

AN OVERVIEW OF FOREST RESIDUES AS PROMISING LOW-COST ADSORBENTS

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Abstract

Anthropogenic activities have severely affected biogeochemical cycles on a global scale, resulting in a drastic increase in environmental problems, intensified by wastewater generation containing high levels of pollutants. As it is known that water is precious yet limited, viable wastewater treatments must be developed. Adsorption is an environmentally friendly option, and it offers the possibility of resolving two problems simultaneously. Besides removing pollutants from water, many adsorbents can be produced using wooden forestry residues. Such materials are generally considered as waste, which leads to their direct disposal. In addition, there are types of wooden forestry waste that have little or no use for humankind, such as fallen leaves or rotten fruits. Therefore, the utilization of wooden forestry residues for preparing low-cost adsorbents is promising. In this review, we briefly approach adsorption advantages to wastewater treatment. Later on, we focus on several types of wooden forestry residues as alternative low-cost adsorbents. © 2021 International Association for Gondwana Research.

Keywords

Adsorption; Bark; Leaves; Sawdust; Seeds