PRODUCTION OF CARBON ADSORBENTS FROM HYDROLYSIS INDUSTRY WASTE AND METHODS FOR THEIR MODIFICATION

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Abstract. Adsorbents derived from lignin, the multi-ton hydrolysis industry waste, were modified using a fullerene in the form of a fullerene extract. The introduction of fullerenes into the material was performed at the mixing stage, prior to the processes of carbonization and activation. Using fullerenes as modifiers leads to an increase in the oxidation rate of carbon materials, as well as a decrease in the size of carbon-graphite crystallites. In addition, the adsorption capacity of the obtained activated carbon increases by 20% for methylene blue and 30% for iodine.

Keywords: hydrolysis lignin, carbon adsorbents, fullerenes, activation, carbonization.