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Amorphous oxides of manganese as new sorbents of strontium ions

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Abstract

Samples with the best adsorption properties are selected as a result of investigations conducted on synthesis of manganese-dioxide-based materials and study of their physicochemical properties. Materials were selected on the basis of their low cost and the simplicity of their production technology. In the laboratory the synthesis and analyses of materials was carried out for selected samples. The sorption of a series of elements is studied for a more detailed investigation of materials obtained. The results obtained will promote the synthesis of materials with improved adsorption properties with the aim of their application for purification of water from strontium. It is shown that the most promising

way for amendment of manganese oxide is modification of this material using acid-resistant oxides. These oxides are also less expensive than existing sorbents for strontium.

Keywords:

- Strontium
- Adsorption
- Purification

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