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NUMERICAL EVALUATION OF THE EFFECT OF THE ACTIVATION METHOD AND THE USED ACTIVATOR ON THE DEVELOPMENT OF THE POROUS STRUCTURE OF THE CARBONACEOUS MATERIALS

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The work presents numerical evaluation of the effect of the chemical activation method and the used activator on the development of the porous structure of the carbonaceous materials. The computer calculations were carried out based on of the adsorption isotherms of nitrogen. On the basis of the research and analyses, a significant effect of the type of the activating agent used and activation method applied on the formation of the porous structure on the adsorptive properties of the produced adsorbate was observed consequently. The new adsorption models with the unique numerical procedure of the fast multivariate fitting of theoretical models to adsorption isotherms applied in this work prove highly advantageous when compared with popular methods of porous structure description by providing a wider range of information on the analysed porous structure and offering unique possibilities of evaluating reliability of the obtained information on the analysed porous structure.

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