

**Supplementary Materials.**

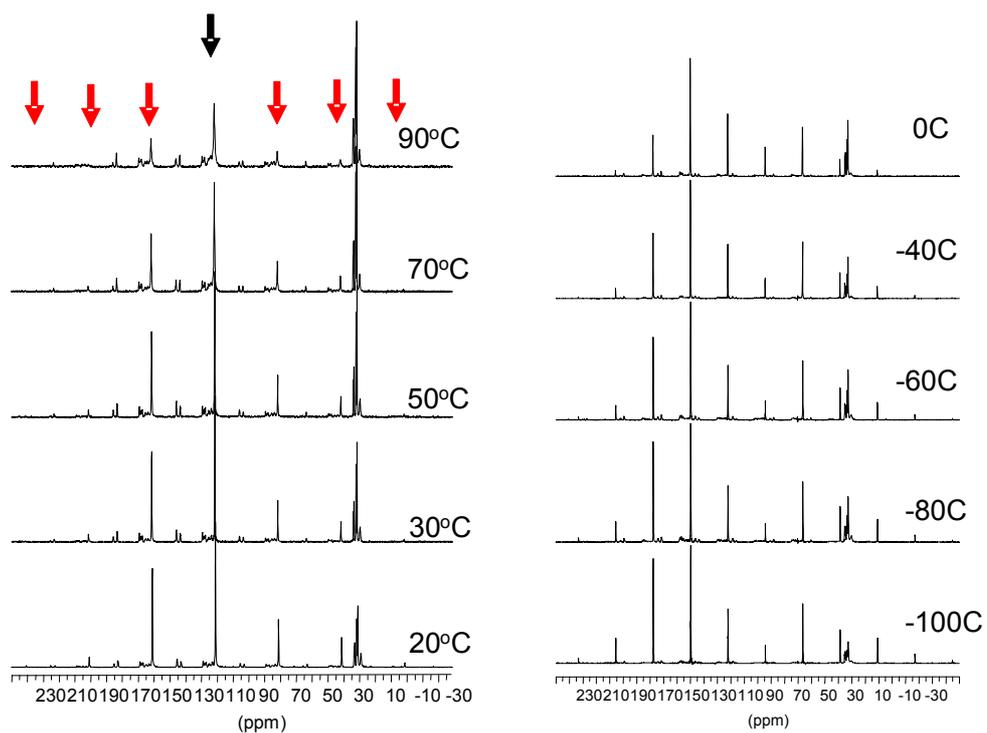


Fig. S1. Variable temperature  $^{13}\text{C}$  CP MAS spectra of a low occupancy  $\text{CO}_2$ -tBC sample with the  $\text{CO}_2$ /tBC ratio of 0.82. Black arrow indicates the isotropic signal of  $\text{CO}_2$  and the red arrows are for the spinning sidebands.

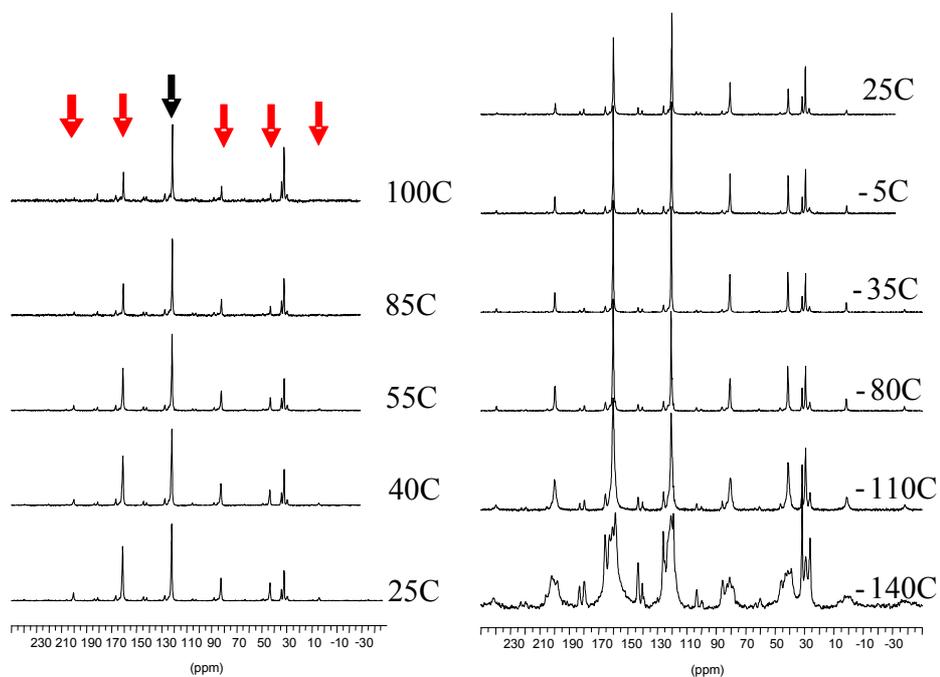


Fig. S2. Variable temperature  $^{13}\text{C}$  CP MAS spectra of a high occupancy  $\text{CO}_2$ -tBC sample with the  $\text{CO}_2/\text{tBC}$  ratio of 1.8. Black arrow indicates the isotropic signal of  $\text{CO}_2$  and the red arrows are for the spinning sidebands.

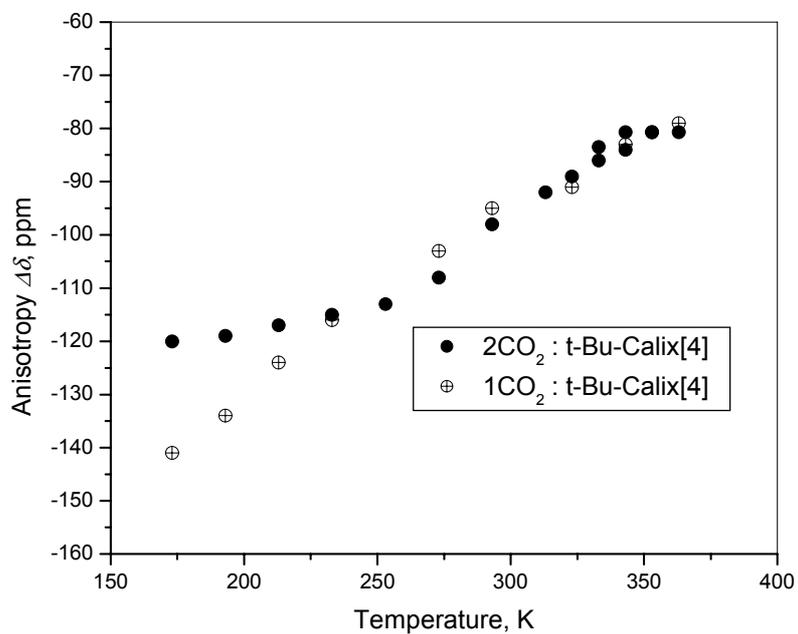


Fig. S3. Variation of the <sup>13</sup>C chemical shift anisotropy with the temperature for CO<sub>2</sub> in a low occupancy CO<sub>2</sub>-tBC sample with the CO<sub>2</sub>/tBC ratio of 0.82 (open circles with a cross) and a high occupancy sample with the CO<sub>2</sub>/tBC ratio of 1.8 (solid circles). All the anisotropy values were obtained from the spinning sidebands analysis.