

Electronic Supplementary Material (ESI) for Catalysis Science & Technology.  
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## Supporting Information

### Effects of alumina morphology on dry reforming of methane over Ni/Al<sub>2</sub>O<sub>3</sub> catalysts

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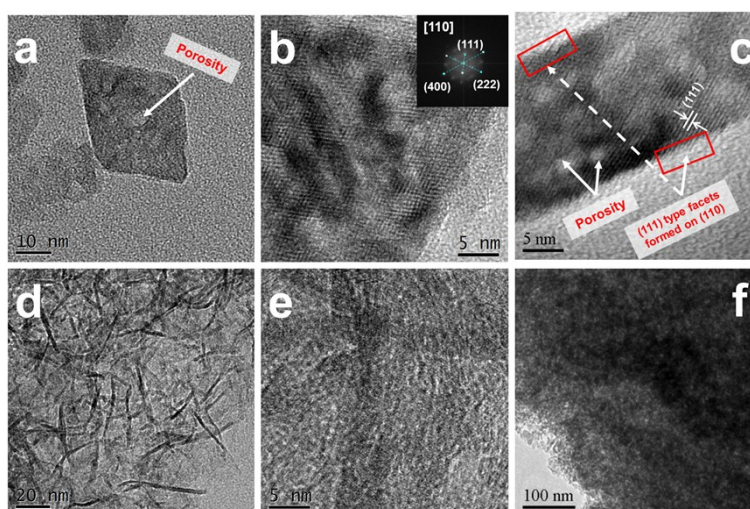


Fig. S1 TEM images of as-prepared supports: (a, b, c) Al<sub>2</sub>O<sub>3</sub>-S, (d, e) Al<sub>2</sub>O<sub>3</sub>-F and (f) Al<sub>2</sub>O<sub>3</sub>-P.

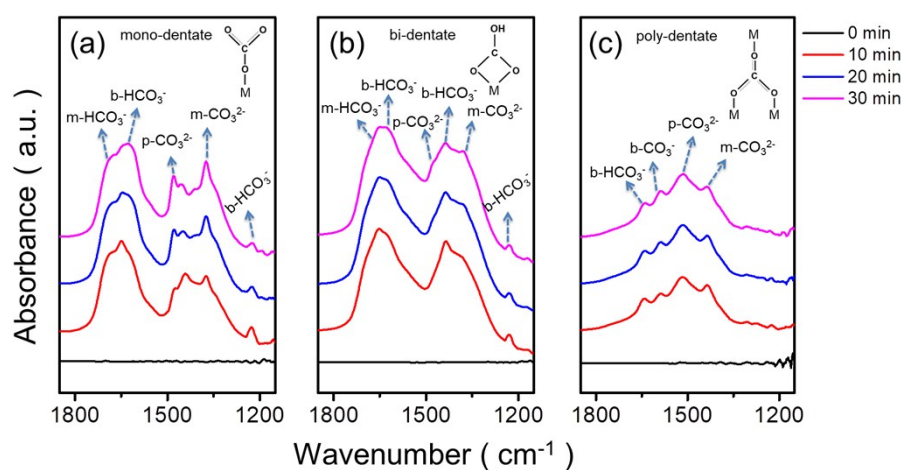


Fig. S2 In situ DRIFT spectra of CO<sub>2</sub> adsorption at 35 °C for 30 min: (a) Al<sub>2</sub>O<sub>3</sub>-S, (b) Al<sub>2</sub>O<sub>3</sub>-F and (c) Al<sub>2</sub>O<sub>3</sub>-P.

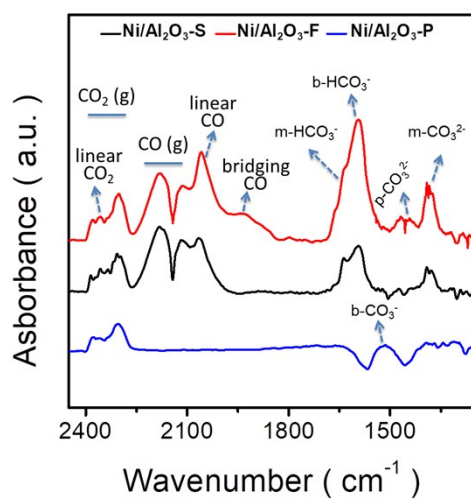


Fig. S3 In situ DRIFT spectra of CO<sub>2</sub> desorption in N<sub>2</sub> flow at 400 °C: Ni/Al<sub>2</sub>O<sub>3</sub>-S (black), Ni/Al<sub>2</sub>O<sub>3</sub>-F (red) and Ni/Al<sub>2</sub>O<sub>3</sub>-P (blue). CO<sub>2</sub> was adsorbed at 400 °C for 30 min before desorption process.