

## **Supplementary Information**

### **Acid-tolerant Intermetallic Cobalt-nickel Silicides as Noble Metal-like Catalysts for Selective Hydrogenation of Phthalic Anhydride to Phthalide**

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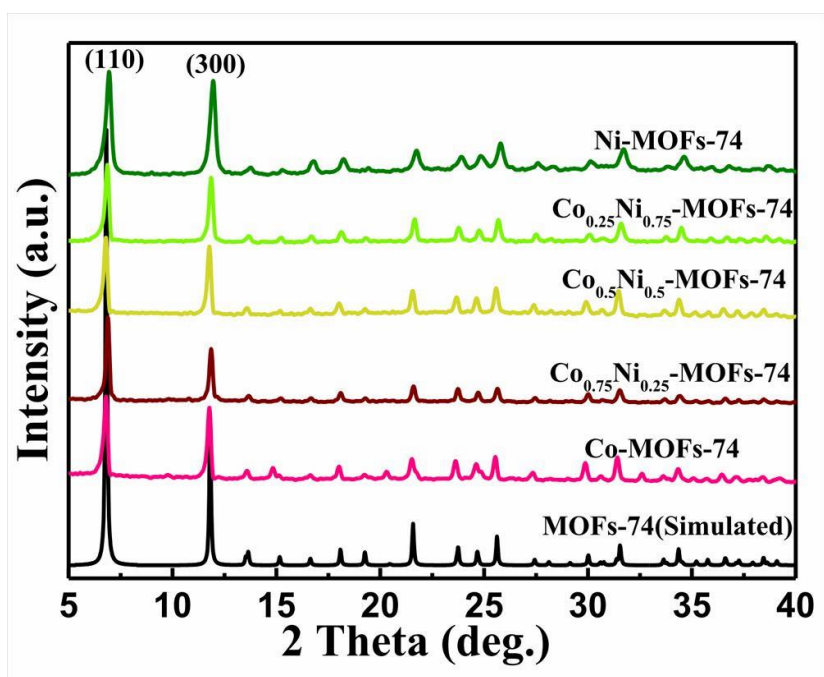
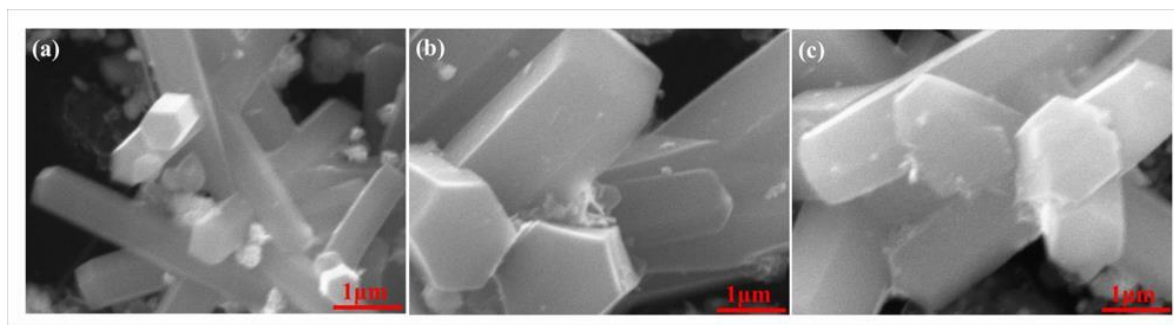
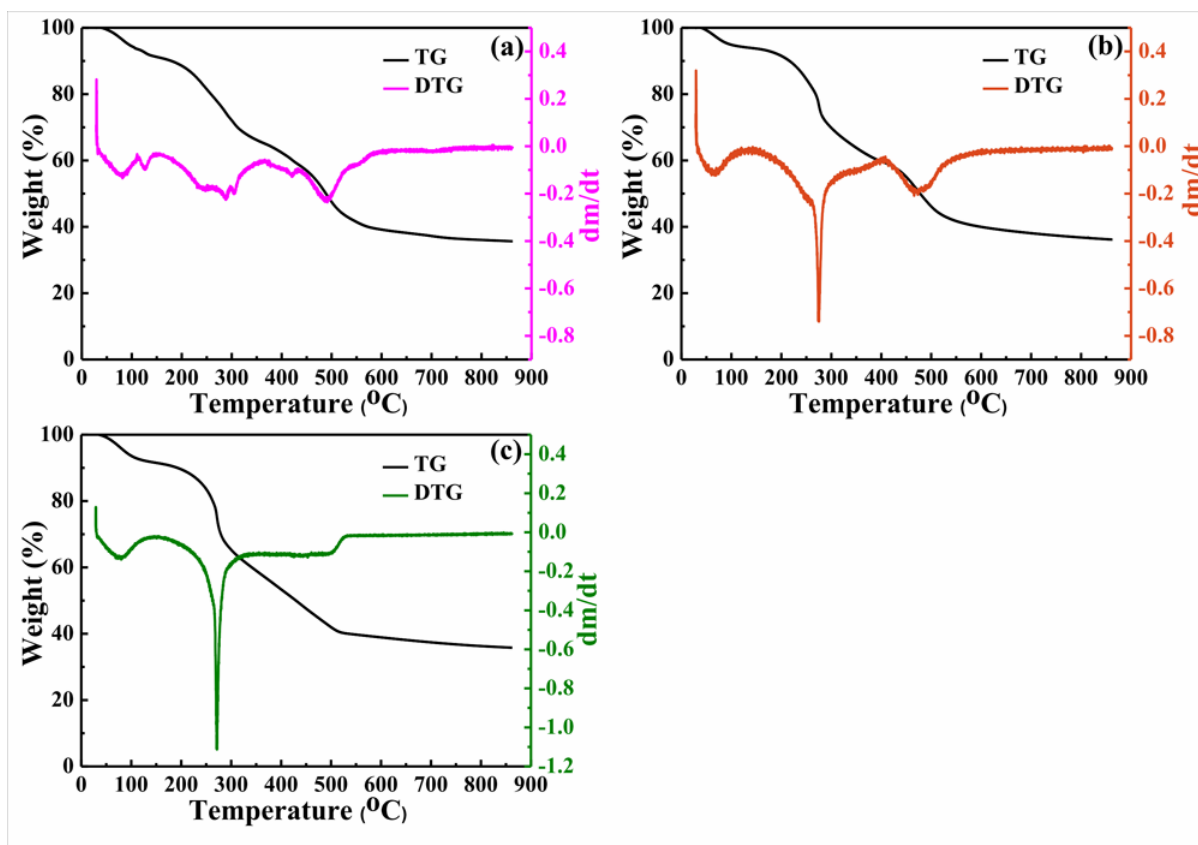


