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WOOD WASTE FOR Cu^{2+} REMOVAL FROM WASTEWATER. A COMPARATIVE STUDY

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Abstract

This paper presents the results obtained in copper removal from wastewater by using sawdust and mixtures of fly ash and sawdust. The adsorption efficiency of the copper ion from 0.01m solutions was tested on mixtures with various waste components ratio and the results are compared with those obtained on single substrates. Three types of sawdust, oak wood, (*Querqus robur*), white poplar, (*Populus alba*), and willow, (*Salix alba l.*), were pre-treated to optimize the sawdust affinity for heavy metals adsorption and for increasing the fly ash affinity for copper adsorption. The adsorption parameters were optimized (contact time, amount of substrate for 100mL solution) and further used for identifying the optimal heavy m/sorption efficiency on willow; willow: FA-W and willow: FA-A.

Key words: biosorption, fly ash, heavy metals removal, sawdust, wastewater treatment

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