

Adsorption Characteristics of Benzene and Toluene on Corn-based Carbon Monolith

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Volatile organic compounds (VOCs) easily evaporate at room temperature and create various environmental problems in our world. The removal of VOCs has been successfully done by the adsorption process. The laboratory made Corn-based carbon monolith was successfully used for the adsorption of benzene and toluene at three different isotherm temperatures. Unusual results were observed and the obtained results were well correlated by the Toth isotherm. The surface characteristics were also verified by the Dubinin-Astakhov and the Clausius-Clapeyron equations. The relation between the adsorbate and adsorbent was assessed based on the thermal desorption results.