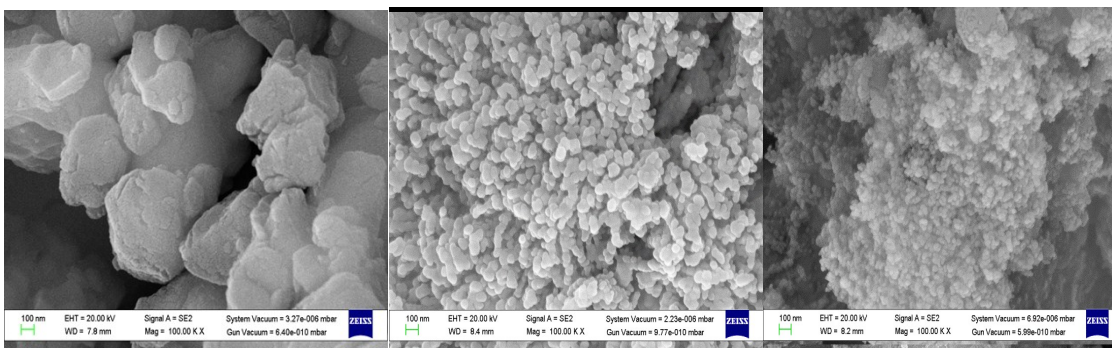


Supplementary information

Cu-Zn/CaO

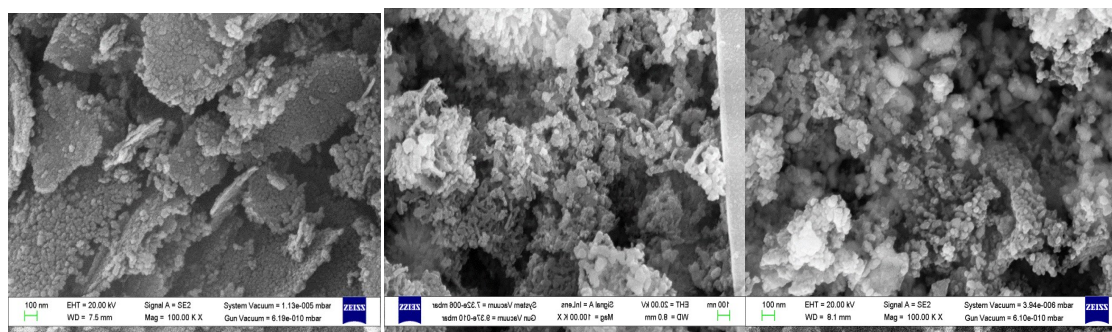


CaO support

Calcined catalyst

Reduced catalyst

Cu-Zn/MgO

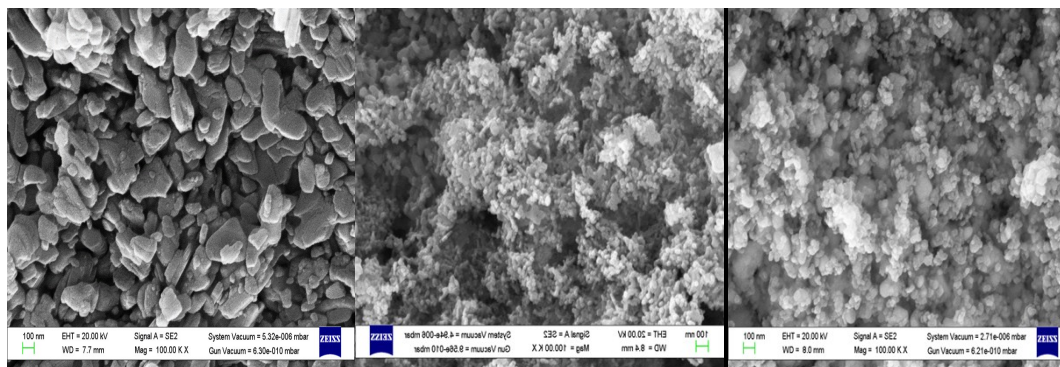


MgO support

Calcined catalyst

