

Korean Chemical Engineering Research

November 2022
Volume 60, Number 4

Korean Chem. Eng. Res., 60(4) 473-640(2022)
PISSN 0304-128X, EISSN 2233-9558

Review

- A review on Separation Technologies for Lithium Recovery from Waste Solutions in Recycling Process of Waste Battery
..... Daesung Song, Eunkyu Kim and Thang-Toan Vu 473

Article

Industrial Chemistry(Electrochemistry, Analytical Chemistry)

- Methodology of the Fuel Conversion Project and Analysis of the Offset System of the Greenhouse Gas Emission Trading System
..... Eok yong Kim, Min chang Shin and Jeong hoon Park 478
- Effect of Adding Fermented Organic Matter on the Performance of Benthic Microbial Fuel Cell (BMFC)
..... Mi-Hwa Lee, Seol-Hwa Yang, Young-Sook Kim, Cheun-Ho Chu and Kwonpil Park 486

Process System Engineering · Plant Design · Process Safety · Plant Engineering

- A Research on the Exposure Status of Cybersecurity Risk of Process Control System and Its Counterplan
..... Youngse Kim, Jinhyung Park, Sangki Kim, Byungjick Kim, Joonwon Lee and Kyoshik Park 492
- Conceptual Design of Vanillin Production Process Using Solvent Extraction
..... Eunkyu Kim, Thang Toan Vu and Daesung Song 499
- Consideration on the Regulated Quantity of Preparation for Accidents by Risk Assessment
..... Gwangjae Ahn, Jungwook Kim, Keunwon Lee and Seungho Jung 506
- Study of Pressure Safety Valves and an Absorption System for a Repurposed Ammonia Tank
..... Jong Hoon Bae and Chang Jun Lee 512
- A Study on the Combustion Characteristics of Organic Insulation Materials According to the Gas Toxicity Evaluation Method
..... Ji-Hun Shim, Jae-Geol Lee, Kyoung-Ho Han, Ju-Wan Kim, Seok-Hun Song, Hyung-Won Jo and Do-Young Yoon 519
- Performance Evaluation of a Closed-Loop Pressure Retarded Membrane Distillation for Brackish Water Desalination and Power Generation
..... Gyu Sang Cho, Jun-Seo Lee and Kiho Park 525
- Analysis of Hydrodynamics in a Directly-Irradiated Fluidized Bed Solar Receiver Using CPFD Simulation
..... Suyoung Kim, Geunhye Won, Min Ji Lee and Sung Won Kim 535

Biochemical Engineering · Biochip Technology · Biomedical Technology

- Negative Pressure Cavitation Acetone-Pentane Fractional Precipitation for the Purification of Paclitaxel from *Taxus chinensis*
..... Hye-Su Min and Jin-Hyun Kim 544
- Enhancement of Electrochemical Performance of Cathode by Optimizing Laccase-Carbon Nanotubes Layers for Enzymatic Fuel Cells
..... Xue Wang and Chang-Joon Kim 550
- Development of the Experimental Apparatus to Measure a Pore Size of Micro-pore Fabrics Used for a Bedding to Block the House Dust Mite Allergen
..... Donhue Kim 557

Energy/Environment · New Renewable Energy · Waste Treatment/Energy Recovery Technology

- Quantitative Analysis of Calcium Carbonate Polymorphs by Peak Area of XRD
..... Young-Cheol Bak 564
- Nanofibers Comprising Mo₂C/Mo₂N Nanoparticles and Reduced Graphene Oxide as Functional Interlayers for Lithium-sulfur Batteries
..... Jae Seob Lee, Ji Hoon Yang and Jung Sang Cho 574
- Kinetics of CO₂ Absorption in Aqueous DETA and DEEA Solutions by Wetted-Wall Column
..... Jong Kyun You, Jun Lee and Yeon Ki Hong 582
- Effect of Terephthalaldehyde to Facilitate Electron Transfer in Heme-mimic Catalyst and Its Use in Membraneless Hydrogen Peroxide Fuel Cell
..... Sieun Jeon, Heeyeon An and Yongjin Chung 588

Fluidization Engineering · Climate Change Technology · Fuel Conversion Technology · Particulate and Powder Engineering

- A Study on the Characteristics of Ca(OH)₂ According to the Calcination Conditions of Oyster Shells and Its Application for Exterior Water Paints
..... Dae Ju Hwang, Young Hwan Yu, Chang Soo Han and Jong Dae Lee 594
- Development of Potassium Impregnated Carbon Absorbents for Indoor CO₂ Adsorption
..... Se-Eun Jeong, Shuang Wang, Yu-Ri Lee, Yooseob Won, Jae-Young Kim, Jae Jun Jang, Hana Kim, Sung-ho Jo, Young Cheol Park and Hyungseok Nam 606

Transport Phenomena · Drug Delivery System · Functional Coating Technology · Biomedical Materials

- Simulation of Bi-dispersed Electrorheological Fluids of Different Particle Sizes by the Extended Maxwell-Wagner Polarization Model
..... Young Dae Kim 613

Catalysis/Reaction Engineering · Reactor Development/Modeling · Numerical Analysis

- Synthesis, Characterization and Ammonia Decomposition Reaction Activity of Vanadium Oxynitride Obtained from the Reduction/Nitridation of Vanadium Oxide
..... Kyung Hee Yun and Chae-Ho Shin 620