Supplementary information for

Improving Anti-coking Properties of Ni/Al_2O_3 Catalysts via the Synergistic Effect of Metallic Nickel and Nickel Phosphides in Dry Methane Reforming

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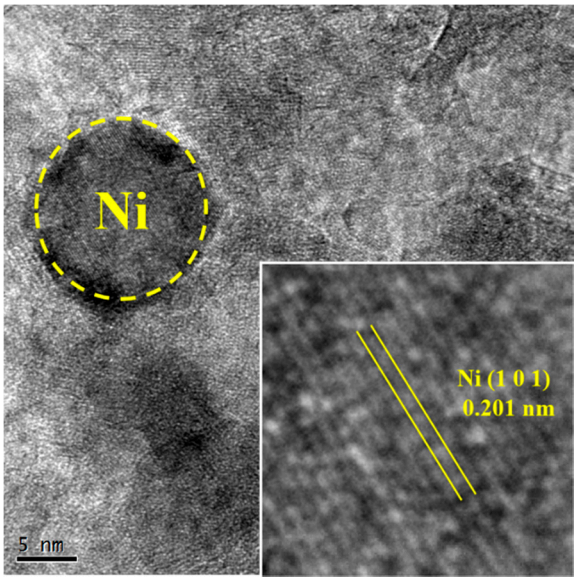

Figure S1. HRTEM image of the reduced Ni/Al_2O_3 catalysts (the inset is the magnified image of Ni).

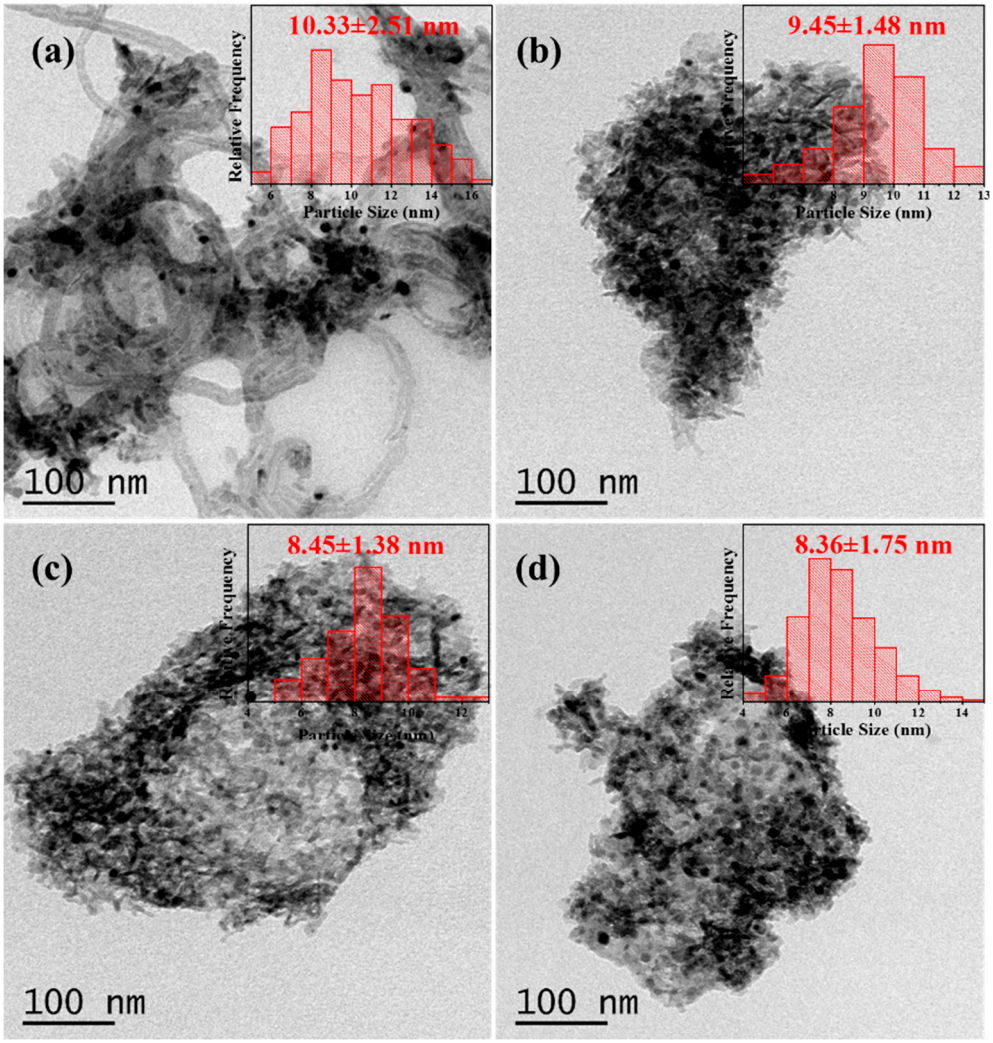

Figure S2. TEM images and corresponding size distributions of spent (a) Ni/Al_2O_3; (b) $NiP\text{-}4/Al_2O_3$; (c) $NiP\text{-}3/Al_2O_3$; (d) $NiP\text{-}2/Al_2O_3$.

