# **Korean Journal of Chemical Engineering**

September 2021 Volume 38, Number 9

Korean J. Chem. Eng. 38(9) 1757-1970 Print ISSN 0256-1115 Online ISSN 1975-7220

### INVITED REVIEW PAPER

Ji Hyun Lee and Jay Hyung Lee 1757 Techno-economic and environmental feasibility of mineral carbonation technology for carbon neutrality: A Perspective

PROCESS SYSTEMS ENGINEERING, PROCESS SAFETY		
Iqrash Shafiq, Murid Hussain, Sumeer Shafique, Muhammad Haris Hamayun, Muhammad Mudassir, Zeeshan Nawaz, Ashfaq Ahmed, and Young-Kwon Park	1768	A comprehensive numerical design of firefighting systems for onshore petroleum installations
TRANSPORT PHENOMENA		
Keun Ho Choi	1781	Prediction of gas holdup in various types of airlift reactors
CATALYSIS, REACTION ENGINEERING		
Jae-Rang Lee, Yong-Ha Kim, and Yong Sun Won	1791	Solid-state reaction between MoS <sub>2</sub> and MoO <sub>3</sub> in a fluidized bed reactor
Khan Muhammad Qureshi, Andrew Ng Kay Lup, Saima Khan, Faisal Abnisa, and Wan Mohd Ashri Wan Daud	1797	Effect of temperature and feed rate on pyrolysis oil produced via helical screw fluidized bed reactor
Wenwen Luan, Chunyu Wang, Zuoxiang Zeng, Weilan Xue, Xuelian He, and Yu Bai	1810	Kinetics of polyvinyl butyral hydrolysis in ethanol/water solutions
Byung Jin Lee, Jae Hwan Lee, Geun-Ho Han, Young Gul Hur, and Kwan-Young Lee	1818	Effect of hydroxyapatite-doping in Na-W-Mn/SiO $_{\!2}$ catalysts on oxidative coupling of methane
ENERGY		
Jin-Seong Seo and Byung-Ki Na	1826	Effects of Pluronic P123 addition and $Cr^{3+}$ doping on electrochemical properties of $Li_4Ti_5O_{12}$ anode for lithium ion batteries
Jun Ho Kim, Su In Mo, Gwang Seon Park, and Jeong Woo Yun	1834	Characteristics of $Sr_{0.92}Y_{0.08}Ti_{1-x}Ni_xO_{3-\delta}$ anode for direct internal steam methane reforming in solid oxide fuel cells
ENVIRONMENTAL ENGINEERING		
Yasin Gomravi, Asadollah Karimi, and Hamidreza Azimi	1843	Adsorption of heavy metal ions via apple waste low-cost adsorbent: Characterization and performance $% \left( 1\right) =\left( 1\right) +\left( 1\right)$
Mehtap Ozekmekci, Derya Unlu, and Mehmet Copur	1859	Removal of boron from industrial was tewater using PVP/PVDF blend membrane and GO/PVP/PVDF hybrid membrane by per vaporation
Min Li, Junfeng Su, Yifei Li, Amjad Ali, Shu Yang, and Shuai Zhang	1870	Suspended membrane bioreactor with extracellular polymeric substances as reserve carbon source for low carbon to nitrogen ratio wastewater: Performance and

microbial community composition

#### **BIOTECHNOLOGY**

- Ashwini Kumar, Savitha Janakiraman, and Lokesh Kyathsandra Nataraj
- 1880 Optimization study for enhanced production of hyaluronic acid from Streptococcus equisimilus MK156140
- C. M. Narayanan and Vikas Narayan 1888 Studies on synthesis of lactic acid and xanthan gum from cheese whey permeate in two phase and three phase moving bed biofilm reactors

#### SEPARATION TECHNOLOGY, THERMODYNAMICS

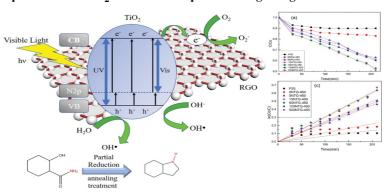
and Fatma Al Shibli

Rajamohan Natarajan 1903 Corrosion inhibition of aluminum under basic conditions using Medicago sativa L. extract - thermodynamic studies

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

Yudi Ma, Shukun Wang, Wanlan Zheng, Xin Xue, Huie Liu, Shuang Chen, and Yiwen Zhu

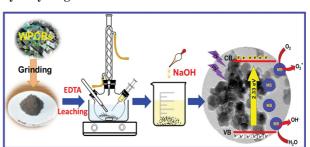
1913 Preparation of N-TiO<sub>2</sub>/RGO nanocomposites through sol-gel method



Ji Seong Moon, and Keun Yong Sohn

Sabah Mohamed Abdelbasir, Shakinaz Taha El-Sheltawy, and Ibrahim Ahmed Ibrahim

- Arunakumari Nulu, Venugopal Nulu, 1923 Unified NCNT@rGO bounded porous silicon composite as an anode material for Lithium-ion batteries
  - Dina Magdy Abdo, 1934 Recovery of Tin as Tin oxide nanoparticles from waste printed circuit boards for photocatalytic dye degradation



# POLYMER, INDUSTRIAL CHEMISTRY

Andrielen Braz Vanzetto, Lucas Dall Agnol, Alessandra Lavoratti, Marcos Vinícius Marocco, Gabriel Gonem de Lima, Lilian Vanessa Rossa Beltrami, Ademir José Zattera, and Diego Piazza

1946 Thermal properties and curing kinetics of epoxy powder coatings containing graphene nanoplatelets

Ao Sheng, Hao Wang, Haoji Jiang, Yaxin Zhao, Hao Li, Hao Jia, Zhong Wei, and Heyun Wang

1956 Structurally ordered nanofiltration membranes prepared by spatially anchoring interfacial polymerization for highly efficient separation properties