

Supporting Information

Low-temperature conversion of the CaO-Captured CO₂ to CH₄ over the greenly prepared Ni/CaO/Al₂O₃ composite under static pressure conditions

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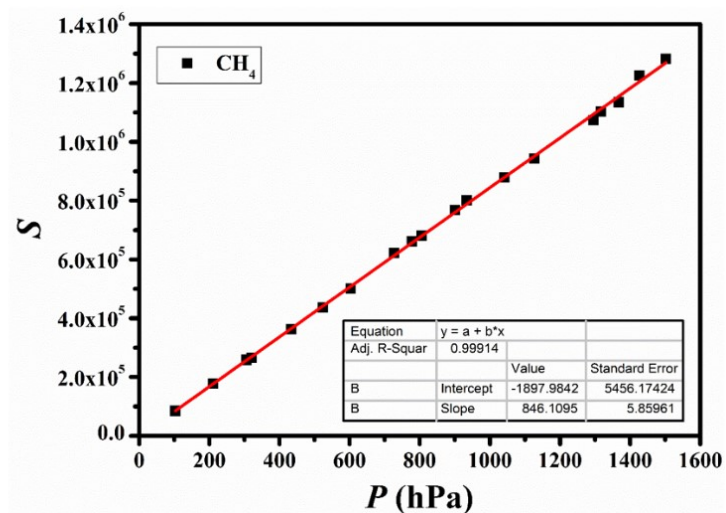


Fig. S1. The pressure-peak area standard curve of high-purity methane in the TCD channel of a gas chromatograph at room temperature.

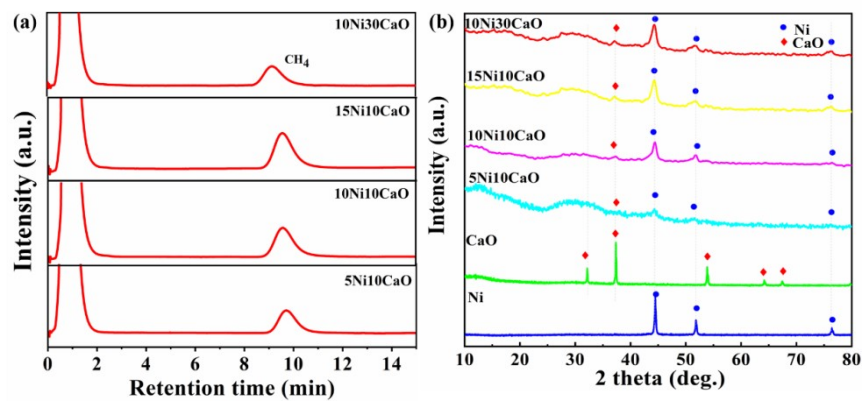


Fig. S2. GC curve of gas product (a) and (b) XRD spectrum of composites prepared by high-speed mechanical ball milling reaction.

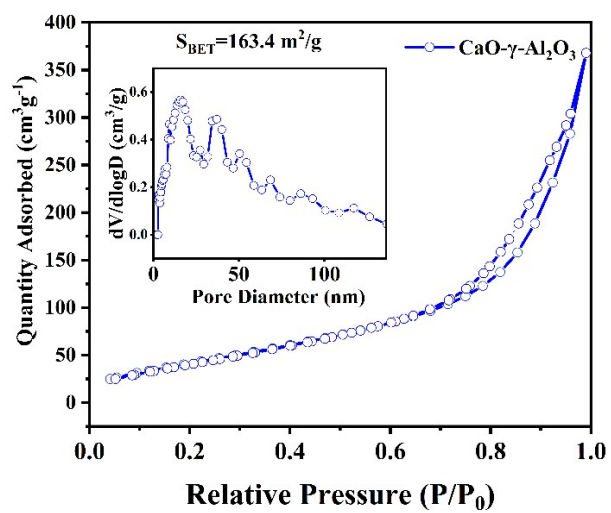


Fig. S3. N₂ adsorption-desorption curve and pore size distribution diagram (inset) of the CaO/ γ -Al₂O₃ composite.

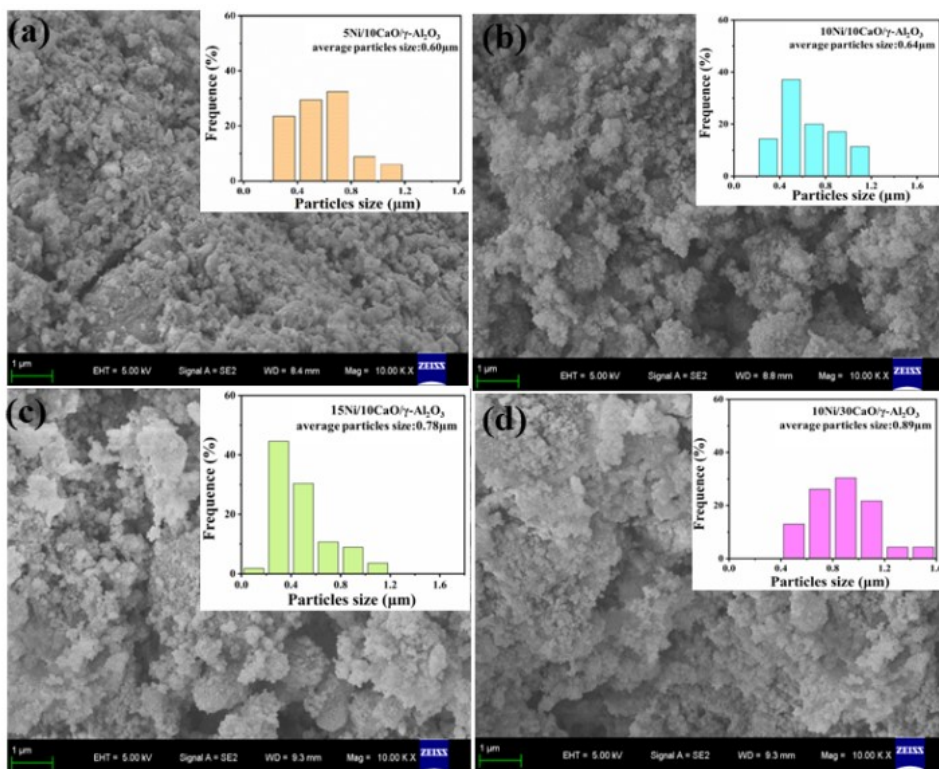


Fig. S4. SEM images of Ni/CaO/ γ -Al₂O₃ after CO₂ capture and hydromethanation at 350 °C.