Reduced catalyst

Cu-Zn/V₂O₅

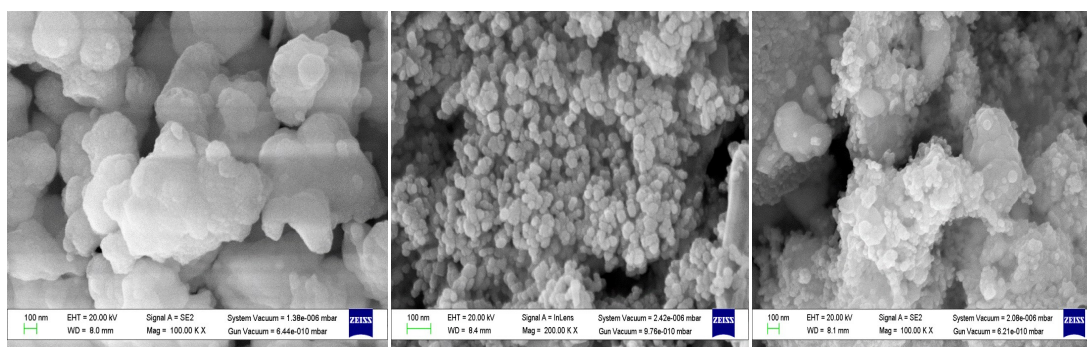


V₂O₅ Support

Calcined catalyst

Reduced catalyst

Cu-Zn/ZrO₂

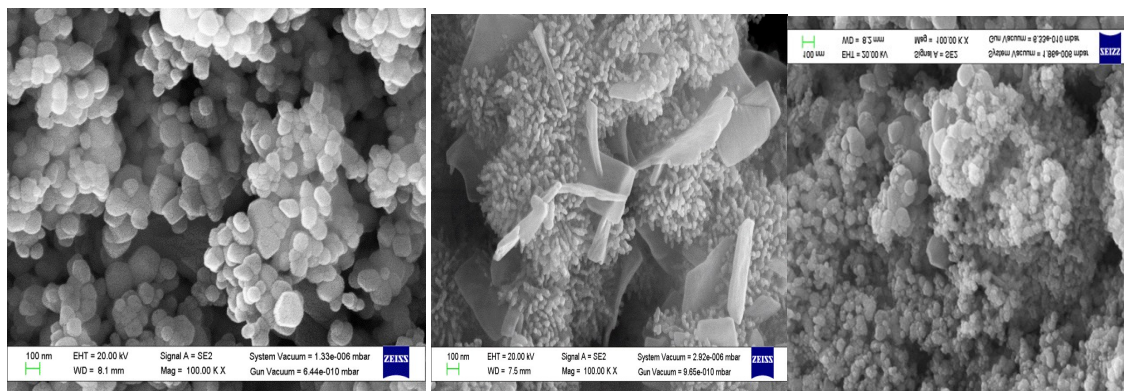


ZrO₂ Support

Calcined catalyst

Reduced catalyst

Cu-Zn/TiO₂



TiO₂ Support

