Hindawi Publishing Corporation International Journal of Photoenergy Volume 2015, Article ID 363167, 1 page http://dx.doi.org/10.1155/2015/363167



Editorial

Advanced Oxidation Processes for Wastewater Treatment 2014

Muruganandham Manickavachagam, ¹ Mika Sillanpaa, ² Meenakshisundaram Swaminathan, ³ and Bashir Ahmmad ⁴

¹Water and Environmental Technology (WET) Center, College of Engineering, Temple University, Philadelphia, PA 19122, USA

Correspondence should be addressed to Muruganandham Manickavachagam; mmuruganandham@temple.edu

Received 6 April 2015; Accepted 6 April 2015

Copyright © 2015 Muruganandham Manickavachagam et al. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Growing concern of various environmental issues leads to developing various advanced technologies. Water contamination is a common and ubiquitous problem worldwide, although many water treatment technologies have been used for water treatment. Thus, one of the notable advanced water treatment processes is using Advanced Oxidation Processes (AOPs) for the treatment of wastewater with high degree of pollutants. AOPs offer various advantages over conventional water treatment processes and various aspects of AOPs have been studied and reported in the literature. Two successful special issues had been published earlier and this is the third special issue in this journal.

Electrochemical treatment of spent caustic from two hydrocarbon industries using Ti/BDD electrode was studied and reported by A. Medel et al. In their article, they discussed electrochemical degradation of contaminants and analyzed various water quality parameters. Souz et al., reported inactivation of microorganisms such as E. Coli, total coliforms and coliphages using peracetic acid (PAA) in the presence and absence of UV light. They concluded that the combined PAA/UV process provided superior efficacy compared to individual process.

Ozonation of indigo carmine using a Fe/Pimenta dioica L. Merrill catalyst was studied and reported by T. Torres-Blancas et al. The authors tested a new catalyst for the catalytic ozonation process and characterized it with suitable analytical methods. Recommendation is being made for effective removal of dye pollutants. Another interesting research has been published by H. A. Kabuk et al. They have used a fuzzy

logic model to determine the biological treatability of textile wastewater. They have used a membrane bioreactor (MBR) for biological treatment after the ozonation of the wastewater. The COD, BOD, and color removal efficiencies in the treatment process was studied. The removal of polyvinyl alcohol using an innovative paired photoelectrochemical oxidative system in a divided electrochemical cell was reported by K.-Y. Huang et al. They reached conclusion from their studies that the synergistic effect of combination process of MEO and PEO could be a promising treatment method for PVA removal from wastewater.

Acknowledgment

We are much grateful to the scientific colleagues, who reviewed the manuscripts by sparing their valuable time.

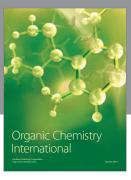
> Muruganandham Manickavachagam Mika Sillanpaa Meenakshisundaram Swaminathan Bashir Ahmmad

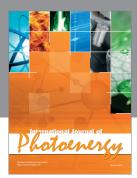
²Laboratory of Green Chemistry, Faculty of Technology, Lappeenranta University of Technology, 50130 Mikkeli, Finland

³Department of Chemistry, Annamalai University, Annamalai Nagar 608002, India

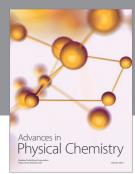
⁴Graduate School of Science and Engineering, Yamagata University, 4-3-16 Jonan, Yamagata 992-8510, Japan

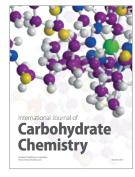
















Submit your manuscripts at http://www.hindawi.com