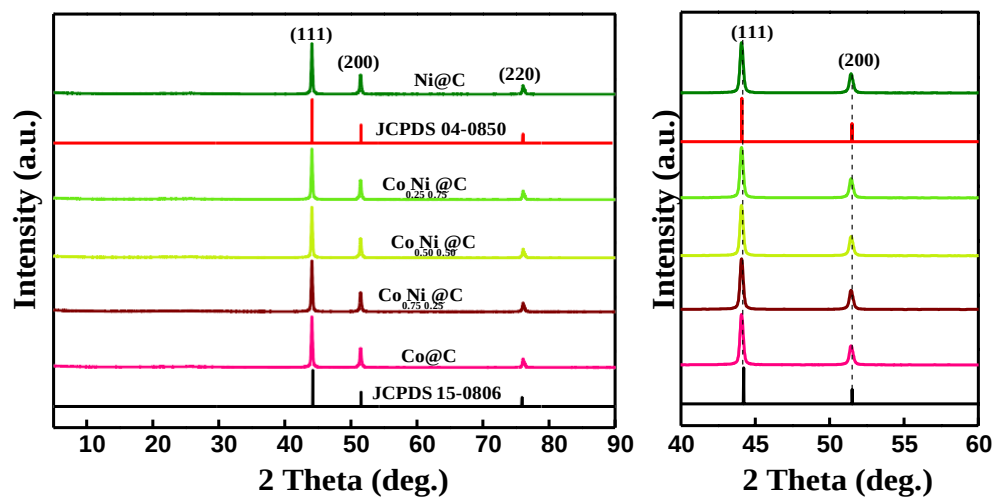
Figure S1. Powder XRD patterns of  $\text{Co}_z\text{Ni}_{1-z}\text{-MOFs-74}$ .