Calcined catalyst

Reduced catalyst

Figure 1 (S) FE-SEM images of supports, calcined and reduced catalyst

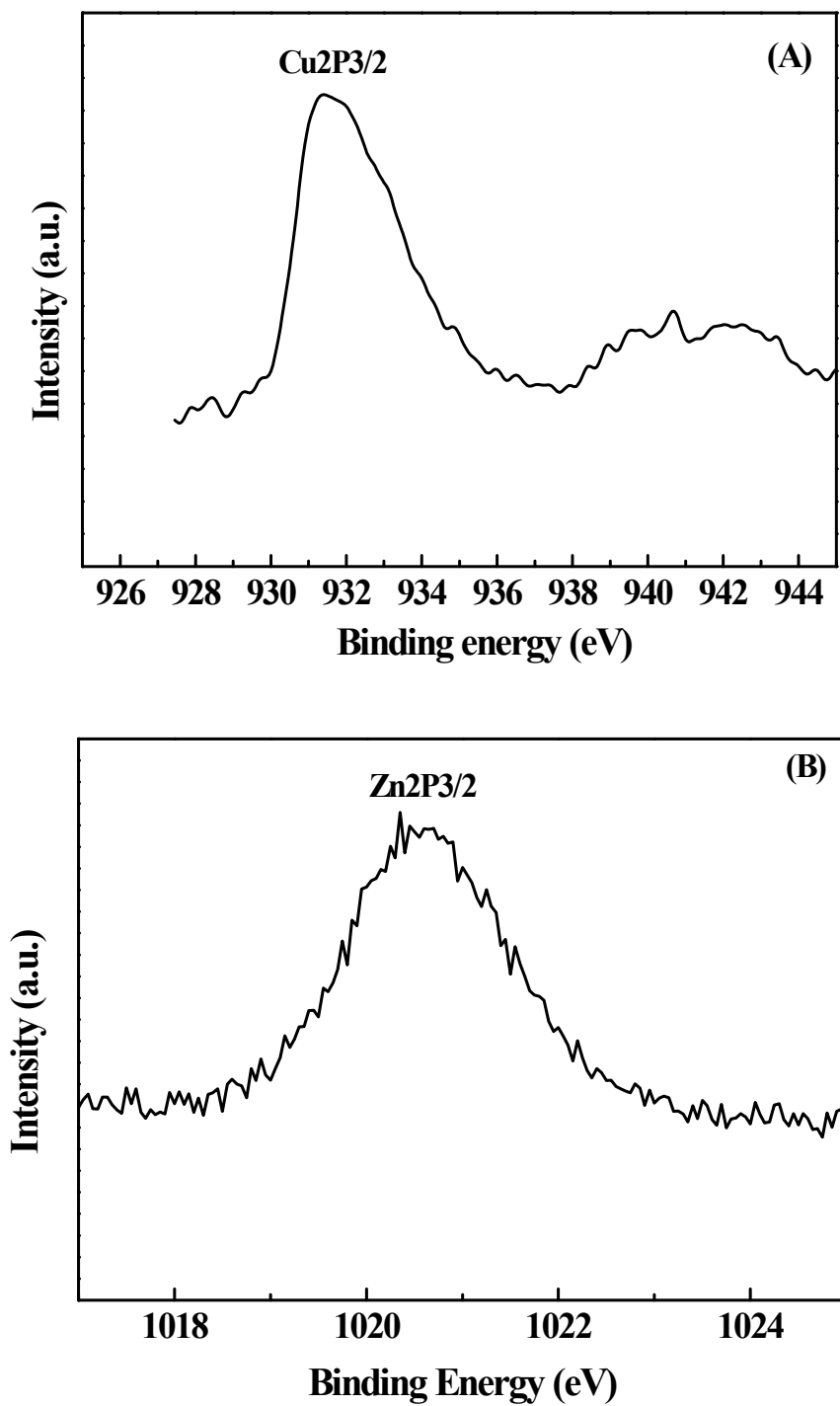


Figure 2(S). XPS spectra of Cu₂p_{3/2} (A) and Zn₂p_{3/2}(B) of fresh reduced Cu-Zn/MgO catalyst

