Supporting Information

Spectroscopic Studies of Nanoparticulate Thin Films of Cobalt-Based Oxygen Evolution Catalyst

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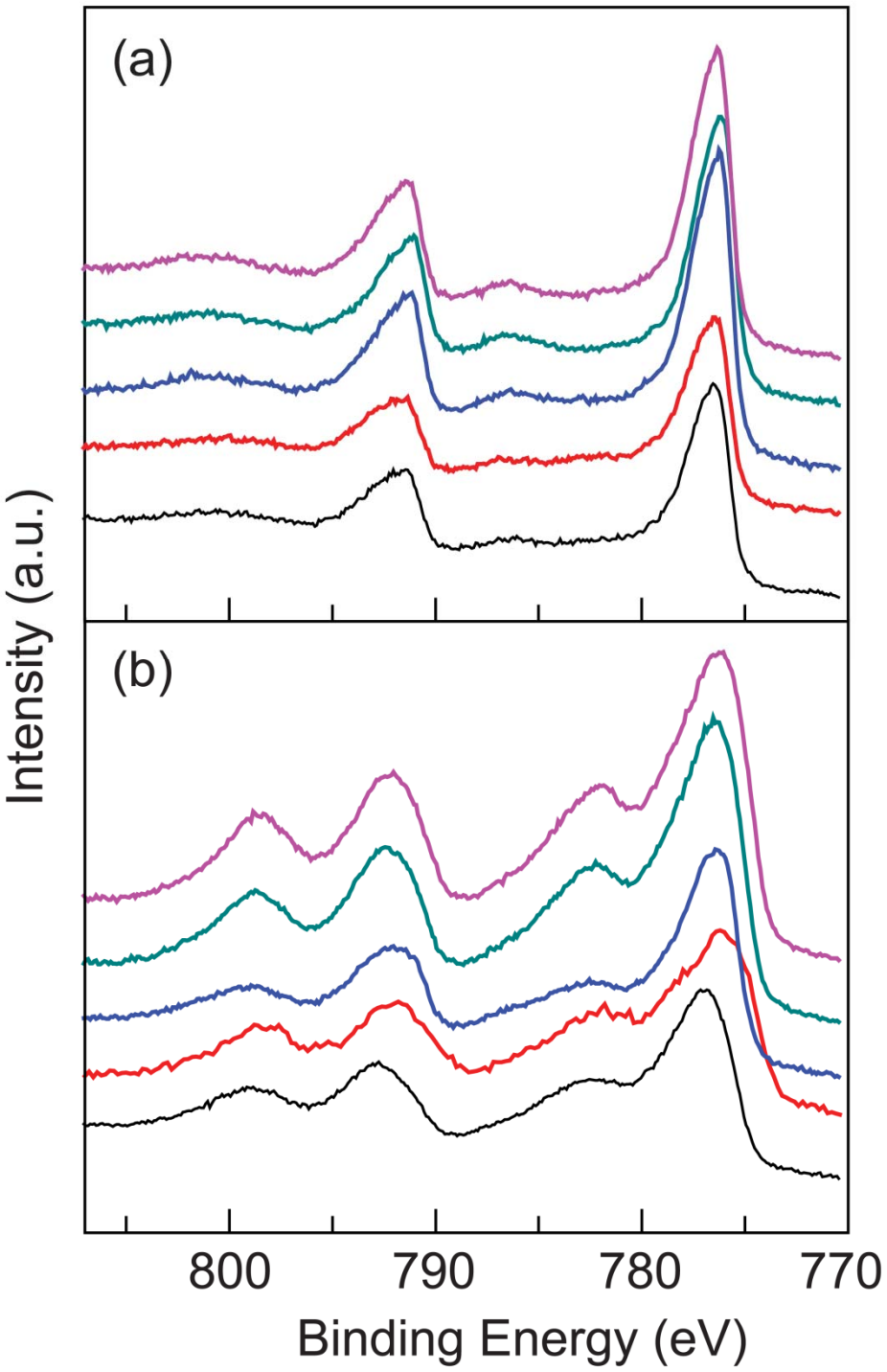

Figure S1. Co $2p_{3/2}$ XPS spectra of various Co-X films (80 mC/cm^2) from different proton-accepting electrolytic solution (a) as prepared and (b) after 1 min of etching to eliminate surface carbon contamination: Co-P_i (—); Co-B_i (—); Co-Ac (—); Co-Pr (—); and Co-Su(—).

