

### Adsorption characteristics of phenol on corn-based activated carbons

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The adsorption of phenol on novel corn-based activated carbons was conducted in a batch mode. The surface area of the prepared chemical activated carbons are very high (>3000 m<sup>2</sup>/g) compared with the commercial activated carbons. In this study, the effect of pH and temperature on adsorption of phenol on corn-based activated carbons was analyzed. It was found that the phenol adsorption capacities of the prepared activated carbons were quite high compared to the previous results. The Langmuir, Freundlich and Sips equations were employed for the result correlation. Among these models, the Langmuir model well fitted with the experimental data. In addition, Pseudo second-order equation was more suitable on the adsorption kinetic studies compared with Pseudo first-order equation.