

Figure S1. XRD results of MoS_2/Co_x (x is the addition amount of $\text{Co}(\text{NO}_3)_2 \cdot 6\text{H}_2\text{O}$, $x=0, 0.1, 0.2, 0.3, 0.5$ (mmol)).

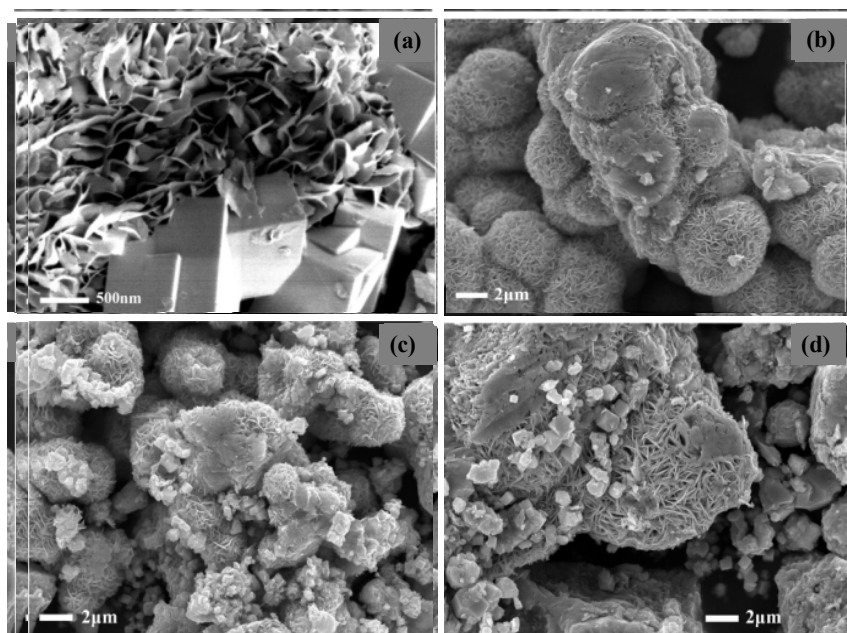


Figure S2. SEM photograph of MoS₂/Co_x (x is the addition amount of Co(NO₃)₂·6H₂O, x=0, 0.1, 0.2, 0.3, 0.5 (mmol)) **(a)** MoS₂/Co_{0.1}, **(b)** MoS₂/Co_{0.2}, **(c)** MoS₂/Co_{0.3}, **(d)** MoS₂/Co_{0.5}.

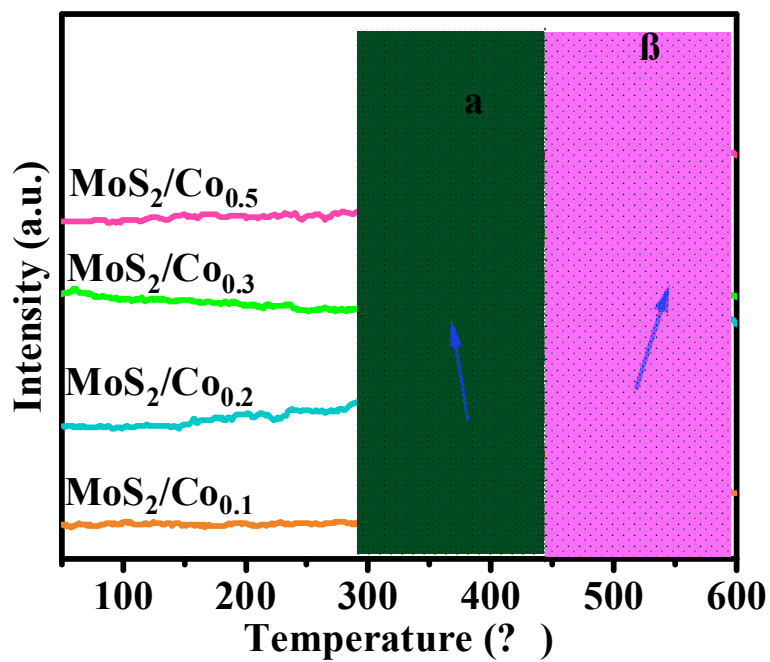


Figure S3. CO₂ adsorption characteristic curve of MoS₂/Co_x (x is the addition amount of Co(NO₃)₂·6H₂O, x= 0.1, 0.2, 0.3, 0.5 (mmol)).

