

# **5th International Conference on Chemical and Process Engineering (ICCPE 2016)**

MATEC Web of Conferences Volume 69 (2016)

Jeju Island, Republic of Korea  
23 - 25 May 2016

## **Editors:**

**Kadhim F. Alsultani  
Kei Eguchi  
H.J. Heeres  
Jabbar H. Al-Baidhani**

**Yaxin Su  
Sulaiman Al-Zuhair  
Sheng-Tao Yang  
Yu-Shao Chen**

ISBN: 978-1-5108-2747-9

**Printed from e-media with permission by:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571



**Some format issues inherent in the e-media version may also appear in this print version.**

This work is licensed under a Creative Commons Attribution license:  
<http://creativecommons.org/licenses/by/2.0/>

**You are free to:**

**Share** – copy and redistribute the material in any medium or format.

**Adapt** – remix, transform, and build upon the material for any purpose, even commercial.

The licensor cannot revoke these freedoms as long as you follow the license terms.

**Under the following terms:**

You must give appropriate credit, provide a link to the license, and indicate if changes were made.

You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use. The copyright is retained by the corresponding authors.

Printed by Curran Associates, Inc. (2016)

For additional information, please contact EDP Sciences – Web of Conferences  
at the address below.

EDP Sciences – Web of Conferences  
17, Avenue du Hoggar  
Parc d'Activité de Courtabœuf  
BP 112  
F-91944 Les Ulis Cedex A  
France

Phone: +33 (0) 1 69 18 75 75

Fax: +33 (0) 1 69 28 84 91

[contact-edps@webofconferences.org](mailto:contact-edps@webofconferences.org)

**Additional copies of this publication are available from:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571 USA  
Phone: 845-758-0400  
Fax: 845-758-2633  
Email: [curran@proceedings.com](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

# TABLE OF CONTENTS

<b>EFFECT OF RICH SELENIUM MUSHROOM POLYSACCHARIDES ON HYPERLIPIDEMIA METABOLISM AND LIPOPROTEIN LIPASE ACTIVITY OF TESTS MICE.....</b>	<b>1</b>
<i>Yue Li-hong, Wang Yu-jun, Yu Jing-ni, Zhang Yue-hua</i>	
<b>COMPARISON OF TWO AGRICULTURAL WASTES FOR PHENOL REMOVAL VIA PEROXIDASE-CATALYZED ENZYMATIC APPROACH.....</b>	<b>6</b>
<i>Chiong Tung, Khor Ee H., Danquah Michael K., Lau Sie Y.</i>	
<b>RESEARCH OF H5N6 TREATMENT BY COMPARING WITH H6N1 AND H10N8 BY USING DECISION TREE AND APRIORI ALGORITHM.....</b>	<b>10</b>
<i>Kim Sunghyun, Lee Hojoon, Yoon Taeseon</i>	
<b>TREATMENT OF VARIOUS AVIAN INFLUENZA VIRUS BASED ON COMPARISON USING DECISION TREE ALGORITHM.....</b>	<b>14</b>
<i>Lee Jongchan, Kim Seojun, Yoon Taeseon</i>	
<b>DEEPER UNDERSTANDING OF FLAVIVIRUSES INCLUDING ZIKA VIRUS BY USING APRIORI ALGORITHM AND DECISION TREE.....</b>	<b>18</b>
<i>Yang Youjin, Gu Bokyung, Yoon Taeseon</i>	
<b>DATA MINING AND ANALYSIS OF BACILLUS VIRUS.....</b>	<b>22</b>
<i>An Jiwoo, Kim ChanWoo, Moon Seohyun, Huh Jungeun, Yoon Taeseon</i>	
<b>COMPARISON OF CIV, SIV AND AIV USING DECISION TREE AND SVM.....</b>	<b>26</b>
<i>Park Hyorin, Park Yoojin, Moon Yerin, Yoon Taeseon</i>	
<b>DEEPER UNDERSTANDING ABOUT THE GENETIC STRUCTURE OF DENGUE VIRUS USING SVM.....</b>	<b>31</b>
<i>Choi Subin, Choi Hyunjin, Yoon Taeseon</i>	
<b>ELECTRICITY GENERATION FROM THE MUD BY USING MICROBIAL FUEL CELL.....</b>	<b>35</b>
<i>Idris Sitinoor Adeib, Esat Farah Nasyitah, Abd Rahim Ain Adilla, Zahin Rizzqi W. A., Ruzlee W., Zyaed Razali W. M.</i>	
<b>BIODIESEL PRODUCTION FROM JATROPHA OIL IN A CLOSED SYSTEM.....</b>	<b>39</b>
<i>Shaaban W., El-Shazly A. H., Elkady M. F., Ohshima M.</i>	
<b>THERMAL PROPERTIES AND MORPHOLOGY OF POLYPROPYLENE/POLYCARBONATE/POLYPROPYLENE-GRAFT-MALEIC ANHYDRIDE BLENDS.....</b>	<b>44</b>
<i>Mat-Shayuti M. S., Abdullah M. Z., Megat-Yusoff P. S. M.</i>	
<b>IBUPROFEN-AMINO ACIDS CO-CRYSTAL SCREENING VIA CO-GRINDING METHODS.....</b>	<b>50</b>
<i>Othman Muhamad Fitri, Jamburi Norasikin, Anuar Normizar, Abd. Rahim Syarifah, Rohalim Nurul Hazwani</i>	
<b>CARBAMAZEPINE-FUMARIC ACID CO-CRYSTAL SCREENING USING SOLUTION BASED METHOD.....</b>	<b>56</b>
<i>Abd Rahim Syarifah, Tan Chou Choang, Ramle Noor Ashila</i>	
<b>A STUDY ON CONCEPTUAL DESIGN OF FISCHER-TROPSCH REACTORS IN GTL APPLICATIONS.....</b>	<b>61</b>
<i>Shin Jae Sun, Qasim Faraz, Jeong Jong Hwa, Park Sang Jin</i>	
<b>VARIATION OF PARTICLE SIZE AND PRETREATMENT TEMPERATURE TO THE CRYSTALLINITY OF LEUCAENA LEUCOCEPHALA.....</b>	<b>65</b>
<i>Mohd Safaai Nor Sharliza, Ibrahim Muhammad Izzudin, Azizan Amizon, Alwi Habsah</i>	
<b>EFFECTS OF PARTICLE SHAPE AND SIZE ON NANOFLUID PROPERTIES FOR POTENTIAL ENHANCED OIL RECOVERY (EOR).....</b>	<b>70</b>
<i>Tengku Mohd Tengku Amran, Baco Jumadi, Bakar Noor Fitrah Abu, Jaafar Mohd Zaidi</i>	
<b>THEORETICAL STUDY OF TWO STATES REACTIVITY OF NO ACTIVATION ON IRON ATOM.....</b>	<b>76</b>
<i>Wang Xiaoman, Su Yaxin, Liao Wenyu, Deng Wenyi</i>	
<b>INVESTIGATION OF THE PARAMETERS AFFECTING CO<sub>2</sub> —ASSISTED POLYANILINE POLYMERIZATION.....</b>	<b>81</b>
<i>Noby H., El-Shazly A. H., Elkady M. F., Ohshima M.</i>	
<b>MICROENCAPSULATION OF CITRONELLA OIL BY COMPLEX COACERVATION USING CHITOSAN-GELATIN (B) SYSTEM: OPERATING DESIGN, PREPARATION AND CHARACTERIZATION.....</b>	<b>86</b>
<i>Abdul Aziz Fitrah Rabani, Jai Junaidah, Raslan Rafegah, Subuki Istikamah</i>	

