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Titolo	Varicella-zoster Virus : Genetics, Pathogenesis and Immunity / editors Ann M. Arvin ... [et al.]
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Autore	Koprivanac Natalija
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Altri autori (Persone)	KusicHrvoje
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Nota di bibliografia	Includes bibliographical references (p. [59-72]) and index.
Nota di contenuto	Intro -- HAZARDOUS ORGANIC POLLUTANTS IN COLORED WASTEWATERS -- CONTENTS -- PREFACE -- INTRODUCTION -- COLORED WASTEWATER -- WASTEWATER TREATMENT METHODS -- ADVANCED OXIDATION PROCESSES -- COLORED WASTEWATER TREATMENT BY AOPS: A REVIEW OF RECENT STUDIES -- FENTON TYPE PROCESSES -- UV-BASED PROCESSES -- UV Photolysis -- Photochemical Processes -- Photocatalytic Processes -- OZONE-BASED PROCESSES -- HIGH VOLTAGE ELECTRICAL DISCHARGE PROCESSES -- Hybrid Corona Reactors -- OTHER AOPS -- Ultrasound -- Water Radiolysis -- Electrochemical Processes -- STUDY OF C.I. REACTIVE BLUE 137 WASTEWATER -- TREATMENT BY SEVERAL AOPS -- OBJECTIVES -- MATERIALS AND METHODS -- RESULTS AND DISCUSSION -- Fenton Type Processes -- UV-Based Processes -- AOPs Cost Estimation -- CONCLUSION -- ACKNOWLEDGEMENT -- REFERENCES -- Index.
Sommario/riassunto	The manufacturing and the application of organic dyes involve the production and the handling of many organic compounds hazardous to human health. Many of these substances are considered toxic, even carcinogenic. Over the past couple of decades, manufacturers and users of dyes have faced increasingly stringent legal regulations promulgated to safeguard human health and the environment. So, there is a clear need to treat dye wastewater prior to discharge into the primary effluent. The limitation of traditional wastewater treatment

technologies (biological and physical), such as low rate, disability to degrade many of recalcitrant organic dyes and the production of secondary waste which demands further treatment, can be overcome by the utilisation of advanced oxidation processes (AOPs). These wastewater treatment methods are considered as low- or even non-waste generation technologies. AOPs are based on the production of very reactive species, such as hydroxyl radicals, able to decolourise and to reduce recalcitrant coloured wastewater loads due to the high oxidation power and the lack of selectivity of OH radicals towards a broad range of organic pollutants present in wastewater. Generally, AOPs can be broadly classified concerning the way of OH radicals generation into chemical, photochemical, photocatalytic, mechanical and electrical technologies. This research deals with the application of chemical and photochemical AOPs for the minimisation of recalcitrant coloured pollutants present in wastewaters. The comparative study of several processes, Fe<sup>0</sup>/H<sub>2</sub>O<sub>2</sub>, UV/Fe<sup>0</sup>/H<sub>2</sub>O<sub>2</sub>, UV/O<sub>3</sub> and UV/O<sub>3</sub>/H<sub>2</sub>O<sub>2</sub>, was performed through an experimental research of decolourisation and mineralisation of a reactive azo dye C.I. Reactive Blue 137, as a model wastewater pollutant. Applied processes were optimised according to their process parameters, Fe<sup>0</sup> dosages, initial H<sub>2</sub>O<sub>2</sub> dosages and initial pH values of treated solutions. The influence of initial organic dye concentration, as well as the addition of solid particles, synthetic zeolites, on the process effectiveness was also investigated. Studied AOPs were evaluated on the basis of their eco-effectiveness, by the means of colour (A<sub>610</sub>), aromaticity (UV<sub>280</sub>), TOC and AOX value decrease, and their cost-effectiveness as well.

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