

### Adsorption Equilibrium of Carbon Dioxide on Nanostructured Materials

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Adsorption equilibria of carbon dioxide on nanostructured materials were obtained by static volumetric method in the pressure range of 0 to 30 bar at 293.15, 303.15, and 313.15 K. In this work, the Langmuir isotherm, Langmuir-Freundlich isotherm and dual-site Langmuir isotherm were used to fit the adsorption equilibrium data of carbon dioxide on carbonized Kapok and lithium-exchanged X type zeolite. It was found that carbonized Kapok has high adsorption capacity of CO<sub>2</sub>.