



“Gheorghe Asachi” Technical University of Iasi, Romania



THE FENTON AND SONO-FENTON PROCESSES APPLIED FOR PESTICIDE DEGRADATION

Ioan Iordache^{1*}, Steven Wilson², Elsa Lundanes², Mihaela Iordache³,
Vasile Lucian Pavel⁴, Neculai Aelenei⁵

¹National Research and Development Institute for Cryogenics and Isotopic Technologies, I.C.I.T. Ramnicu Valcea, 4 Uzinei Street, 240050 Ramnicu Valcea, Romania

²University of Oslo, Department of Chemistry, Box 1033, Blindern N - 0315 Oslo, Norway

³The National Research and Development Institute for Industrial Ecology ECOIND, 1 Uzinei Street, 240050 Ramnicu Valcea, Romania

⁴“Gheorghe Asachi” Technical University of Iasi, Faculty of Hydrotechnical Engineering, Geodesy and Environmental Engineering, 65 D. Mangeron Blvd, 700050 Iasi, Romania

⁵“Gheorghe Asachi” Technical University of Iasi, Faculty of Chemical Engineering and Environment Protection, 73 Prof. Dr. docent D. Mangeron Street, 700050 Iasi, Romania

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-hydroxybenzotrile (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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* Author to whom all correspondence should be addressed: e-mail: iordache.ioan@icsi.ro; Fax: +40250732746