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Study on the Treatment of Waste Water Containing Nitrogen Heterocyclic Aromatic Hydrocarbons by Phenol-Induced Microbial Communities

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Abstract : This project has treated the waste-water that contains the nitrogen heterocyclic aromatic hydrocarbons, by using the phenol-induced microbial communities. The treatment of nitrogen heterocyclic aromatic hydrocarbons is a difficult problem for coking waste-water treatment. Pyridine, quinoline and indole are three kinds of most common nitrogen heterocyclic compounds in the f, and treating these refractory organics biologically has always been a research focus. The phenol-degrading bacteria can be used in the enhanced biological treatment effectively, and has a good treatment effect. Therefore, using the phenol-induced microbial communities to treat the coking waste-water can remove multiple pollutants concurrently, and improve the treating efficiency of coking waste-water. Experiments have proved that the phenol-induced microbial communities can degrade the nitrogen heterocyclic ring aromatic hydrocarbon efficiently.

Keywords : phenol, nitrogen heterocyclic aromatic hydrocarbons, phenol-degrading bacteria, microbial communities, biological treatment technology
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