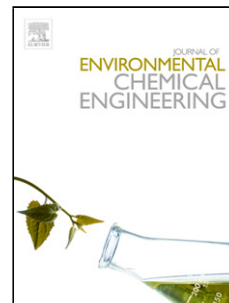


Accepted Manuscript

Title: ADSORPTIVE REMOVAL OF CONGO RED FROM AQUEOUS SOLUTION USING ZEOLITIC IMIDAZOLATE FRAMEWORK-67

Authors: Nguyen Thi Thanh Tu, Tran Vinh Thien, Pham Dinh Du, Vo Thi Thanh Chau, Tran Xuan Mau, Dinh Quang Khieu



PII: S2213-3437(18)30152-0
DOI: <https://doi.org/10.1016/j.jece.2018.03.031>
Reference: JECE 2272

To appear in:

Received date: 12-1-2018
Revised date: 12-3-2018
Accepted date: 13-3-2018

Please cite this article as: Nguyen Thi Thanh Tu, Tran Vinh Thien, Pham Dinh Du, Vo Thi Thanh Chau, Tran Xuan Mau, Dinh Quang Khieu, ADSORPTIVE REMOVAL OF CONGO RED FROM AQUEOUS SOLUTION USING ZEOLITIC IMIDAZOLATE FRAMEWORK-67, Journal of Environmental Chemical Engineering <https://doi.org/10.1016/j.jece.2018.03.031>

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.

ADSORPTIVE REMOVAL OF CONGO RED FROM AQUEOUS SOLUTION USING ZEOLITIC IMIDAZOLATE FRAMEWORK–67

Nguyen Thi Thanh Tu^{1,2}, Tran Vinh Thien³, Pham Dinh Du⁴,

Vo Thi Thanh Chau⁵, Tran Xuan Mau¹, Dinh Quang Khieu¹

¹University of Sciences, Hue University, 530000, Vietnam

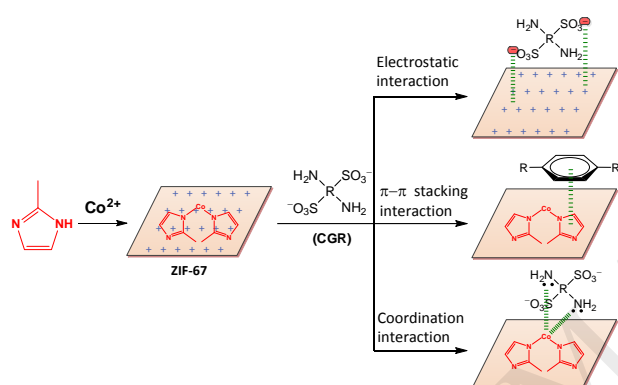
²Environmental Technology Center (ENTEC), 700000, Vietnam

³Faculty of Natural Sciences, Phu Yen University, 620000 Vietnam

⁴Faculty of Natural Sciences, Thu Dau Mot University, 590000, Vietnam

⁵Industrial University of Ho Chi Minh City, 570000, Vietnam

Graphical abstract



Highlights

- The piecewise linear regression combined with Akaike's Information Criteria is a useful statistical tool for analyzing kinetics and isotherms models.
- ZIF-67 exhibits very high adsorption for some other dyes such as Congo red, Rhodamine B and methylene blue.
- ZIF-67 is expected to become one of the most promising adsorbents to remove dyes from water.

Abstract

In the present paper, the Congo red dye (CGR) adsorption onto zeolitic imidazolate framework-67 (ZIF-67) is demonstrated. ZIF-67 was synthesized using the microwave method. The obtained ZIF-67 was characterized by means of X-ray diffraction (XRD), scanning electron microscope (SEM), thermal gravity analysis (TG), and X-ray photoelectron spectroscopy (XPS). ZIF-67 was employed to adsorb CGR from aqueous solutions. The first-

Download English Version:

<https://daneshyari.com/en/article/6664026>

Download Persian Version:

<https://daneshyari.com/article/6664026>

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