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Low-temperature processing of mixtures from waste of active sludge (WAS) and cullet

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The recycling of waste activated sludge (WAS) formed in the process of biological purification of sewage, and big volume of cullet is an urgent ecological problem. In the work, the properties of compositional materials based on WAS and cullet of low-melting glass, synthesized in an energy-saving mode: at $T \sim (600-800 \text{ }^\circ\text{C})$ for $t \sim (30-60 \text{ min})$ were analyzed. It was established that in this narrow range of temperature treatments in air it is possible to obtain fundamentally different porous materials consisting of a

porous glass shell and a carbon-containing core. As T and t increase, the thickness of the shell increases, and the size of the core decreases. As a result, these specimens have different properties. Specimens with carbon core have adsorption properties and can be used for purification of water from dyes. Specimens without of carbon core are the base for preparation of bricks from foam glass.

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