

# The Korean Journal of Chemical Engineering

October 2012  
Volume 29, Number 10

Korean J. Chem. Eng. 29(10) 1285-1466  
Print ISSN 0256-1115  
Online ISSN 1975-7220

## RAPID COMMUNICATION

- Hongping Pu, Liuyi Zhang, 1285 One-step synthesis of mesoporous sulfated zirconia nanoparticles with anionic template  
Dongquan Du, Caiyun Han,  
Hongyin Li, Jiangyan Li,  
and Yongming Luo
- Minsoo Kim, Hong-shik Lee, 1289 Vegetable oil aided hydrothermal synthesis of cerium oxide nanocrystals  
Young Ho Shin, Ki Ho Ahn,  
Yong-Suk Youn, Jaehoon Kim,  
and Youn-Woo Lee

## PROCESS SYSTEMS ENGINEERING, PROCESS SAFETY

- Lu-Yen Chen, Chung-Hwei Su, 1292 Isothermal and non-isothermal kinetic and safety parameter evaluation of tert-  
Kuen-Yuan Chuang, Chun-Ping Lin,  
Shuh-Woei Yu, and Jo-Ming Tseng  
butyl(2-ethylhexyl)monoperoxy carbonate by differential scanning calorimetry
- Zhaoyi Huo, Liang Zhao, 1298 A hybrid optimization strategy for simultaneous synthesis of heat exchanger net-  
Hongchao Yin, and Jianxiong Ye  
work
- Heon Seok Lee, Byung Seok Ko, 1310 Reduction of thermal radiation by steam in flare stack system  
Jae Mo Yang, Chang Jun Lee,  
Jin Hwan Yoo, Dongil Shin,  
Chulhwan Park, and Jae Wook Ko

## TRANSPORT PHENOMENA

- Seokwon Kim, Hansol Yoo, 1321 Convective heat transfer of alumina nanofluids in laminar flows through a pipe at  
and Chongyoup Kim  
the thermal entrance regime

## CATALYSIS, REACTION ENGINEERING

- Joonho Kim, Taeyoon Kim, 1329 Carbon dioxide reforming of methane to synthesis gas over  $\text{LaNi}_{1-x}\text{Cr}_x\text{O}_3$  perovs-  
Jung Whan Yoo, Ki Bong Lee,  
and Suk-In Hong  
kite catalysts

## ENERGY

- Kyungduck Park and Jeongseb Han 1336 A study on thermal analysis of  $\text{MgH}_2$  powder made by hydriding chemical vapor  
deposition method
- Kyung Yoen Won, Young Soo Kim, 1341 Comparison of bioethanol production of simultaneous saccharification & fermenta-  
and Kyeong Keun Oh  
tion and separation hydrolysis & fermentation from cellulose-rich barley straw
- Parviz Mohammadi, Shaliza Ibrahim, 1347 Comparative study on the effect of various pretreatment methods on the enrichment  
and Mohamad Suffian Mohamad Annuar  
of hydrogen producing bacteria in anaerobic granulated sludge from brewery wastewater

## ENVIRONMENTAL ENGINEERING

- Ali Akbar Zinatizadeh Lorestani, 1352 Comparison of different fluid dynamics in activated sludge system for the treat-  
Hojjatollah Bashiri, Azar Asadi,  
and Hossein Bonakdari  
ment of a stimulated milk processing wastewater: Process analysis and optimiza-  
tion
- Feng Li, Rabindra Bade, Sanghwa Oh, 1362 Immobilization of heavy metals in a contaminated soil using organic sludge char  
and Won Sik Shin  
and other binders

Eun Ju Lee and Kwang-Hee Lim 1373 **A dynamic adsorption model for the gas-phase biofilters treating ethanol: Prediction and validation**

Alper Erdem Yilmaz, 1382 **Boron removal by means of chemical precipitation with calcium hydroxide and Recep Boncukcuoglu, Serkan Bayar, calcium borate formation**  
Baybars Ali Fil,  
and Mehmet Muhtar Kocakerim

Minqiang He, Aixia Pan, Jimin Xie, 1388 **Synthesis of 1-benzoylpyrene using silica-supported phosphotungstic heteropoly acid as an efficient and reusable catalyst**  
Huamin Li, Xinhua Yuan,  
Xiaonong Cheng, and Min Chen

#### BIOTECHNOLOGY

- Bok Hee Kim, DuBok Choi, 1393 **Comparative study on the antioxidant and nitrite scavenging activity of fruiting  
Yu Lan Piao, Sang-Shin Park, body and mycelium extract from *Pleurotus ferulae***  
Myung Koo Lee, Wol-Suk Cha,  
Young-Cheol Chang, and Hoon Cho
- Weina Liu, Yucui Hou, Weize Wu, 1403 **Complete conversion of cellulose to water soluble substances by pretreatment with  
Shuhang Ren, and Wenhua Wang ionic liquids**
- Jung Hee Park, Huahua Xue, 1409 **Immobilization of laccase on carbon nanomaterials**  
Jin Suk Jung, and Keungarp Ryu

#### SEPARATION TECHNOLOGY, THERMODYNAMICS

- Jing Zhu, Fei Shen, Yong-Hong Hu, 1413 **Solubility of N-chloro succinimide in different pure solvents in the temperature  
Xin-min Jiang, and Dong-yun Li range from 278.15 K to 333.15 K**
- Min Hee Lee, Joon-Hyuk Yim, 1418 **Measurement and correlation of the isothermal vapor-liquid equilibrium data for  
and Jong Sung Lim carbon dioxide and dimethyl ether system**
- Shaikh Asrof Ali 1426 **Phase diagrams of urethanized polyvinyl alcohol with a series of hydrophobically modified pH-responsive polymers containing amino acid residues**
- Yong Sun Won 1438 **Computational study on the decomposition of tetraneopentyl zirconium for the  
chemical vapor deposition of zirconium carbide**

#### MATERIALS (Organic, Inorganic, Electronic, Thin Films)

- Ki Woong Ahn, Hana Rah, 1444 **Preparation of spherical macroporous silica in an aerosol phase  
and Sun-Geon Kim**
- Umme Farva, Mohamed Alam Khan, 1453 **Elucidation of morphological and optoelectronic properties of highly crystalline  
and Chinho Park chalcopyrite ( $\text{CuInSe}_2$ ) nanoparticles synthesized via hot injection route**

#### POLYMER, INDUSTRIAL CHEMISTRY, FLUIDIZATION, PARTICLE TECHNOLOGY

- Mohammad Irani, Ali Reza Keshtkar, 1459 **Preparation of poly(vinyl alcohol)/tetraethyl orthosilicate hybrid membranes modified  
and Mohammad Ali Mousavian with TMPTMS by sol-gel method for removal of lead from aqueous solutions**