

Sonochemical synthesis of nanocomposites MnO₂/C

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Abstract

Nanocomposites MnO₂/C were obtained by two methods, both of which included an ultrasonic impact and did not involve chemically active substances. The first method was conducted in a single stage; activated charcoal BAU-A served as a matrix material. Sonochemical synthesis of nanocomposites based on spectrally pure graphite (the second method) required its modifications realized by mechanical activation. According to X-ray data all synthesized composites were nanocrystalline and contained two phases – manganese oxide(IV) and carbon. The average crystallite size of MnO₂ adsorbed on the porous structure of the carbon materials was about 5 nm.