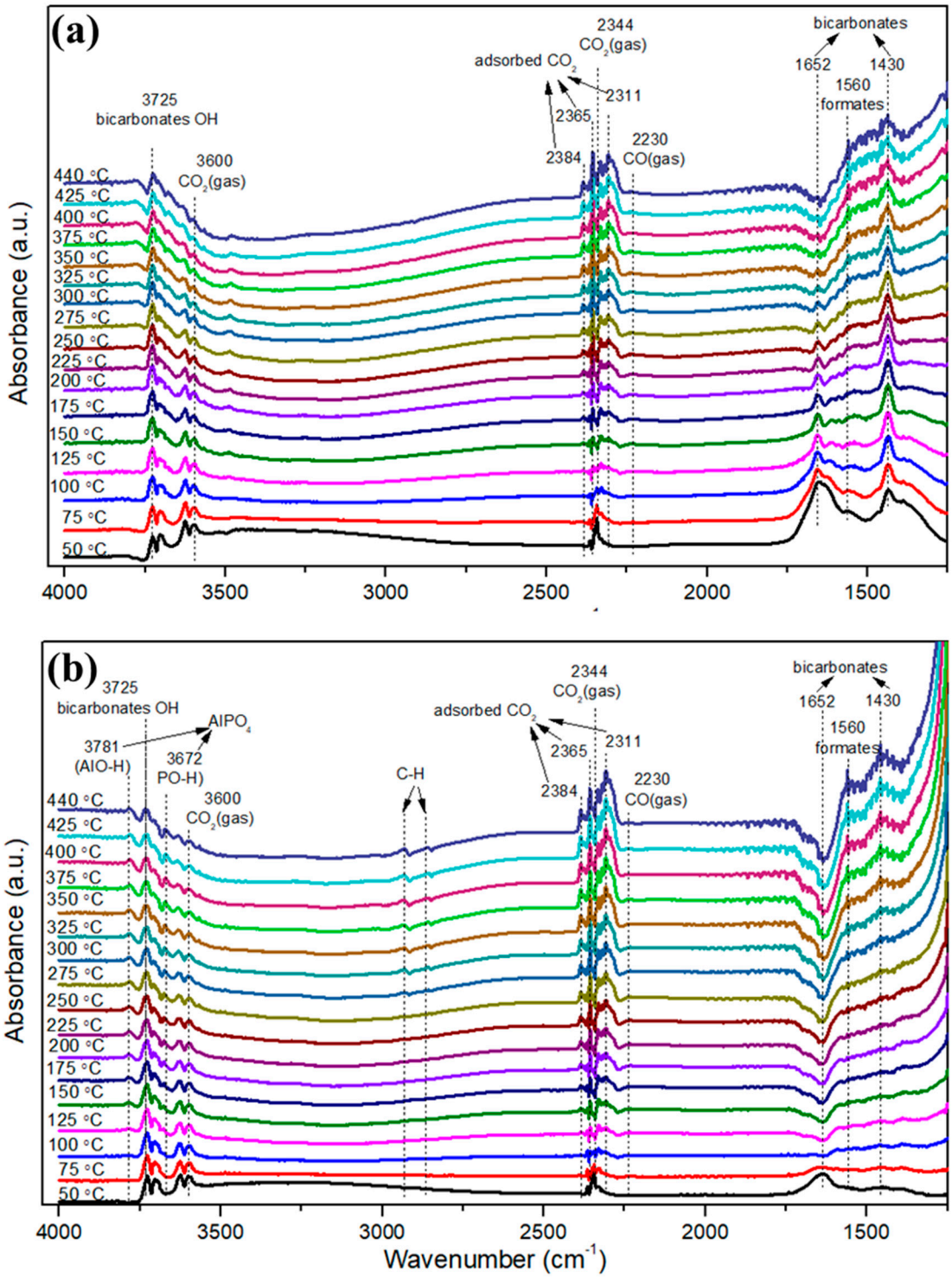

Figure S3. DRIFTS spectra of CO_2 temperature programmed adsorption at different temperatures over (a) Ni/Al_2O_3 and (b) NiP-2/Al_2O_3.