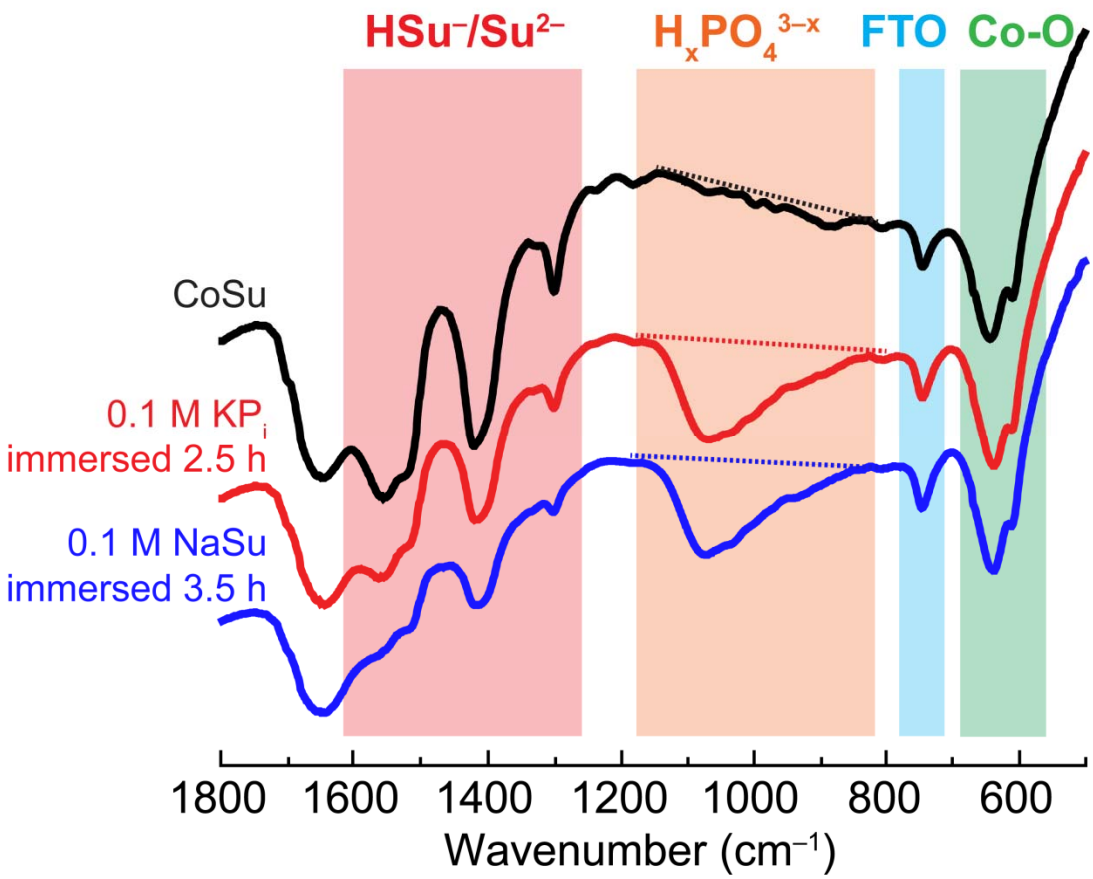

Figure S2. IR Spectra of Co-Su thin film 80 mC/cm^2 (—), immersed in 0.1 M KP$_i$ pH 7 for 2.5 h (—) and re-immersed in 0.1 M NaSu, pH 8 solution for 3.5 h (—).

