

The Korean Journal of Chemical Engineering

November 2015
Volume 32, Number 11

Korean J. Chem. Eng. 32(11) 2169-2368
Print ISSN 0256-1115
Online ISSN 1975-7220

PROCESS SYSTEMS ENGINEERING, PROCESS SAFETY

- Kamlesh Ghodasara, Sungwon Hwang, 2169 **Catalytic propane dehydrogenation: Advanced strategies for the analysis and design of moving bed reactors**
and Robin Smith
- Dae Jin Jang and Young Han Kim 2181 **A new horizontal distillation for energy saving with a diabatic rectangular column**

TRANSPORT PHENOMENA

- Jiansheng Wang, Xiaoming Gao, 2187 **Flow and heat transfer characteristics in a channel having furrowed wall based on sinusoidal wave**
and Weiyi Li
- Nima Nabian, Ali Asghar Ghoreyshi, 2204 **Performance evaluation and mass transfer study of CO₂ absorption in flat sheet membrane contactor using novel porous polysulfone membrane**
Ahmad Rahimpour,
and Mohsen Shakeri

CATALYSIS, REACTION ENGINEERING

- Jung Eun Park, Bo Bae Kim, 2212 **Propane combustion over Pt/Al₂O₃ catalysts with different crystalline structures of alumina**
and Eun Duck Park
- Yong Hee Lee, Hyoungsik Kim, 2220 **Co-Mn-Ru/Al₂O₃ catalyst for the production of high-calorific synthetic natural gas**
Hyun Sook Choi, Dae-Won Lee,
and Kwan-Young Lee
- Jinxiao Dou, Xianchun Li, 2227 **Desulfurization of coke oven gas using char-supported Fe-Zn-Mo catalysts: Mechanisms and thermodynamics**
Arash Tahmasebi, Jing Xu,
and Jianglong Yu

ENERGY

- Prakash Parthasarathy 2236 **Effect of combined slow pyrolysis and steam gasification of sugarcane bagasse on hydrogen generation**
and Sheeba Narayanan

ENVIRONMENTAL ENGINEERING

- Juanjuan Yang, Yunhui Dong, 2247 **Removal of Co(II) from aqueous solutions by sulfonated magnetic multi-walled carbon nanotubes**
Jun Li, Zhengjie Liu, Fanlian Min,
and Yueyun Li
- Qianqian Guo, Wen Jing, 2257 **Promoting role of sulfur groups in selective catalytic reduction of NO with NH₃ over H₂SO₄ modified activated carbons**
Shangzeng Cheng, Zhanggen Huang,
Dekui Sun, Yaqin Hou,
and Xiaojin Han
- Xin Chen, Jin Wang, Shaowei Wang, 2264 **Effect of solution properties on the interaction of ⁹⁰Sr(II) with GMZ bentonite**
Fengliang Ma, Xiaopeng Chen,
and Jiaying Li
- Choong Jeon and Ju-Hyun Cha 2273 **Removal of cesium ions from waste solution using sericite incorporated into nickel hexacyanoferrate**

BIOTECHNOLOGY

- Sung Bong Kim, Ja Hyun Lee, 2280 **Furfural production from hydrolysate of barley straw after dilute sulfuric acid pre-treatment**
Xiaoguang Yang, Jiwon Lee,
and Seung Wook Kim

Joo-Young Jung, Ji-Won Yang, 2285 **Cost-efficient cultivation of *Spirulina platensis* by chemical absorption of CO₂ into medium containing NaOH**
Kyochan Kim, Kwon-Tack Hwang,
Simon MoonGeun, Jung,
and Jong-Hee Kwon

Seok-Hwan Park, Jae-Hee Park, 2290 **Biodiesel production from palm oil using a non-catalyzed supercritical process**
Sriramulu Gobikrishnan,
Gwi-Taek Jeong, and Don-Hee Park

SEPARATION TECHNOLOGY, THERMODYNAMICS

Stefan Baj, Tomasz Krawczyk, 2295 **Absorption of carbon dioxide in aqueous solutions of imidazolium ionic liquids with carboxylate anions**
Aleksandra Dąbrowska,
Agnieszka Siewniak,
and Aleksander Sobolewski

Yamina Ammi, Latifa Khaouane, 2300 **Prediction of the rejection of organic compounds (neutral and ionic) by nanofiltration and reverse osmosis membranes using neural networks**
and Salah Hanini

Javad Saïen and Mahdi Zardoshti 2311 **Mass transfer intensification of nanofluid single drops with effect of temperature**

Mimi Suliza Muhamad, 2319 **Preparation and characterization of PES/SiO₂ composite ultrafiltration membrane for advanced water treatment**
Mohamad Razman Salim,
and Woei-Jye Lau

Min-Kyung Kim, Ki Heon Eom, 2330 **Simple boron removal from seawater by using polyols as complexing agents: A computational mechanistic study**
Jun-Heok Lim, Jea-Keun Lee,
Ju Dong Lee, and Yong Sun Won

MATERIALS (Organic, Inorganic, Electronic, Thin Films)

Hanmei Hu, Xinqing Ge, Qiang Zheng, 2335 **Novel perpendicularly cross-rectangular CuO architectures: Controlled synthesis, enhanced photocatalytic activity and catalytic thermal-decomposition of NH₄ClO₄**
and Chonghai Deng

Dae-Yeop Kang, Jun-Heok Lim, 2342 **Study of struvite crystallization in a semi-batch jet loop fluidized bed reactor**
Tae-Yoon Lee, and Jea-Keun Lee

POLYMER, INDUSTRIAL CHEMISTRY

Xianghong Li and Shuduan Deng 2347 **Cassava starch graft copolymer as an eco-friendly corrosion inhibitor for steel in H₂SO₄ solution**

Xiaobing Wang, Guihua Qiu, Yi Ge, 2355 **Highly selective magnetic polymer particles via molecular imprinting**
Wei Zheng, Lingmei Kong,
Yajuan Xue, Bin Ren, and Yuxing Peng

FLUIDIZATION, PARTICLE TECHNOLOGY

Chin Swee Miin, 2361 **Hydrodynamics of multi-sized particles in stable regime of a swirling bed**
Shaharin Anwar Sulaiman,
Vijay Raj Raghavan,
Morgan Raymond Heikal,
and Muhammad Yasin Naz