

BCREC

Chemical Reaction
Engineering & Catalysis
(CREC) Group

Department of
Chemical Engineering,
DIPONEGORO
UNIVERSITY

Masyarakat Katalisis
Indonesia – Indonesian
Catalyst Society
(MKICS)



ISSN 1978-2993

Bulletin of Chemical Reaction Engineering & Catalysis

Volume 3, Number 1-3, Year 2008, 15 December 2008

Available online at: <http://bcrec.undip.ac.id/>

Table of Contents

Volume 3 Number 1-3 Year 2008 (15 December 2008)

1. Front Cover/Table of Content
2. Preface (1)
3. Editorial Board (2)
4. **[Article]** Mathematical Model of Ion Transport in Electrodialysis Process (*F. S. Rohman and N. Aziz* (3 - 8)
5. **[Article]** Synthesis ZrO_2 -Montmorillonite and Application as Catalyst in Catalytic Cracking of Heavy Fraction of Crude Oil (*Is Fatimah, Karna Wijaya, Khoirul Himmi Setyawan*) (9 - 13)
6. **[Article]** Ekstraksi Kalium dari Abu Tandan Kosong Sawit Sebagai Katalis Pada Reaksi Transesterifikasi Minyak Sawit (*Muhammad Imaduddin, Yoeswono, Karna Wijaya, dan Iqmal Tahir*)(14 - 20)
7. **[Article]** Mathematical Modelling of Catalytic Fixed-Bed Reactor for Carbon Dioxide Reforming of Methane over $\text{Rh/Al}_2\text{O}_3$ Catalyst (*Istadi, Nor Aishah Saidina Amin, and New Pei Yee*) ... (21 - 29)
8. Author Guidelines (30)

Bull. Chem. React.
Eng. Catal.

Vol. 3

No. 1-3

1— 30

Semarang
December 2008

ISSN
1978-2993



Preface

BULLETIN OF CHEMICAL REACTION ENGINEERING & CATALYSIS (BCREC), Volume 3, Number 1-3, Year 2008 (15 December 2008) has been published as a media for communicating the activities of CREC UNDIP research group and Masyarakat Katalis Indonesia — Indonesian Catalyst Society (MKICS). The journal also publishes the latest news of technology related with chemical reaction engineering and catalysis. Since 2007, the BCREC has been assigned as formal journal of CREC Group and Indonesian Catalyst Society (MKICS).

In BCREC Volume 3 Year 2008 consists of number of reviewed articles concerning on chemical reaction engineering and catalysis (English and Indonesian). The Editor encourages all MKICS members to submit their articles in this journal. However, manuscripts from all over the world related with the topics of BCREC are very welcome.

It is very pleased to inform that start from January 2009 the website of BCREC has been moved to new server (<http://bcrec.undip.ac.id/>)

Dr. Istadi (Editor)

Chemical Reaction Engineering & Catalysis, Department of Chemical Engineering, Diponegoro University
E-mail: bcrec@undip.ac.id

Publication Information:

Bulletin of Chemical Reaction Engineering & Catalysis (ISSN 1978-2993).

Short journal title: *Bull. Chem. React. Eng. Catal.*

For year 2008, Volume 3 Number 1 — 3 are scheduled for publication. This bulletin is electronically published via journal website (<http://bcrec.undip.ac.id/>). The bulletin can be downloaded for free from the website.

The bulletin is published by CREC Group Dept. of Chemical Engineering Diponegoro University and Indonesian Catalyst Society (MKICS).



EDITORIAL BOARD

Patrons:

Head of Department, Chemical Engineering, Diponegoro University

Jln. Prof. Sudharto, Kampus UNDIP Tembalang, Semarang, Central Java, INDONESIA 50239

Chief of Indonesian Catalyst Society (MKICS) (Assoc. Prof. Dr. Subagio)

Department of Chemical Engineering, Institut Teknologi Bandung, Bandung, Indonesia

Editor in Chief:

Dr. Istadi

Chemical Reaction Engineering & Catalysis (CREC) Group, Department of Chemical Engineering, Diponegoro University, Jln. Prof. Sudharto, Kampus UNDIP Tembalang, Semarang, Central Java, INDONESIA 50239

E-mail: bcrec@undip.ac.id

Editorial Member:

Prof. Dr. Purwanto, Chemical Reaction Engineering & Catalysis (CREC) Group, Department of Chemical Engineering, Diponegoro University, Jln. Prof. Sudharto, Kampus UNDIP Tembalang, Semarang, INDONESIA 50239, E-mail: purwa61@yahoo.fr

Dr. Didi Dwi Anggoro, Chemical Reaction Engineering & Catalysis (CREC) Group, Department of Chemical Engineering, Diponegoro University, Jln. Prof. Sudharto, Kampus UNDIP Tembalang, Semarang, INDONESIA 50239, E-mail: anggoro@alumni.undip.ac.id

Advisory International Editorial Boards:

Assoc. Prof. Dr. Subagio

Department of Chemical Engineering, Institut Teknologi Bandung, Jl. Ganesha 10, Bandung, Indonesia
E-mail: subagio@che.itb.ac.id

Prof. Dr. Nor Aishah Saidina Amin

Chemical Reaction Engineering Group (CREG), Faculty of Chemical and Natural Resources Engineering, Universiti Teknologi Malaysia, 81310 UTM Skudai, Johor, Malaysia
E-mail: noraishah@fkkksa.utm.my

Assoc. Prof. Dr. Y. H. Taufiq-Yap

Putra Centre for Catalysis Science and Technology, Department of Chemistry, Faculty of Science, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor, Malaysia
E-mail: yap@fsas.upm.edu.my

Assoc. Prof. Dr. Hadi Nur

Ibnu Sina Institute for Fundamental Science Studies, Universiti Teknologi Malaysia 81310 UTM Skudai, Johor, Malaysia
E-mail: hadi@kimia.fs.utm.my

Prof. Dr. Abdul Rahman Mohamed

School of Chemical Engineering, Universiti Sains Malaysia, 14300 Nibong Tebal, Pulau Penang, Malaysia
E-mail: chrahman@eng.usm.my

Assoc. Prof. Dr. Abdullah

Department of Chemical Engineering, Diponegoro University, Semarang, Indonesia,
E-mail: abd_busairi@yahoo.com

Dr. Hery Haerudin

Research Center for Chemistry, Indonesian Institute Of Sciences (PP Kimia – LIPI), Kawasan PUSPIPTEK, Tangerang, Banten, Indonesia

Assoc. Prof. Dr. Sibudjing Kawi

Department of Chemical and Biochemical Engineering, National University of Singapore, Singapore
E-mail: chekawis@nus.edu.sg

Dr. Yang Hong

Dalian Institute of Chemical Physics, Chinese Academy of Sciences, 457 Zhongshan Road, Dalian 116023, China
E-mail: jngc@dicp.ac.cn