THE FENTON AND SONO-FENTON PROCESSES APPLIED FOR PESTICIDE DEGRADATION

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Abstract

In this study, the authors explore the potential of ultrasound and wet catalyzed peroxide oxidation into the wastewater treatment processes. The processes applied for degradation of pesticides were carried out using Fenton reagent and sonochemical treatment. The Fenton and the sono-Fenton decomposition of 2,4-dichlorophenoxyacetic acid (2,4 D), 4-(2,4-dichlorophenoxy)butyric acid (2,4 DB), 4-chloro-o-tolyoxyacetic acid (MCPA), 3,5-dibromo-4-hidroxybenzonitrile (bromoxynil), and 3-(4-chlorophenyl)-1,1-dimethylurea (monuron) showed that, in all cases ultrasound irradiation of wastewater improved the wet oxidation process.

Key words: pesticides, sonochemical degradation, sono-Fenton, wastewater

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