

Adsorption Equilibrium of H₂, CO₂ and CO
On Lithium-exchanged X type Zeolite

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Adsorption experiments for H₂, CO₂, and CO on lithium-exchanged X type zeolite(UOP) were performed by static volumetric method in the pressure range of 0 to 15 atm at temperatures of 293.15K 303.15K and 313.15K. The parameters obtained from single component adsorption isotherm. Multicomponent adsorption equilibria could be predicted and compared with experimental data. The Langmuir isotherm Langmuir-Freundlich isotherm and Dual-site Langmuir isotherm were used to predict the experimental result for binary adsorption equilibria of H₂/CO₂ and H₂/CO on lithium-exchanged X type zeolite. In spite of the relative simplicity of isotherms, the correlation between experimental and theoretical data is good.