

URL	TITLE	ABSTRACT	AUTHORS	PUBLICATION	DATE	TYPE
http://ieeexplore.ieee.org/xpl/articleDetails.jsp?tp=&arnumber=5748142&contentType=Conference+Publications	Research on Microwave Irradiation-Fenton Oxidation Coupling Coagulation Process to Treat Dyeing Wastewater	The study was carried out to evaluate the feasibility of microwave irradiation-Fenton oxidation coupling coagulation process to treat the industrial dyeing wastewater. Batch experiments were performed to investigate effects of various experimental parameters such as H_2O_2 concentration (3.6-8.4g/L), $FeSO_4 \cdot 7H_2O$ concentration (0.06-0.14g/L), microwave power (100-1000W), microwave irradiation time (0.25-5 min), initial pH (2.0-8.0) and PMSi concentration (28.8-76.8 mg/L) on treatment efficiency. Kinetic data revealed that the combined process has obviously efficiency on decoloration of dyeing wastewater. Under the conditions of 4.8g/L H_2O_2, 0.08g/L $FeSO_4 \cdot 7H_2O$, 500 W of microwave power, 1 min of microwave irradiation time and 33.6 mg/L PMSi, the removal ratios of colority and COD reached to 98% and 95.96% respectively with massive floccules and rapid sedimentation. The mechanism discussion also indicated the combined process embodied fully the synergetic effect between microwave irradiation, Fenton oxidation and coagulation as a result of the thermal efficiency and non-thermal efficiency of microwave.	Zhang Genlin; Xu Xiaojun; Huang Mengyang; Meng Junwang	2011 International Conference on Computer Distributed Control and Intelligent Environmental Monitoring	2011	Conference publication

DOI

ISBN

10.1109/CDCIEM.2011.12

New-2005_Electronic_978-0-7695-4350-5