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

Supplementary Data

Nanoscale Co-Based Catalysts for Low-Temperature CO Oxidation

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This PDF file includes:

Figs. S1 to S8

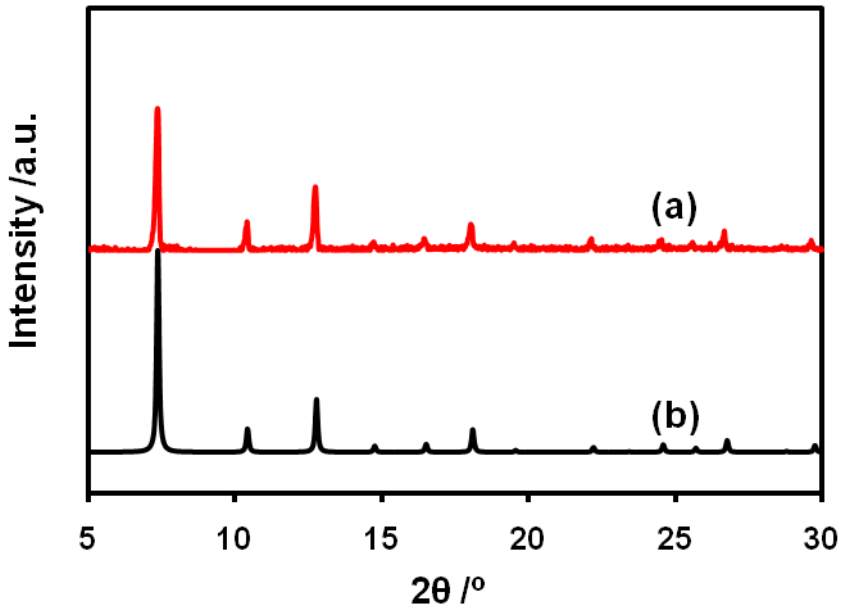

Figure S1. Powder XRD patterns of ZIF-67: (a) as-synthesized, and (b) simulated.