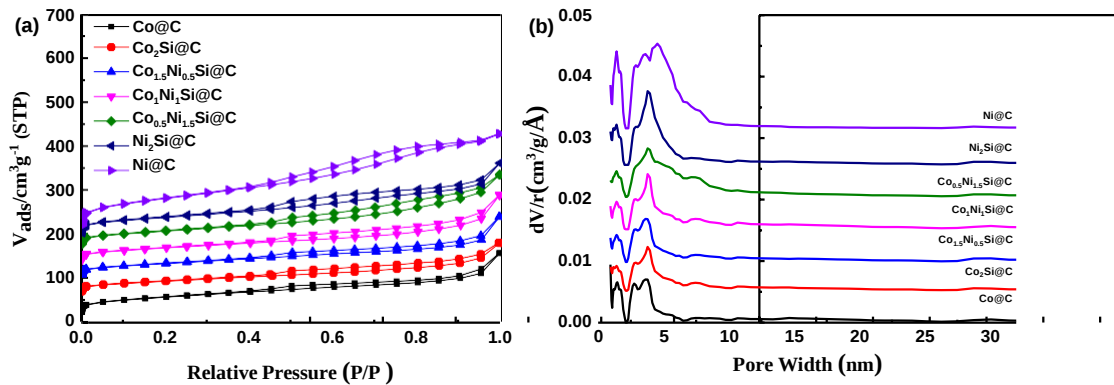
**Figure S2.** SEM images of (a) Co-MOFs-74, (b)  $\text{Co}_{0.75}\text{Ni}_{0.25}$ -MOFs-74, and (c) Ni-MOFs-74.



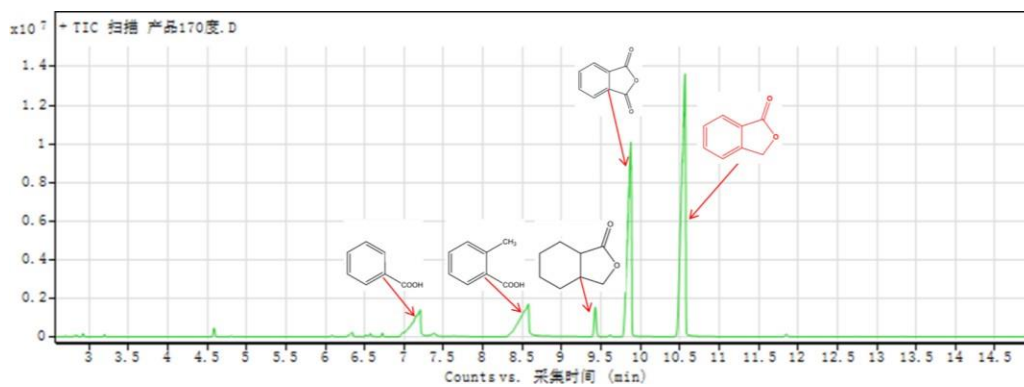
**Figure S3.** TG-DTG curves of (a) Co-MOFs-74, (b) Co<sub>0.75</sub>Ni<sub>0.25</sub>-MOFs-74, and (c) Ni-MOFs-74.



**Figure S4.** XRD patterns of  $\text{Co}_z\text{Ni}_{1-z}\text{@C}$  samples.



**Figure S5.** (a) Nitrogen adsorption-desorption isotherms at 77 K and (b) corresponding pore size distribution curves of Co@C, Ni@C, and Co<sub>x</sub>Ni<sub>2-x</sub>Si@C.



**Figure S6.** GC-MS profile of the products for the hydrogenation of phthalic anhydride (reaction condition: 100 mg Ni<sub>2</sub>Si@C catalyst, 180 °C, 4 MPa H<sub>2</sub>, 2 h).