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Computer analysis of the microporous structure of activated carbons prepared from plant materials by chemical activation

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The work presents results of the analysis of the microporous structure of activated carbons obtained from plant materials by chemical activation with potassium hydroxide. The aim of the research was to evaluate the impact of the hydroxide to biomass mass ratio on the microporous structure of the obtained activated carbons. The calculations were carried out using the BET and DR methods, as well as the new LBET method with the unique fast multivariant identification adsorption systems procedure. The obtained results of the research highlighted the significant potential of the

production of activated carbons with very high adsorption capacity and large specific surface area from plant materials, by chemical activation with potassium hydroxide. Moreover the presented research yielded a broad spectrum of information and shed a new light on the issues pertaining to the assessment of the effect of carbonaceous adsorbent production technology on the obtained parameters of the porous structure.

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