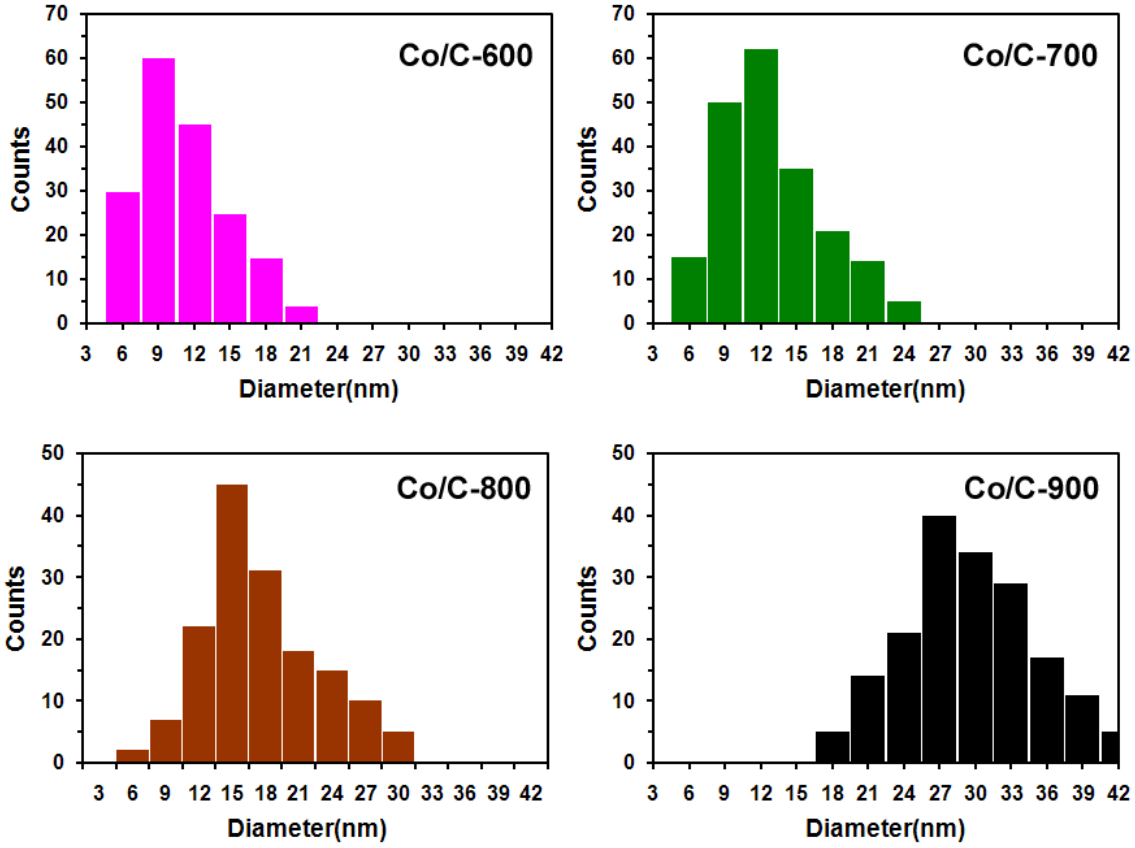

Figure S2. Size distribution of Co nanoparticles in Co/C-X corresponding to TEM micrographs in Figure 2.

