

Supporting information

Co nanoparticles embedded in 3D CoO matrix for electrocatalytic hydrogen evolution

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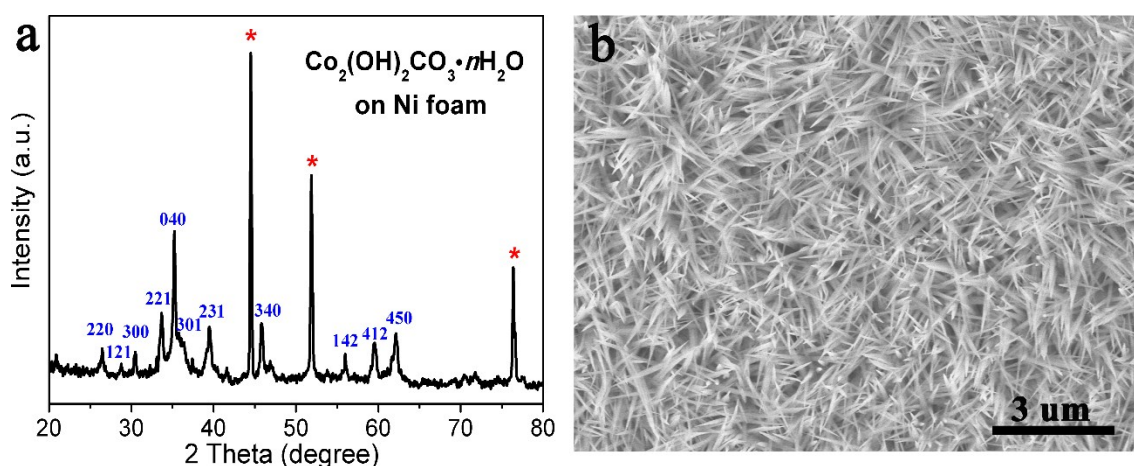


Figure S1. (a) XRD pattern and (b) SEM image of $\text{Co}_2(\text{OH})_2\text{CO}_3 \cdot n\text{H}_2\text{O}$ nanowire arrays on Ni foam

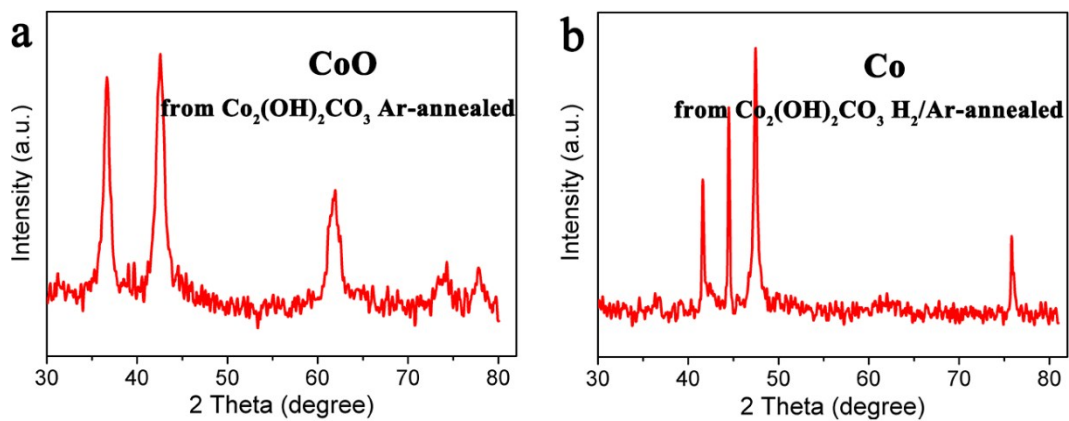


Figure S2. (a) XRD pattern of CoO powder which is obtained from $\text{Co}_2(\text{OH})_2\text{CO}_3 \cdot n\text{H}_2\text{O}$ annealed in Ar at 350 °C for 2h. (b) XRD pattern of Co powder which is obtained from $\text{Co}_2(\text{OH})_2\text{CO}_3 \cdot n\text{H}_2\text{O}$ annealed in H_2/Ar at 260 °C for 2h.

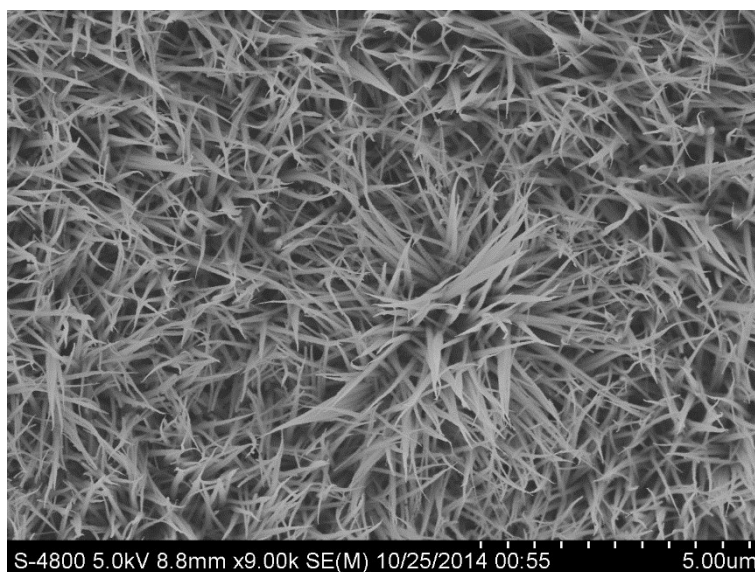


Figure S3. SEM image of Co/CoO nanowire array after after a long-period (24 h) HER measurement.

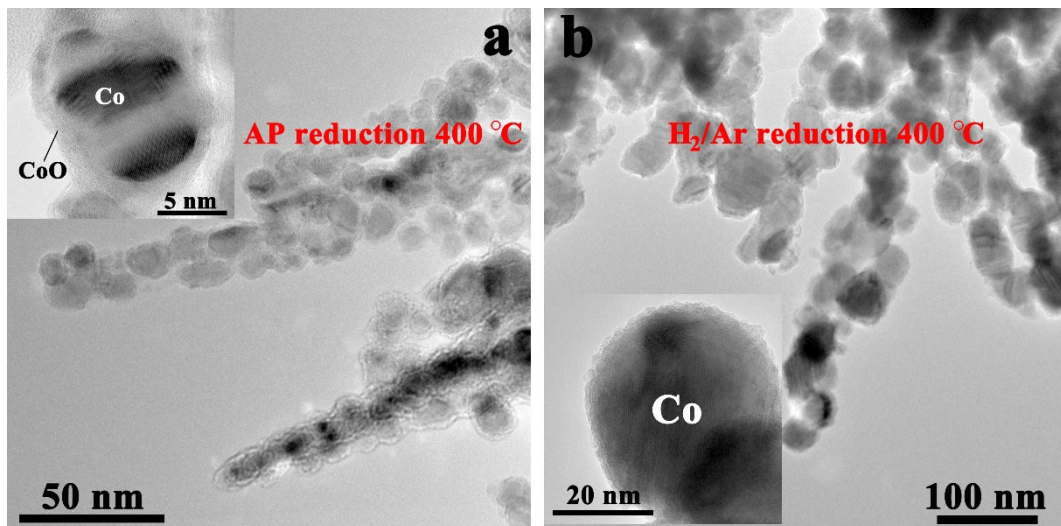


Figure S4. TEM images of (a) Sample IV prepared by Al powder reduction at 400 °C and (b) Sample V prepared by H₂/Ar reduction at 260 °C.