<b>A COMPARISON BETWEEN THE EFFECTS OF SEPIOLITE AND SILICA ON MECHANICAL PROPERTIES AND THERMAL STABILITY OF NR/EPDM BLEND.....</b>	94
<i>Winya Nattawat, Hansupalak Nanthiya</i>	
<b>THE EFFECTIVENESS STUDY OF DIFFERENT MEMBRANES IN TREATING INDUSTRIAL WASTEWATER.....</b>	99
<i>Shahrudin Munawar Zaman, Binti Ishak Izzah Softahanun, Othman Nur Hidayati, Alias Nur Hashimah, Ramlee Nur Azrini</i>	
<b>IN-SITU CATALYTIC SURFACE MODIFICATION OF MICRO-STRUCTURED <math>La_{0.6}Sr_{0.4}Co_{0.2}Fe_{0.8}O_{3-\delta}</math> (LSCF) OXYGEN PERMEABLE MEMBRANE USING VACUUM-ASSISTED TECHNIQUE.....</b>	105
<i>Othman Nur Hidayati, Shahrudin Munawar Zaman, Sihar Ainun Sailah, Wu Zhentao, Li K.</i>	
<b>PHOTOCATALYTIC DEGRADATION OF OIL USING POLYVINYLIDENE FLUORIDE/TITANIUM DIOXIDE COMPOSITE MEMBRANE FOR OILY WASTEWATER TREATMENT .....</b>	111
<i>Rusli Ummi Nadiah, Alias Nur Hashimah, Shahrudin Munawar Zaman, Othman Nur Hidayati</i>	
<b>PYROLYSIS OF CARBONACEOUS PARTICLES AND PROPERTIES OF CARBONACEOUS-G-POLY (ACRYLIC ACID-CO-ACRYLAMIDE) SUPERABSORBENT POLYMER FOR AGRICULTURAL APPLICATIONS.....</b>	116
<i>Ghazali S., Jamari S., Noordin N., Tan K. M.</i>	
<b>THERMAL BEHAVIOR AND THE SOLVENT EFFECTS OF p-METHOXY TETRAPHENYLPORPHYRIN (TOMPP), COPPER PORPHYRIN (CUTOMPP), AND NITROPORPHYRIN (CUTOMPP-NO<sub>2</sub>).....</b>	122
<i>Phromsaitit Tossapon, Jantayot Wootthiphan, Pinsuwan Kusuma, Nuchthanom Autthavit, Boonyuen Supakorn</i>	
<b>AN OPTIMIZATION STUDY ON SYNGAS PRODUCTION AND ECONOMIC EVALUATION.....</b>	127
<i>Qasim Faraz, Shin Jae Sun, Jeong Jong Hwa, Park Sang Jin</i>	
<b>GREEN, ECO, INNOVATIVE DESIGN, AND MANUFACTURING TECHNOLOGY OF A 1-TON PER BATCH MUNICIPAL SOLID WASTE INCINERATOR.....</b>	132
<i>Kerdsuwan Somrat</i>	
<b>Author Index</b>	