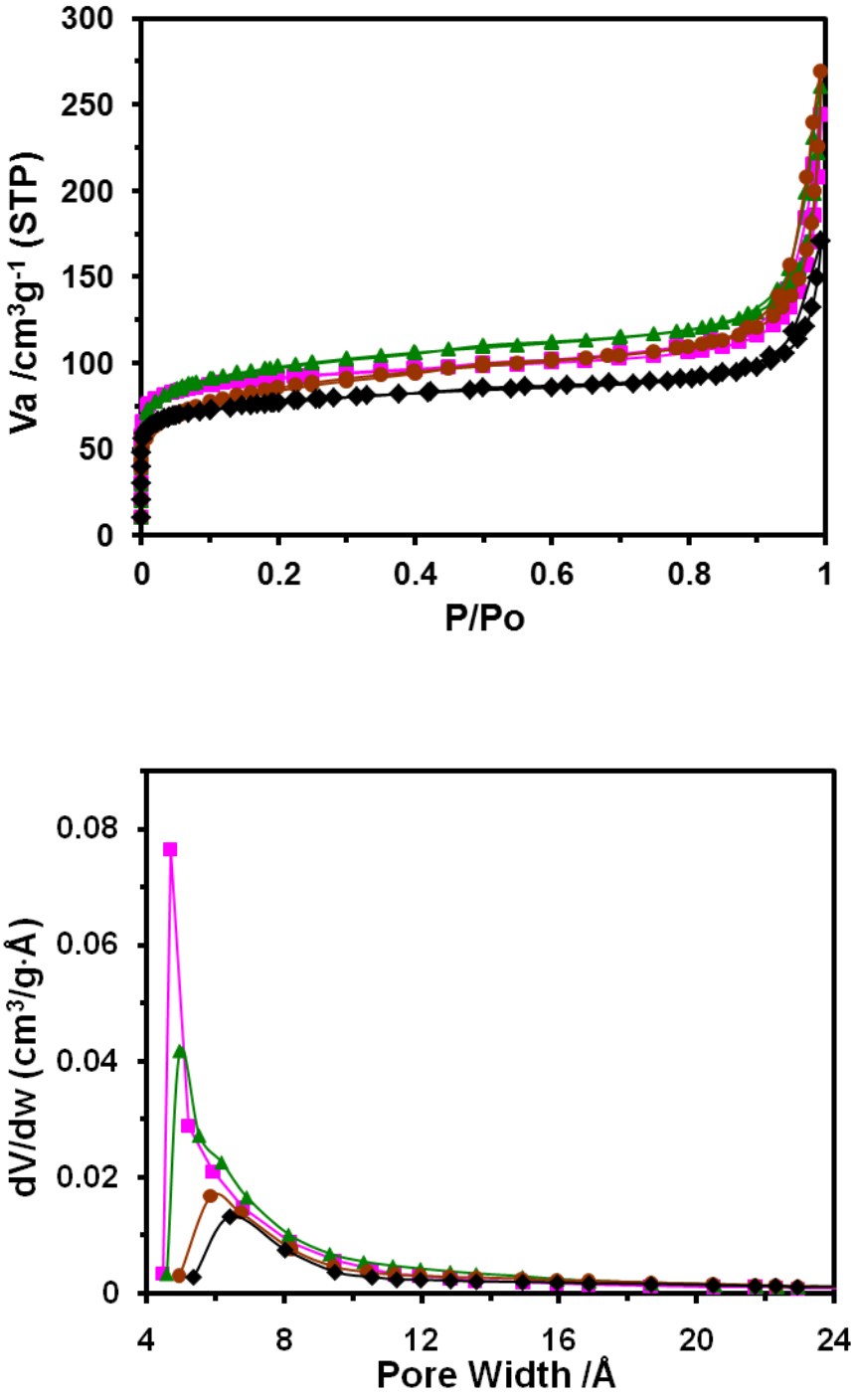

Figure S3. Nitrogen adsorption-desorption isotherms at 77 K (top) and corresponding pore-size distribution curves of Co/C-600 (■), Co/C-700 (▲), Co/C-800 (●), and Co/C-900 (◆).

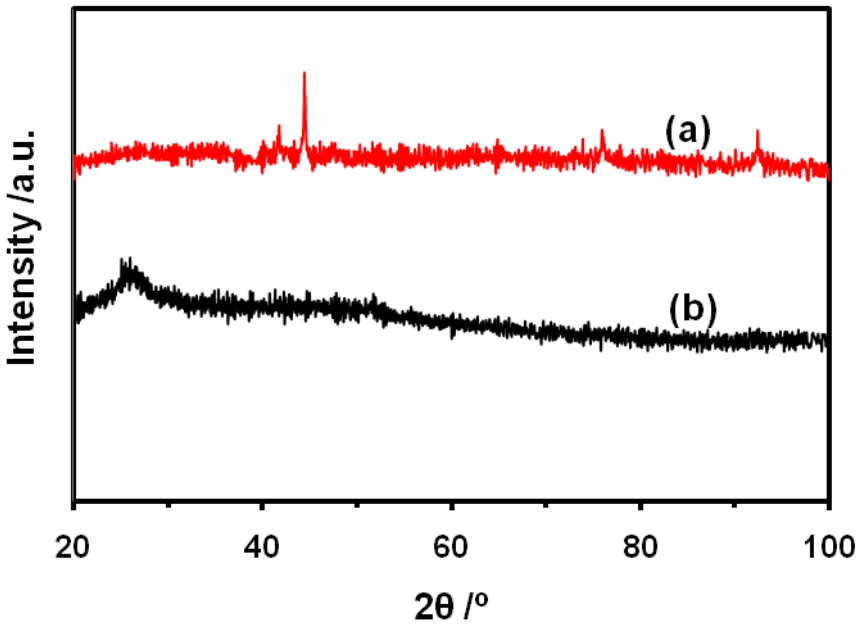

Figure S4. Powder XRD patterns of (a) Co/C-600-Co, and (b) Co/C-600-C.

