

Supplementary Information

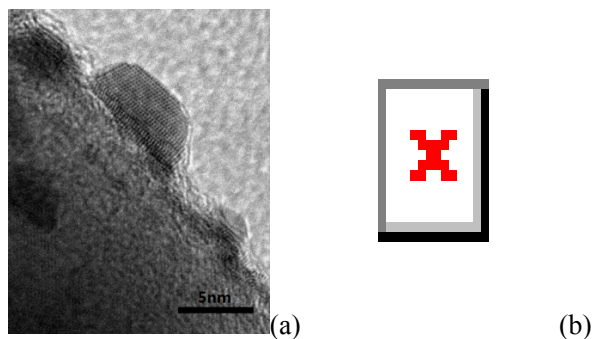


Fig. S1 HRTEM iamges of (a,b) used Au/c- Co_3O_4 .

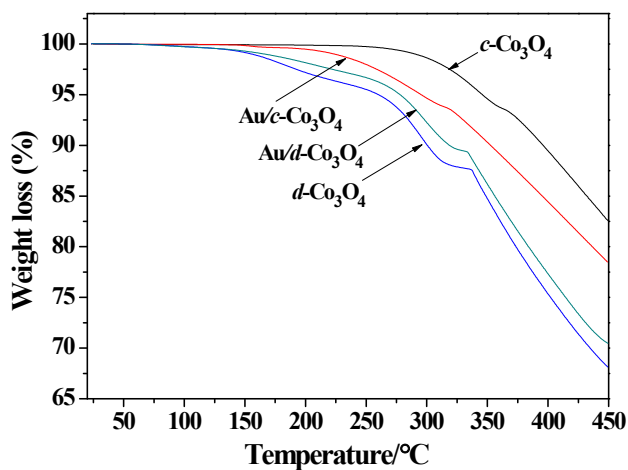


Fig. S2 TGA measurements over d- Co_3O_4 , c- Co_3O_4 , Au/d- Co_3O_4 , and Au/c- Co_3O_4 in reducing atmosphere (5% H_2 -Ar).

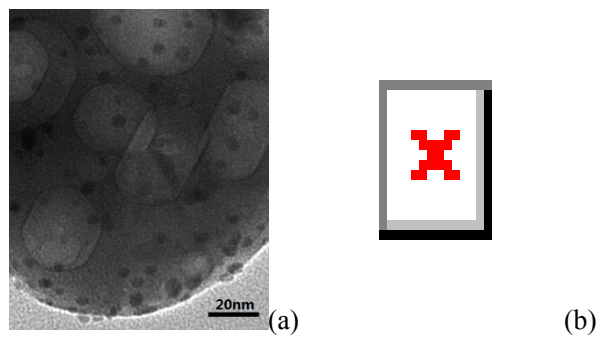


Fig. S3 TEM images of (a) Au/c-Co₃O₄ and (b) Au/d-Co₃O₄ after pre-reaction at 350 °C for 5 h.

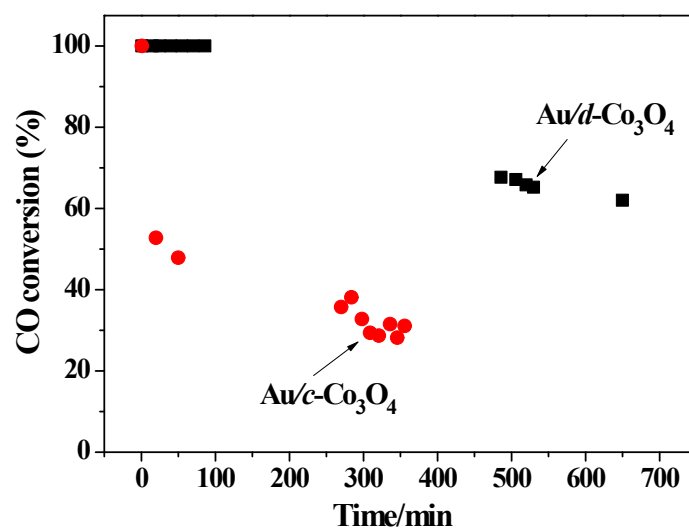


Fig. S4 Stability tests over Au/c-Co₃O₄ and Au/d-Co₃O₄ after pre-reaction at 350 °C for 5 h.