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Review on activated carbon: Synthesis, properties and applications

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Abstract
Many researchers have reported that a number of control methods were used in waste water treatment. In this work, there are several types of agricultural wastes and fruits were employed to synthesis activated carbon via chemical activation and physical activation process. The obtained activated carbons indicated higher surface area and larger adsorption capacity. This paper describes experimental findings on uses of activated carbon in wastewater treatment, which produced under different conditions such as contact time, initial pollutant concentration, temperature, pH value, adsorbent dosage, particle size and agitation. The adsorption capacity and equilibrium data of different pollutants (dyes, oil, grease waste water, organic pollutants, pesticides, herbicides, heavy metal ions, lignin and tannin colour) were studied through various isotherms. Thermodynamic parameters such as entropy, free energy and enthalpy were investigated. © 2021 Seventh Sense Research Group®.

Author Keywords
Activated carbon; Adsorption; Langmuir isotherm; Surface area; Waste water treatment

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