

## Methane Adsorption Properties of Synthesized PAC from Rice-Husk

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Success of adsorbed natural gas (ANG) storage process is mainly based on the characteristics of adsorbent and so various synthesized adsorbents were applied for the methane adsorption. Activated carbon from rice husk (AC-RH) was synthesized and its methane adsorption capacities were compared with phenol based activated carbons (AC-PH<sub>2</sub>O and AC-PKOH). The adsorption experiments were conducted by volumetric method under various constant temperatures (293.15, 303.15, 313.15 and 323.15 K) and pressure up to 3.5 MPa. Maximum methane adsorption was observed in AC-RH as its surface area is higher than the other two adsorbents. The experimental data were correlated well with Langmuir-Fruendlich isotherms. In addition, isosteric heat of adsorption was calculated by using Clausius-Clapeyron equation.