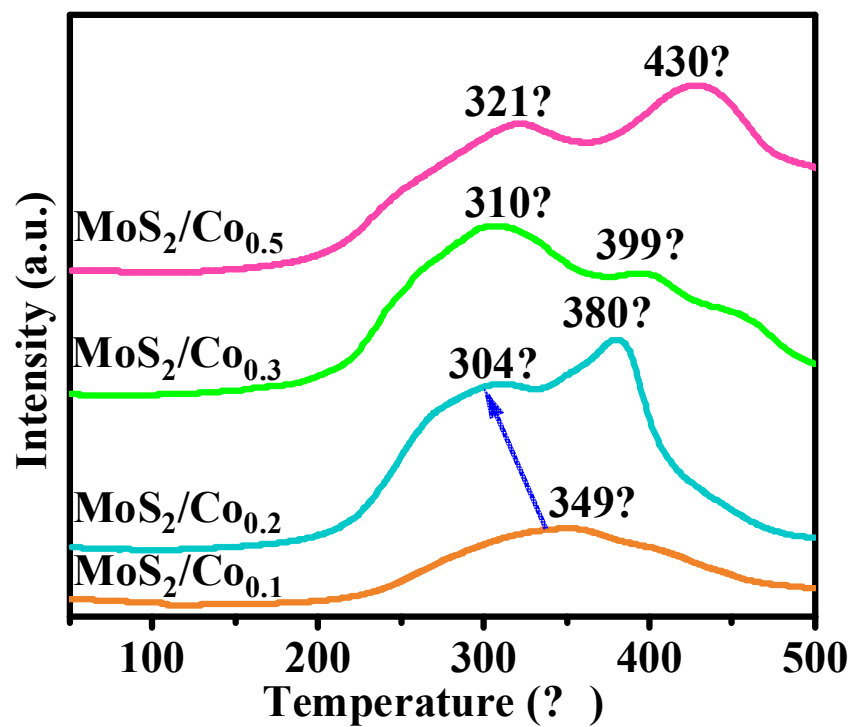


Figure S4. H₂-TPR reduction curve of MoS₂/Co_x (x is the addition amount of Co(NO₃)₂·6H₂O, x= 0.1, 0.2, 0.3, 0.5 (mmol)).

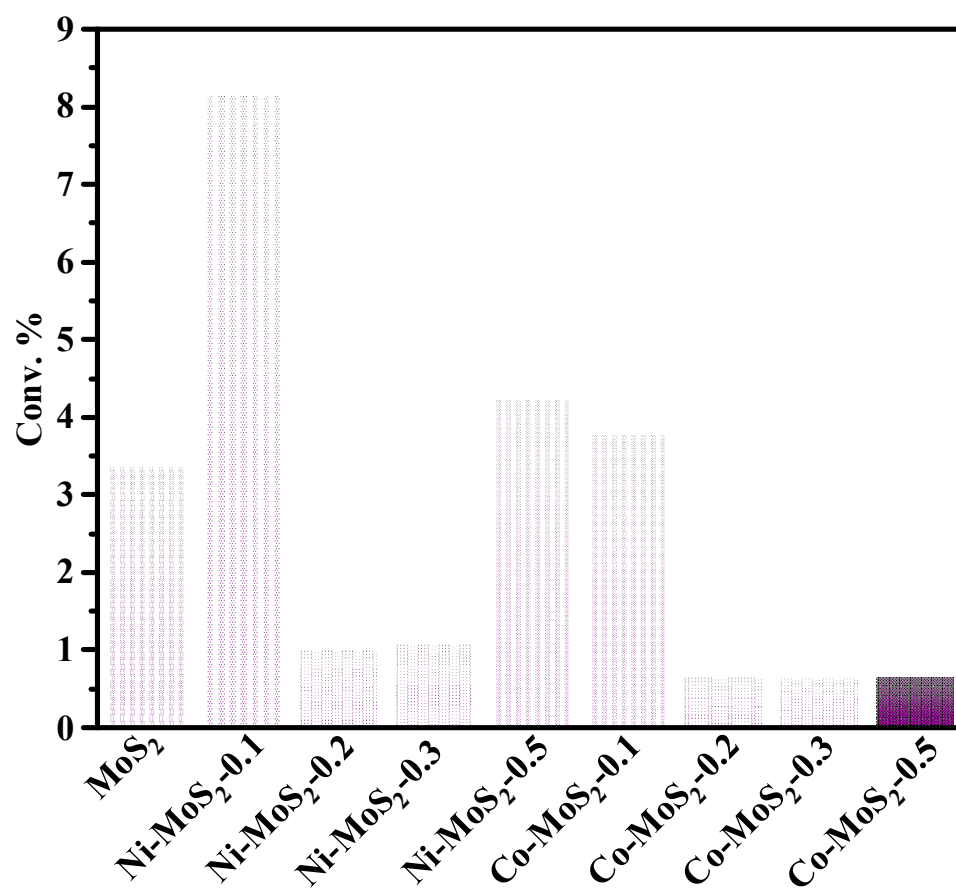


Figure S5. CO₂ conversion rate of MoS₂, MoS₂/Ni_x and MoS₂/Co_x catalysts.

