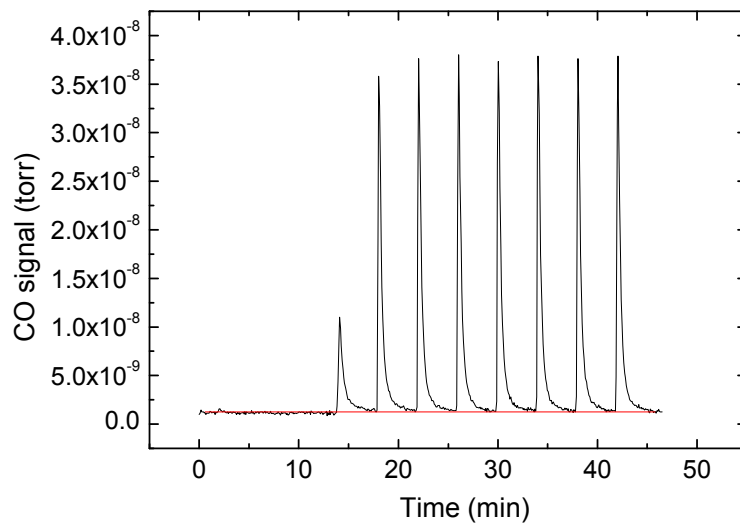


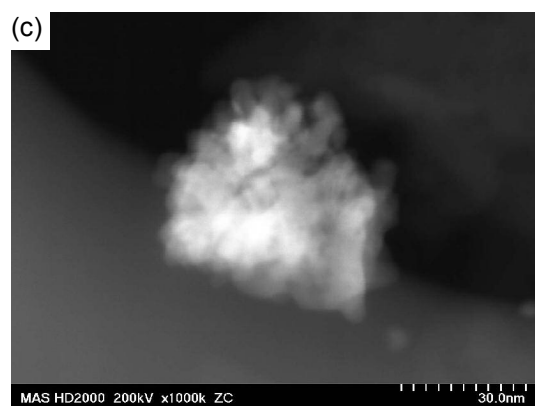
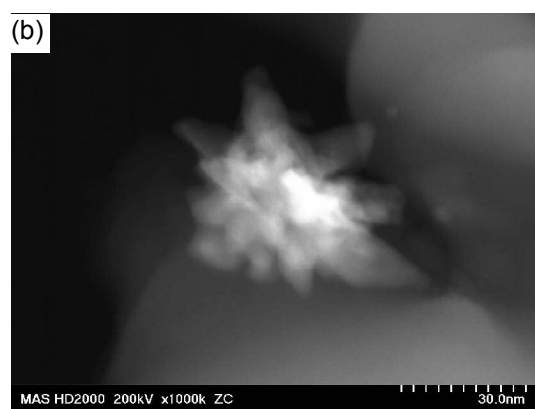
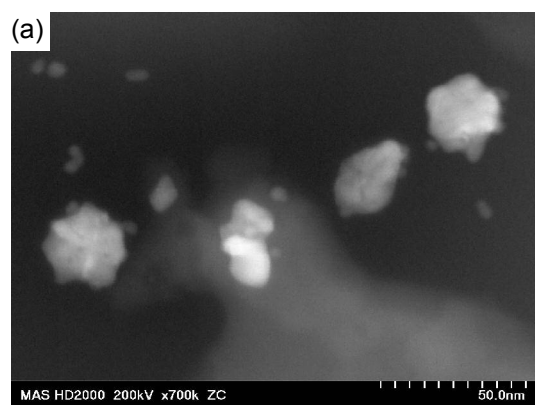
## Supporting Information

### Characterization of Palladium (Pd) on Alumina Catalysts Prepared Using Liquid Carbon Dioxide

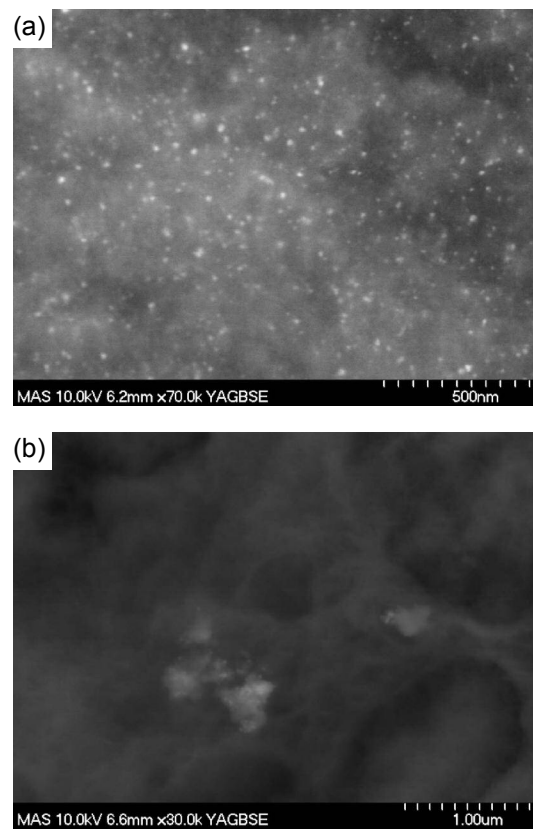
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**Figure S1.** Typical CO pulse chemisorption data. The first three CO pulses were completely absorbed on the Pd surface. Approximately half amount of the fourth CO pulse was absorbed on the Pd surface and the Pd surface was saturated with CO.



**Figure S2.** STEM images of 1.15 wt% Pd on  $\alpha$ -alumina. (a) Small Pd particles with  $\sim 5$  nm in diameter were observed. (b) Spikes in the Pd particles were observed. (C) Porous structure in the Pd particles was observed.



**Figure S3.** SEM images of (a) 3.94 wt% Pd on  $\gamma$ -alumina and (b) 0.58 wt% Pd on  $\gamma$ -alumina.