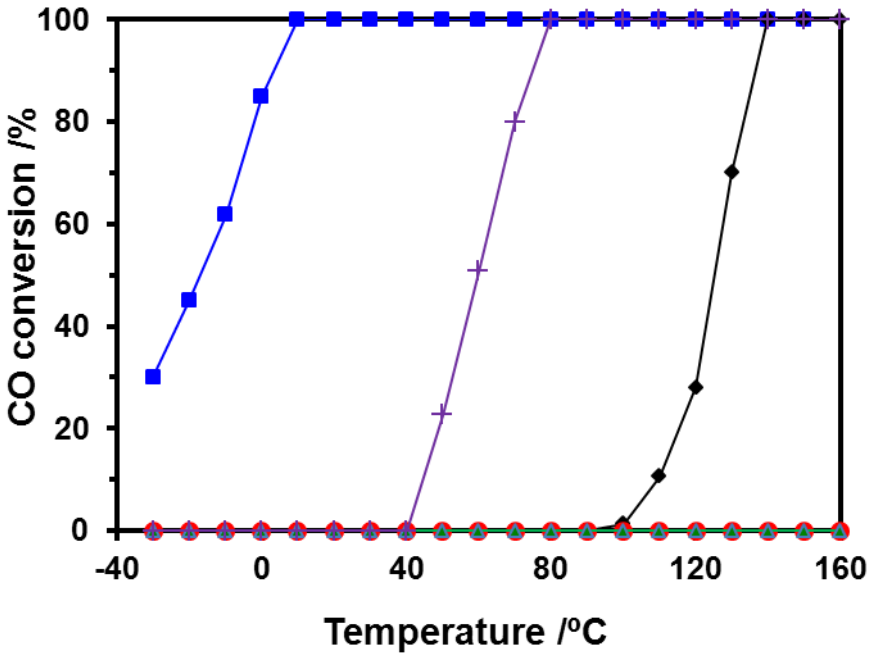

Figure S5. Conversion as a function of reaction temperature for CO oxidation over Co/C-600 (■), Co/C-600-Co (◆), Co/C-600-C (●), Co/AC (+), and Co and AC physical mixture (▲) under dry gas conditions.

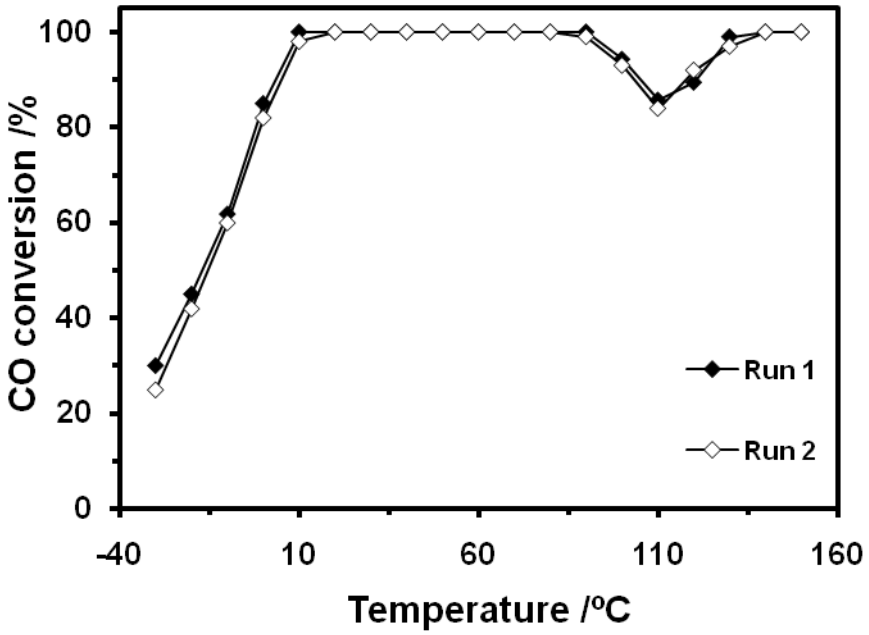

Figure S6. Conversion as a function of reaction temperature for CO oxidation over Co/C-600 under wet gas conditions.

