

A review on bamboo as an adsorbent for removal of pollutants for wastewater treatment

ABSTRACT

Water and wastewater treatment are very important for obtaining clean and sanitary water as well as protecting the environment from toxic pollutants. Not only enriched with cellulose and carbon but the abundant resources of bamboo also make it suitable to be utilized as an adsorbent. With the right processing technologies and improvements, the potential of bamboo is unlimited. This study review provides knowledge on the use of bamboo-based adsorbents for the removal of contaminants and pollutants in wastewater in the form of activated carbon, biochar, and aerogel. This review highlighted bamboo utilization and its relevance as an adsorbent for wastewater treatment. The technologies for the processing and improvement of bamboo as well as the performance of the bamboo-based adsorbents are also discussed in this study. The adsorption capacity of bamboo has shown improvement with modification and good adsorption capacity achieved with some of the adsorbent being able to be recycled and reused.