**Supplementary Materials**

**The Influence of Si/Al Ratios on Adsorption and Desorption Characterizations of Pd/Beta Served as Cold-Start Catalysts**

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**Figure S1.** N₂ adsorption-desorption isotherm of H-Beta (a) and Pd/Beta (b) samples with different Si/Al ratios.

**Figure S2.** Pore size distribution curves of H-Beta (a) and Pd/Beta (b) samples with different Si/Al ratios.
Figure S3. HRTEM figures of each sample (a: Pd/16; b: Pd/55; c: Pd/83).

Figure S4. In situ FT-IR of NH₃ adsorption (Temperature: 80 °C; Flow: 500 ppm NH₃ + N₂).