



USING OF INDUSTRIAL WASTE MATERIALS FOR TEXTILE WASTEWATER TREATMENT

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Abstract

Sorption is one of the several methods that have been successfully utilized for dyes removal. A large number of materials have been used as suitable sorbents for decolorization of industrial effluents: activated carbon (the most common but expensive adsorbent), polymeric resins, various low-cost adsorbents (agricultural and industrial by-products, peat, chitin, silica, bentonite, other clays, fly ash).

Our paper is a review about our researches regarding different types of industrial and agricultural waste materials with sorptive properties (ashes, textile fibres, sawdust, lignin, sun flower shells, corn cob, etc.) that were utilized into textile wastewater treatment. Batch sorption experiments were carried out in order to establish the favourable conditions to uptake of dyes. The studied operating variables were: pH, sorbent dose, dyes concentration, temperature and sorption time. The sorption systems were described using Freundlich, Langmuir and Dubinin-Radushkevich isotherm models.

Key words: dyes, industrial and agricultural wastes, sorption, textile wastewaters

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