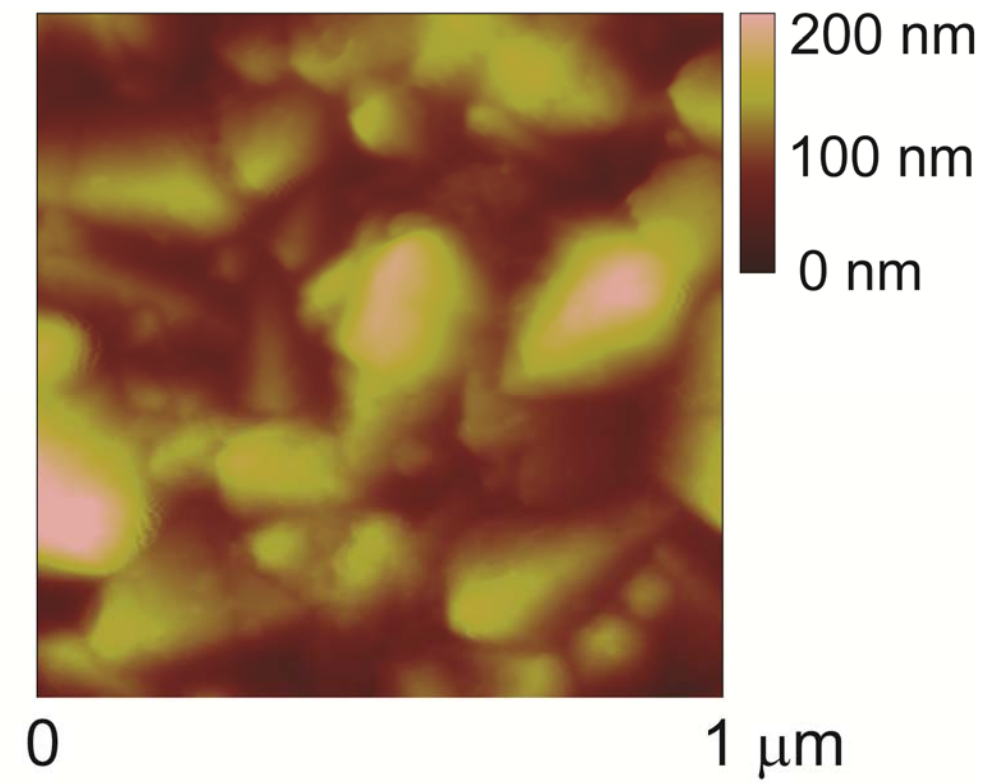

Figure S3. AFM image of FTO electrode with 400 nm crystalline domain and 200 nm surface roughness.

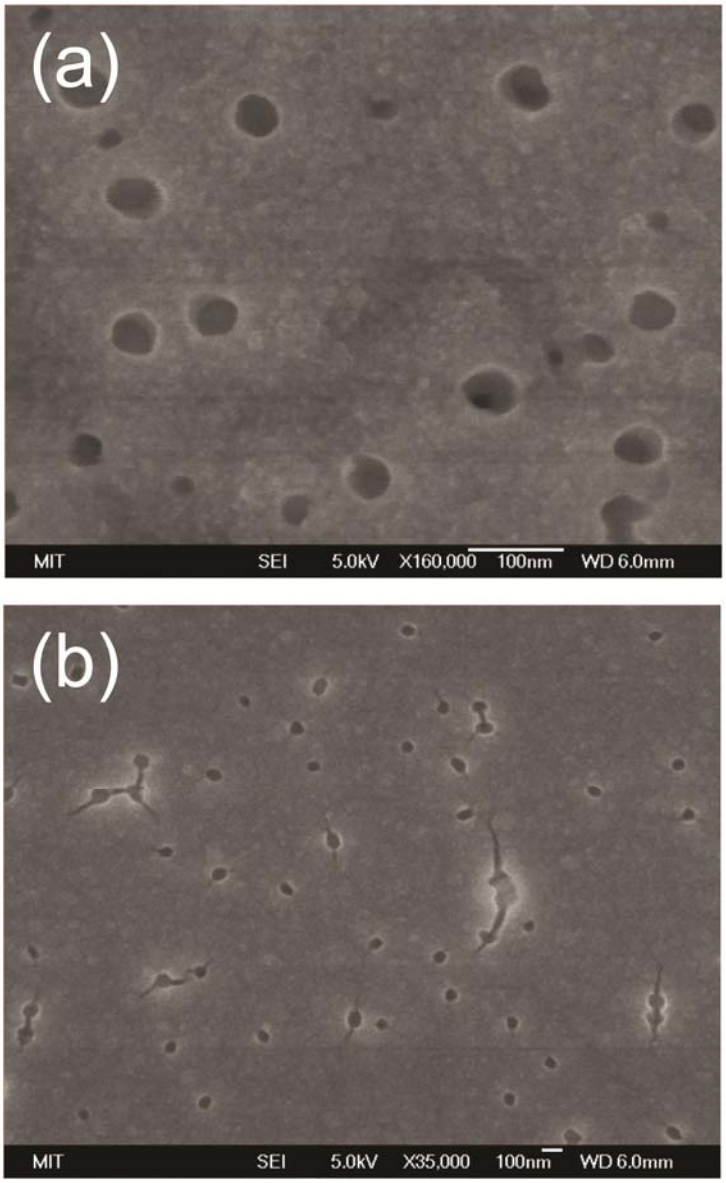

Figure S4. Scanning electron microscopic (SEM) images of Co-P_i thin films (5 mC/cm^2) on a (a) Au electrode and (b) Pt electrode.