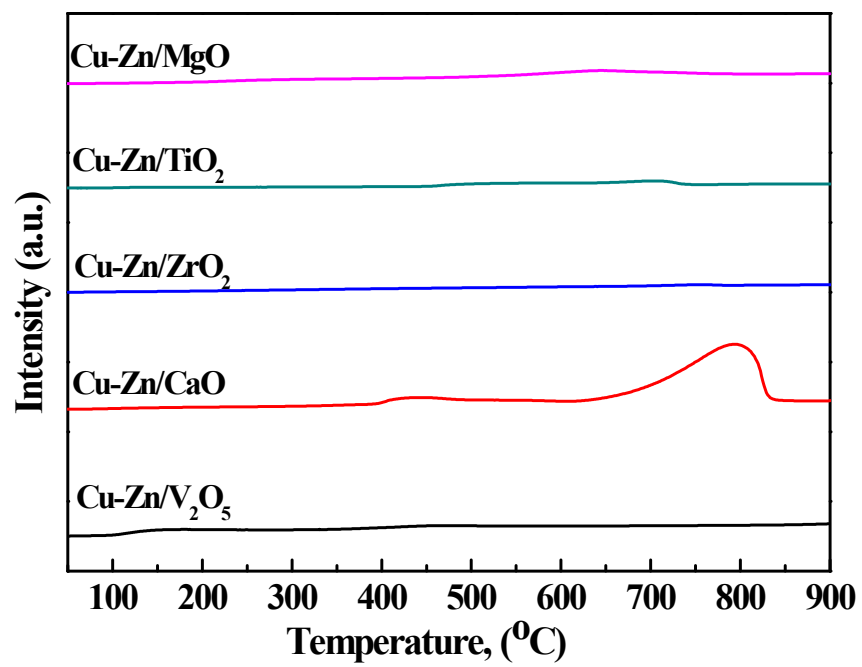


Figure 3 (S). Blank TPD results of the reduced catalysts

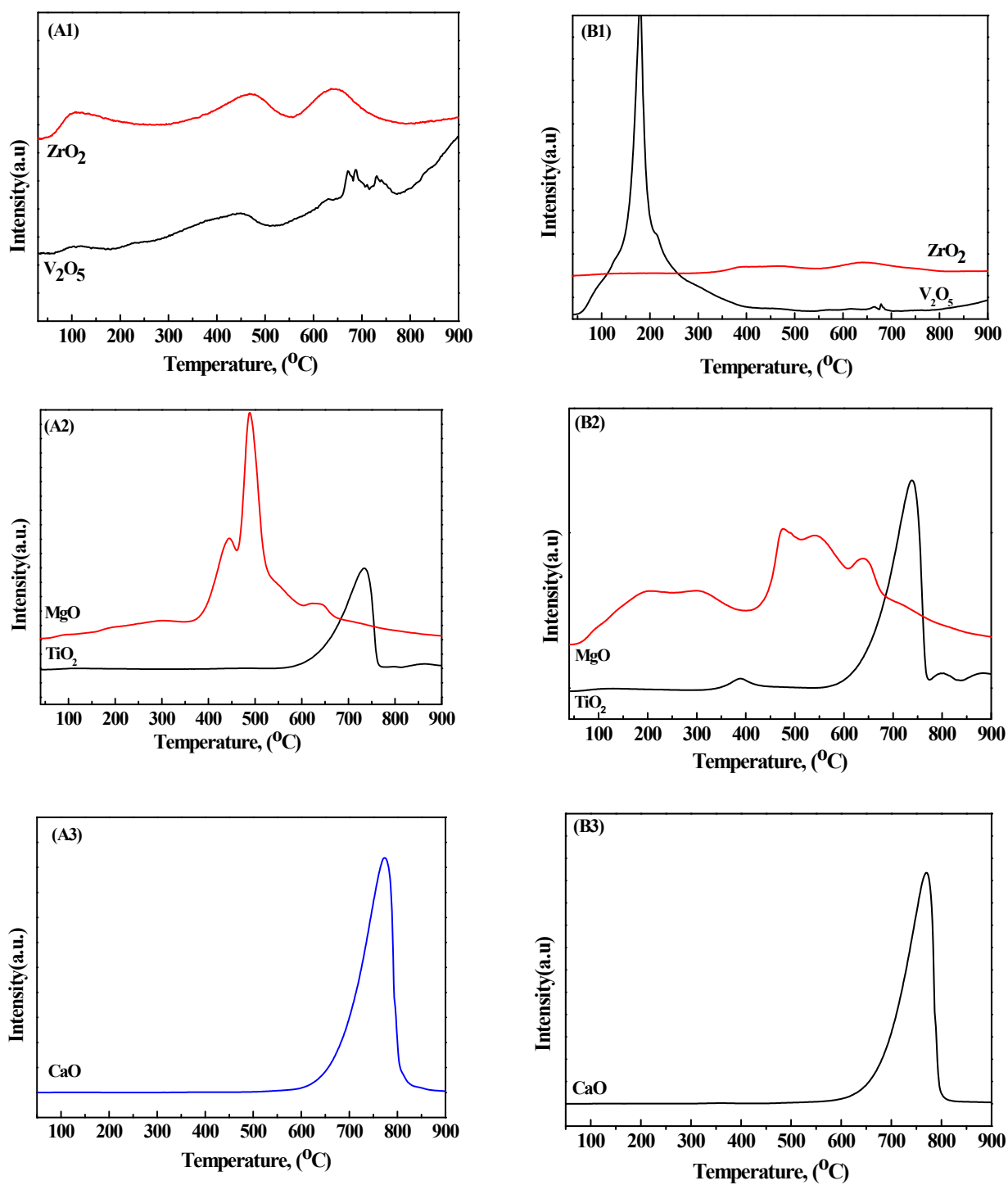


Figure 4(S) TPD patterns of support (A1) -(A3) CO₂-TPD and (B1) -(B3) NH₃-TPD