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# Advances in utilization of macrophytes in water pollution control

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Macrophytes can perform many ecological functions when they are used in water pollution control, including assimilating and storing nutrient elements such as nitrogen and phosphorus, transporting O<sub>2</sub> to the root zone, providing substrates for microbes, inhibiting growth of algae. Some of aquatic plants have special abilities to accumulate heavy metal elements or degrade organic contaminants. Many types of macrophyte-based treatment systems are developed depending on the difference of the life forms of the plants employed. Among them, pond systems using floating macrophytes and constructed wetlands culturing emergent plants are most commonly utilized. This review concentrats on advance of the macrophyte-based treatment technology. The mechnisims on pollutants removel and future research needs for macrophyte-based wastewater treatment systems are discussed.

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