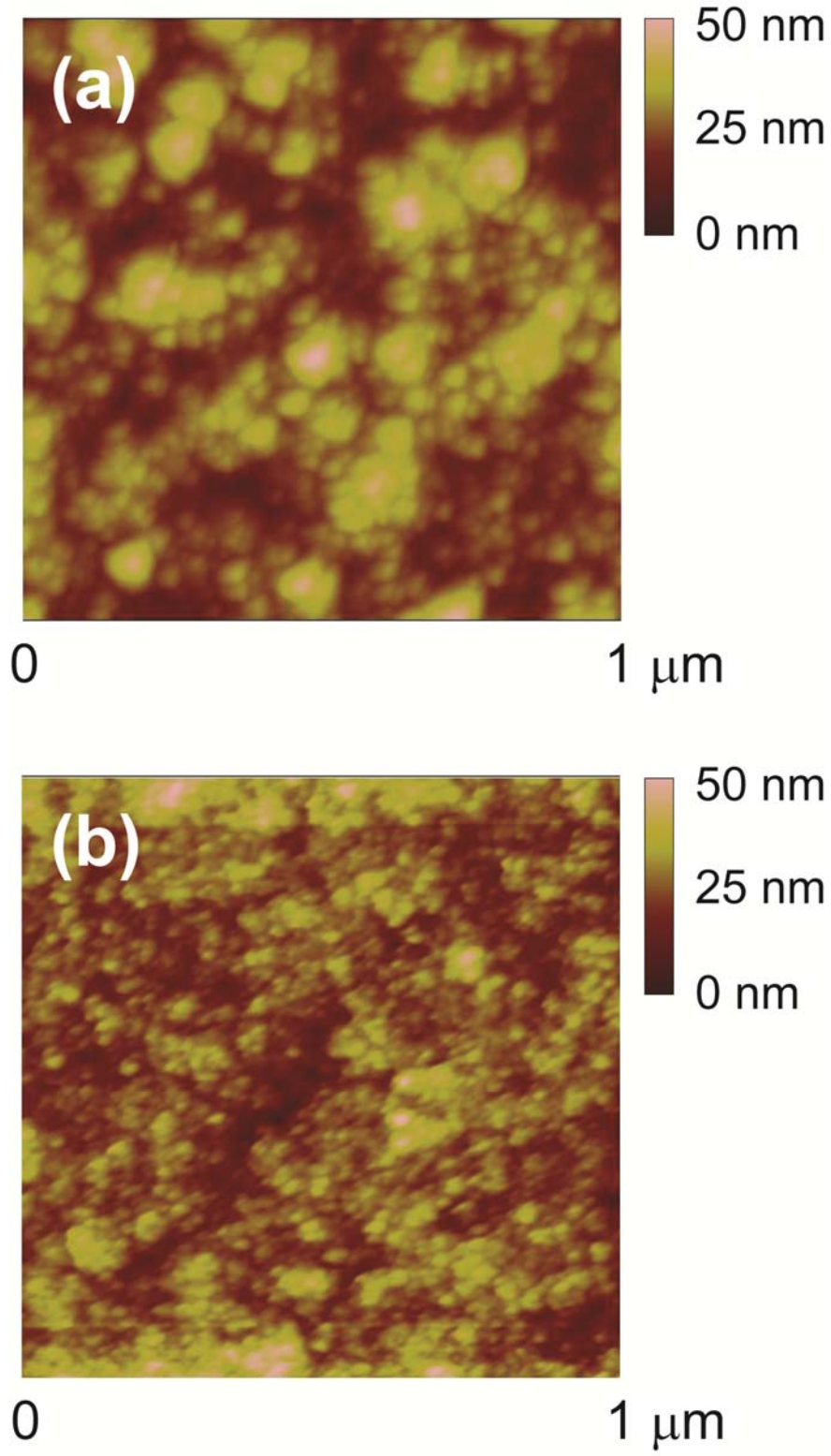

Figure S5. AFM images of Co-P_i thin films on (5 mC/cm^2) on a (a) Au electrode and (b) Pt electrode.