

Influence of moisture with acidic gases on the adsorption capacity of CO₂ adsorbents

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Amine-functionalized CO₂ adsorbents have emerged as a promising material for post-combustion CO₂ capture due to their high CO₂ selectivity and capacity. This study focused on the effect of exposure to acid gases under the presence of moisture on CO₂ capture performance of the adsorbents. CO₂ adsorbents were exposed to concentrations of SO₂ and NO₂ gases along with certain humidity at different temperatures. The CO₂ adsorption capacity and stability were evaluated using TGA and in-situ FT-IR analyses.