

Accepted Manuscript

Title: Optimization of carbofuran degradation in microwave-granular activated carbon system using response surface methodology

Authors: Neelancherry Remya, Jih-Gaw Lin



PII: S2213-3437(17)30349-4
DOI: <http://dx.doi.org/doi:10.1016/j.jece.2017.07.045>
Reference: JECE 1760

To appear in:

Received date: 26-4-2017
Revised date: 14-7-2017
Accepted date: 20-7-2017

Please cite this article as: Neelancherry Remya, Jih-Gaw Lin, Optimization of carbofuran degradation in microwave-granular activated carbon system using response surface methodology, Journal of Environmental Chemical Engineering <http://dx.doi.org/10.1016/j.jece.2017.07.045>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Optimization of Carbofuran Degradation in Microwave-Granular activated carbon System using Response Surface Methodology

Authors

Neelancherry Remya^{a*}, Jih-Gaw Lin^b

Affiliation address:

^aSchool of Infrastructure, Indian Institute of Technology Bhubaneswar,
Odisha, India, 752050; e-mail: remyamadhav@gmail.com

^bInstitute of Environmental Engineering, National Chiao Tung University,
1001, University road, Hsinchu city, Taiwan 30010.

***Corresponding author:**

Neelancherry Remya

School of Infrastructure, Indian Institute of Technology Bhubaneswar,
Odisha, India, 752050, Tel.:+91 8280549054

E-mail: remyamadhav@gmail.com

Fax: +91 674 2301983

Abstract

Present study revealed tremendous improvement in carbofuran degradation in a Microwave - Granular Activated carbon (MW-GAC) system compared to natural hydrolysis process and the degradation half-life was 12 and 0.189 min. at a pH of 6 and 10 respectively at a reaction temperature of 80°C. In addition, the effect of several operating parameters such as carbofuran concentration, MW output power and reaction time was modelled using Central

Download English Version:

<https://daneshyari.com/en/article/6664306>

Download Persian Version:

<https://daneshyari.com/article/6664306>

[Daneshyari.com](https://daneshyari.com)