

# Korean Chemical Engineering Research

November 2021  
Volume 59, Number 4

Korean Chem. Eng. Res., 59(4) 481-660 (2021)  
PISSN 0304-128X, EISSN 2233-9558

## Article

### Industrial Chemistry(Electrochemistry, Analytical Chemistry)

- Endothermic Properties of Liquid Fuel Decomposition Catalyst Using Metal Foam Support  
..... Jeongin Mun, Nari Kim, Byunghun Jeong and Jihoon Jung 481
- Electrochemical Performance of Pitch coated Nano Silicon Sheets / Graphite Composite as Anode Material  
..... Tae Heon Lee and Jong Dae Lee 487
- Kinetics, Isotherm and Adsorption Mechanism Studies of Letrozole Loaded Modified and Biosynthesized Silver Nanoparticles as a Drug Delivery System: Comparison of Nonlinear and Linear Analysis  
.....Mahsa PourShaban, Elham Moniri, Raheleh Safaeijavan and Homayon Ahmad Panahi 493
- Generation of Hydrogen from Hydrolysis Reaction of NaBH<sub>4</sub> Using Fresh Water  
.....Sohyeong Oh, Donggeun Yoo, Taeho Kim, Ikgyun Kim and Kwon-Pil Park 503
- Comparison of Degradation due to Fenton Reaction between Reinforced and Non-reinforced Membranes Used in PEMFC  
..... Sohyeong Oh, Donggeun Yoo, Mihwa Lee, Jisang Park and Kwon-Pil Park 508
- Drug Delivery Study on Chitosan Nanoparticles Using Iron Oxide (II, III) and Valine  
..... So-Hyeon Jang and Ik-Joong Kang 514

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

- Design of Hazardous Fume Exhaust System in Vacuum Pressure Impregnation Process Using CFD  
..... Jungyu Jang, Yup Yoo, Hyundo Park, Il Moon, Baekgyu Lim, Junghwan Kim and Hyungtae Cho 521
- Application of Time-series Cross Validation in Hyperparameter Tuning of a Predictive Model for 2,3-BDO Distillation Process  
..... Nahyeon An, Yeongryeol Choi, Hyungtae Cho and Junghwan Kim 532

### Separation Technology · Thermodynamics and Molecular Simulation · Membrane Technology · Supercritical Fluid Extraction · Ionic Liquids

- Optimum Geometry of Glass Lined HOMEBASE Impeller for Gas-Liquid System of Low Viscosity Liquid  
..... Seung-Tae Koh 542

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

- Evaluating the Applicability of Activated Carbon-added Fiberboard Filters Fabricated with Lignocellulosic Fiber for the Reduction Equipment of Particulate Matter  
..... In Yang, Jae min So, Jeong Woo Hwang, Joon weon Choi, Young-kyu Lee, Wonsil Choi, Seung Won Oh and Myoung cheol Moon 548
- Characteristics of Sr<sub>0.92</sub>Y<sub>0.08</sub>Ti<sub>1-x</sub>V<sub>x</sub>O<sub>3-δ</sub> (x = 0.01, 0.04, 0.07, 0.12) Anode for Using H<sub>2</sub>S Containing Fuel in Solid Oxide Fuel Cells  
.....Geun Young Jang, Jun Ho Kim, Su In Mo, Gwang Seon Park and Jeong Woo Yun 557
- Isotherm, Kinetic, Thermodynamic and Competitive for Adsorption of Brilliant Green and Quinoline Yellow Dyes by Activated Carbon  
..... Jong Jib Lee 565
- Performance of Waste-air Treating System Composed of Two Alternately-operating UV/photocatalytic Reactors and Evaluation of Its Characteristics  
..... Eun Ju Lee and Kwang-Hee Lim 574
- Characterization of Repeated Deactivation and Subsequent Re-activation of Photocatalyst Used in Two Alternately-operating UV/photocatalytic Reactors of Waste-air Treating System  
..... Eun Ju Lee, Chan Hong Chung and Kwang-Hee Lim 584

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

- Removal of Anionic Dyes and Heavy Metal Ions Using Silica Nanospheres or Porous Silica Micro-particles Modified with Various Coupling Agents  
..... Sohyeon Sung, Minjun Lee and Young Sang Cho 596
- A Study on the Characteristics of Manufactured Mg Crown on the Calcining Conditions of Dolomite  
..... Dae Ju Hwang, Young Hwan Yu and Jong Dae Lee 611

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

- Dynamics Transition of Electroconvective Instability Depending on Confinement Effect  
..... Seungha Lee, Cheol Heon Hyun and Hyomin Lee 626

### Materials(Inorganics/Organics, Electronics, Semiconductor) · Nano Technology · Semiconductor Technology · Microreactor

- Cleaning Behavior of Aqueous Solution Containing Amine or Carboxylic Acid in Cu-interconnection Process  
..... Cheonkwang Ko and Won Gyu Lee 632
- Fabrication of 3D Multilayered Microfluidic Channel Using Fluorinated Ethylene Propylene Nanoparticle Dispersion  
.....Kyoung-Ik Min 639

## Short Communication

- Refractive Index and Excess Volume for Diisopropylamine + Isomeric Butanol Mixtures in terms of Nakata and Sakurai model  
..... Kavitha Kumari and Sanjeev Maken 644