Supplementary information:

Strong metal-support interactions between Ni and ZnO particles and their effect on the methanation performance of Ni/ZnO

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Figure S.1. The stabilities for CO methanation over the Ni/γ-Al₂O₃ sample reduced at 500 °C (a) and Ni/ZnO samples reduced at 350 °C (b), 400 °C (c), 450 °C (d) and 500 °C (e). Reaction conditions: temperature = 380 °C; pressure = 0.1 MPa; GHSV = 1000 h⁻¹.

Figure S.2. The TEM image of the Ni/ZnO sample reduced at 350 °C after 300 h reaction time. The inset is Ni particles size distribution histogram.
Figure S.3. CO conversion over Ni/ZnO samples reduced at 400 °C (a), 450 °C (b) and 500 °C (c) after they were in situ re-oxidized in air flow of 50 mL/min at 200 °C for 2 h and subsequently re-reduced in H₂ flow of 50 mL/min at 350 °C for 3 h.