

## **Fe-BTC and Fe-BTC derived nanoporous carbon: a kinetic and thermodynamic study of alcohol adsorption**

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### **Abstract**

The kinetics and thermodynamic adsorption of five alcohols (ethanol, n-propanol, n-butanol, butan-2-ol, and propane-2-ol) were studied in a batch system using Fe-BTC and Fe-BTC derived nanoporous carbon as adsorbents, specifically synthesized to conduct this research. The batch adsorption processes were carried out at several temperatures; the experimental values were selected from previous tests to this research. Immersion calorimetry was also used to experimentally establish the immersion enthalpy of each of the adsorbates used. The results were analyzed according to the structure of the adsorbents used and the structure of the probe molecules.

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