Electrochemical Treatment of Phenolic Wastewater with TiO₂/SnO₂ Electrode: Influence of Operating Parameters and Optimization

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The phenolic wastewater produced in the production process generally has the characteristics of high concentration, strong biological toxicity, difficult degradation and long residual period, making it one of the priority pollutants with prominent environmental risks to be monitored. Electrochemical treatment of phenolic wastewater is characterized by high current efficiency, simple equipment, mild reaction conditions and clean process. In this paper, the working electrode was prepared with ordinary graphite plate as the electrode lining and TiO₂ supported by SnO₂ as the working outer layer, forming the relevant electrochemical reactor. Taking the simulated wastewater containing phenol as the research object, the technical condition, effect and related mechanism of electrochemical treatment of phenol wastewater were discussed.

Keywords: Electrochemical treatment; Phenol; Wastewater; Optimization; TiO₂/SnO₂ electrode

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