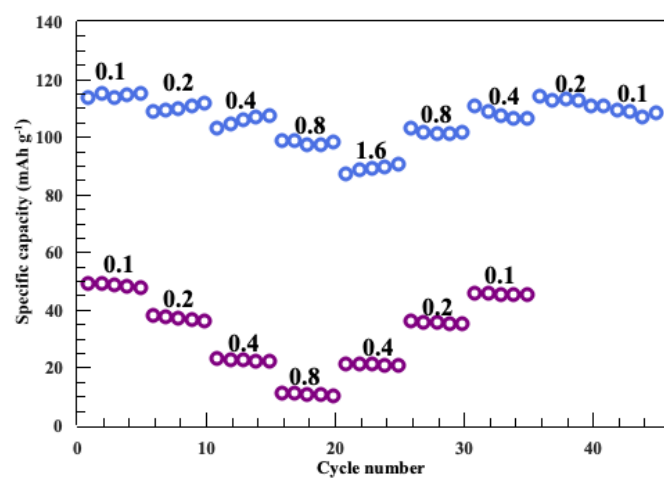


Figure S5. The rate performance comparison of β -Co(OH)₂ and the mixed phase.

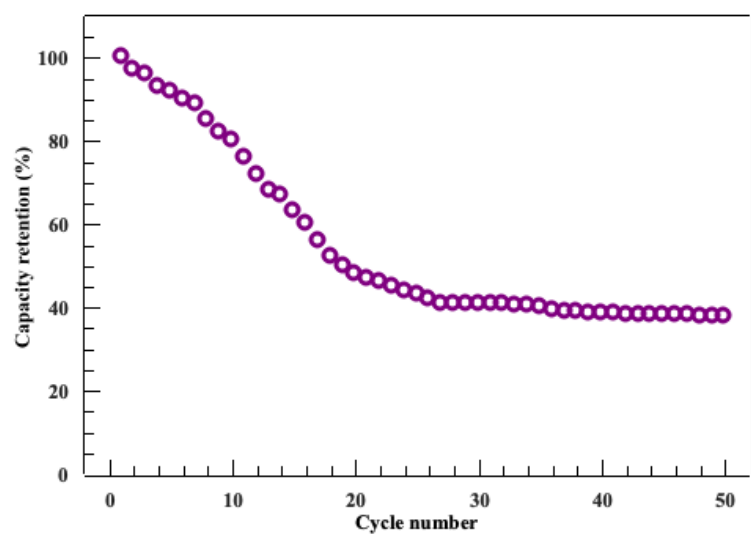


Figure S6. The stability test of $\beta\text{-Co(OH)}_2$ at 0.1 A g^{-1} .

Table S1. Total energy values (in eV) for the minima and the transition state shown in Figure 4.

State	Energy
Co(OH)₂	-42.800
Transion state	-42.050
CoOOH	-43.400

Table S2. The fitting results of the EIS spectra of the mixed phase of Co(OH)₂ and CoOOH.

Sample	R_{ct} (Ω)	R_s (Ω)	W (S·sec^{0.5})
Co(OH) ₂ /CoOOH	2.1	8	0.44