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Electroflotation Recovery of Highly Dispersed Carbon Materials from Aqueous
Solutions of Electrolyte

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ABSTRACT

Physicochemical characteristics (specific surface area of the material, particle size, particle charge, functional groups on the surface of the material, critical micelle concentration) of highly dispersed carbon materials in aqueous solutions in the presence of surfactants of different nature were studied experimentally. The influence of these characteristics on the electroflotation process of carbon nanoflakes was shown. Also, the influence of various additives (electrolytes, flocculants, coagulants) on the process of electroflotation extraction of carbon nanoflakes and activated carbon of brand «OU-B» from aqueous solutions was studied.

Keywords: electroflotation; surfactants; highly dispersed carbon materials; carbon nanoflakes; activated carbon; zeta potential; hydrodynamic radius; critical concentration of micelle formation.

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