

### Effect of Humidity on the Competitive Adsorption of VOCs on Mesoporous Materials

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Adsorption equilibria of water and VOC vapors were measured by using a gravimetric technique. To investigate the effect of humidity on the competitive adsorption of VOCs, experimental and theoretical studies were carried out with respect to adsorption and desorption breakthrough curves obtained in wash-coated monolith column under various humidity conditions. It was found that water vapor in the VOC stream had little effect on the adsorption capacity of VOC up to 80% RH (relative humidity).