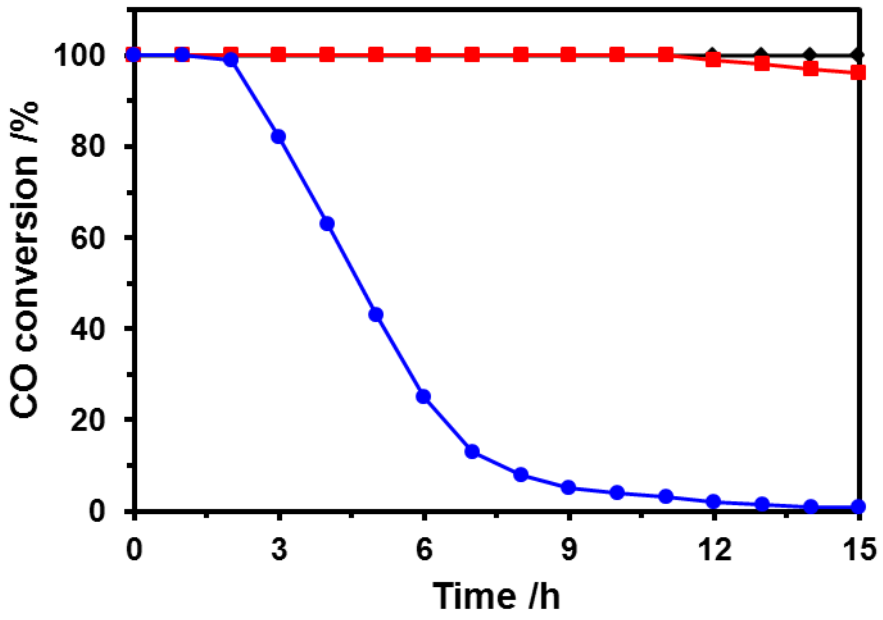

Figure S7. Effect of H_2O concentration on the stability of the Co/C-600 for CO oxidation at a constant temperature of 25 °C for 15 h under 500 ppm moisture (■), 4 vol.% moisture (●), and dry (◆) conditions, respectively.

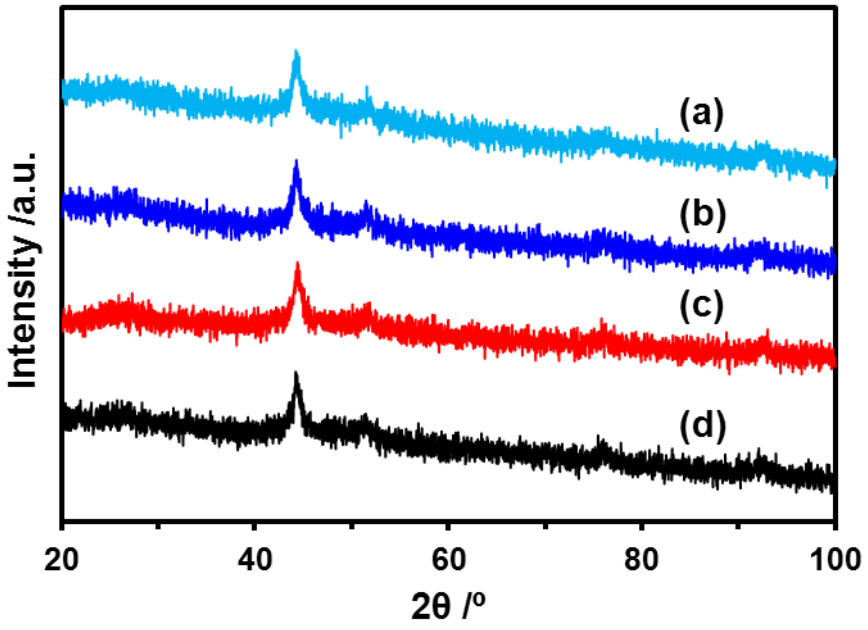

Figure S8. Powder XRD patterns of fresh (a) and used Co/C-600 after the first (b), second (c), and third (d) run of stability test under wet gas conditions corresponding to results in Figure 10.