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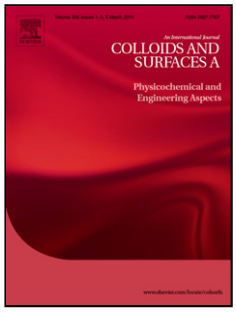

Title: The active carbons modified by industrial wastes in process of sorption concentration of toxic organic compounds and heavy metals ions

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The active carbons modified by industrial wastes in process of sorption concentration of toxic organic compounds and heavy metals ions

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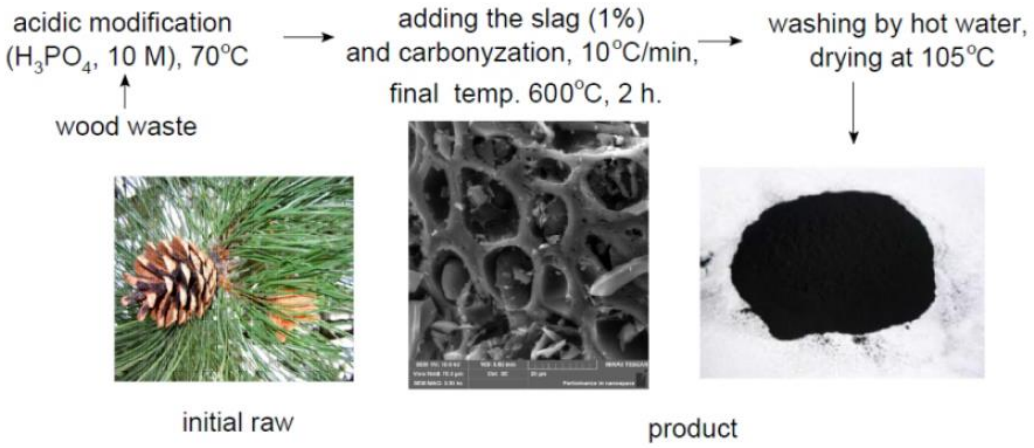
Graphical abstract



Highlights

- Activated carbon sorbent from wood was obtained by chemical activation with acidic- and heat treatment in the presence of metallurgical slag.
- The sorbent structure was described by FT-IR spectra, SEM analysis, and etc.
- Adsorption properties of sorbent were evaluated.

Abstract

The results of investigation of active carbons, obtained from the pine waste (lat. *Pínus sylvéstris*) by modifying phosphoric acid and industrial (metallurgical slag) wastes, are discussed. The structure, composition and properties of obtained sorbent have been investigated by using FT-IR-spectroscopy, elemental analysis, DTA/TGA, SEM. The iodine adsorption activity and adsorption values toward to some inorganic and organic pollutants of sorbent have been evaluated. Based on laboratory test results, it was established that the sorbent on the base of activated carbons prepared by chemical modification, followed by carbonization in the presence of metallurgical slag and water treatment, has a porous

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