Korean Journal of Chemical Engineering

October 2021 Volume 38, Number 10

Korean J. Chem. Eng. 38(10) 1971-2170 Print ISSN 0256-1115 Online ISSN 1975-7220

INVITED REVIEW PAPER		
Sangwon Lee, Haeun Byun, Mujin Cheon, Jihan Kim, and Jay Hyung Lee	1971	Machine learning-based discovery of molecules, crystals, and composites: A perspective review
PROCESS SYSTEMS ENGINEERING, PROCESS SAFETY		
Qianchao Wang, Lei Pan, Kwang Y. Lee, and Zizhan Wu	1983	Deep-learning modeling and control optimization framework for intelligent thermal power plants: A practice on superheated steam temperature
Vasilios I. Manousiouthakis and Soo Hyoung Choi	2003	A carbon cycle optimization method for fossil and biomass energy utilization
		TRANSPORT PHENOMENA
Jianguang Wei, Xin Zhang, Jiangtao Li, Runnan Zhou, and Songze Liu	2009	10-m long slim sandpack experiments to investigate gel system transport behavior in porous media
Fatemeh Keramat, Azadeh Mirvakili, Alireza Shariati, and Mohammad Reza Rahimpour	2020	Investigation of anti-condensation strategies in the methanol synthesis reactor using computational fluid dynamics
CATALYSIS, REACTION ENGINEERING		
Nguyen Trung Dung, Nguyen Van Hiep, Manh B. Nguyen, Vu Dinh Thao, and Nguyen Nhat Huy	2034	Photocatalytic removal of Rhodamine B in water using g-C $_3$ N $_4$ /MIL-53(Fe) material under LED visible light with persulfate activation
Hagos Birhane Asfha, NaYoung Kang, Ashenafi Hailu Berta, Hodong Hwang, Kiwoong Kim, and Yong-Ki Park	2047	Kinetic modeling of methanol to olefins over phosphorus modified HZSM-5 zeo- lite catalyst
ENERGY		
Aniket Kumar, Yejin Yun, Jaewoon Hong, In-Ho Kim, Aman Bhardwaj, and Sun-Ju Song	2057	Influence of different parameters on total fluoride concentration evaluation in ex-situ chemical degradation of nafion based membrane
ENVIRONMENTAL ENGINEERING		
Ji Eun Jeong and Chang-Yong Lee	2064	The simultaneous removal of sulfur dioxide and nitrogen dioxide by the limestone slurry with addition of organic acid additives
Miloslav Hartman, Bohumír Čech, Michael Pohořelý, Karel Svoboda, and Michal Šyc	2072	Slow-rate devolatilization of municipal sewage sludge and texture of residual solids
Akash Sitaram Jadhav and Madhukar Vinayak Jadhav	2082	Utilization of black mustard husk ash for adsorption of fluoride from water
BIOTECHNOLOGY		

S. Silviana, Didi Dwi Anggoro, 2091 Utilization of geothermal waste as a silica adsorbent for biodiesel purification

Cantika Aulia Salsabila, and Kevin Aprilio

Sang Hyun Kim, Min Ju Suh, Jang Yeon Cho, Hong-Ju Lee, See-Hyoung Park, Kyungmoon Park, Jung-Oh Ahn, Jeong Chan Joo, Shashi Kant Bhatia, and Yung-Hun Yang

Sion Ham, Yeong-Hoon Han, 2106 Application of L-glutamate oxidase from Streptomyces sp. X119-6 with catalase (KatE) to whole-cell systems for glutaric acid production in Escherichia coli

SEPARATION TECHNOLOGY, THERMODYNAMICS

Yongjie Li, Qiang Fu, Hongyun Qin, Kun Yang, Junnan Lv, Qicheng Zhang, Hui Zhang, Feng Liu, Xia Chen, and Ming Wang

2113 Separation of valuable metals from mixed cathode materials of spent lithium-ion batteries by single-stage extraction

Longfei Liu 2122 Real-time life and degradation prediction of ceramic filter tube based on statespace model

MATERIALS (Organic, Inorganic, Electronic, Thin Films)

Min-Jung Song and Joon-Hyung Jin 2129 Synergistic effect of photoanode and photocathode modified with oxygenated multi-walled carbon nanotubes in dve-sensitized solar cells

Yan-Chun Li, Fan-Long Jin, 2134 Oxygen-vacancy-rich spinel CoFe₂O₄ nanocrystals anchored on cage-like carbon and Soo-Jin Park for high-performance oxygen electrocatalysis

Xiaoxian Zhang, Yue Niu, Feng Xue, 2141 Preparation and evaluation of porous H_{1.6}Mn_{1.6}O₄@chitosan pellet for Li⁺ ex-Jianhong Gao, Xiaolei Zhu, traction and Shengui Ju

Jing Zhong, Xiuxiu Ren, and Zhengzhong Zhou

Qigang Wu, Rong Xu, Hui Shao, 2150 Preparation of heteroatom isomorphously substituted MEL zeolite membranes for pervaporation separation of dimethylformamide/water mixtures

POLYMER, INDUSTRIAL CHEMISTRY

Ali Hashem, Chukwunonso Onyeka Aniagor, Mohamed Abdel-Fattah Afifi, Ashraf Abou-Okeil, and Sayed Hussein Samaha

2157 Synthesis of super-absorbent poly(AN)-g-starch composite hydrogel and its modelling for aqueous sorption of cadmium ions