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عنوان مقاله:

Degradation of Terphetalic Acid from Petrochemical Wastewater by Ozonation and O3/ZnO Processes in Semi Batch Reactor

محل انتشار:

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خلاصه مقاله:

Background & Aims of the Study: One of the toxic pollutants in the wastewater ofpetrochemical industries is Terphetalic acid. In this study, the degradation and mineralization ofTerphetalic acid in aqueous environment were studied by Ozonation and O3/ZnO processes in asemi batch reactor.Materials & Methods: This study is an experimental research on a laboratory scale. The studyexecuted on synthetic wastewater having Terphetalic acid. The impact of operational factorssuch as pH, initial concentration of ZnO and Terphetalic acid was also studied.Results: Different amounts of variables were optimized for the removal of Terphetalic acid inO3/ZnO process. The optimum conditions were achieved as follows: the [ZnO]=1.20 g/l, pH at 9,and [TPA]=70 mg/l.Conclusions: The results exhibited that at the predicted optimum conditions and after 30 min ofreaction, the removal of Terphetalic acid and Total Organic Carbon (TOC) was 96.9 and 44.3%,respectively. The O3/ZnO process was powerful in the removal of TPA, but it can remove theTOC to some extent.

کلمات کلیدی:

O3/ZnO process,Terphetalic acid,petrochemical wastewater,Total Organic Carbon (TOC)Iran

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