## Enhancing the CO<sub>2</sub> chemisorption on lithium cuprate (Li<sub>2</sub>CuO<sub>2</sub>) at moderate temperatures and different pressure conditions by the alkaline nitrates addition

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## **Supporting Information**

**Figure S1.** X-ray diffraction patterns (A) and N<sub>2</sub> adsorption-desorption isotherms (B) of the pristine Li<sub>2</sub>CuO<sub>2</sub> and alkaline nitrate-containing samples.



**Figure S2.** X-ray diffraction patterns of the Na-Li<sub>2</sub>CuO<sub>2</sub> (A) and K-Li<sub>2</sub>CuO<sub>2</sub> (B) samples and isothermal products after the corresponding  $CO_2$  sorption processes.



**Figure S3**. High-pressure  $CO_2$  sorption isotherms on the Na-Li<sub>2</sub>CuO<sub>2</sub> (A) and K-Li<sub>2</sub>CuO<sub>2</sub> (B) samples at different temperatures. The square insets show the  $CO_2$  sorption at the initial pressures.