

Korean Chemical Engineering Research

February 2019
Volume 57, Number 1

Korean Chem. Eng. Res., 57(1) 1-148 (2019)
PISSN 0304-128X, EISSN 2233-9558

Article

- Industrial Chemistry(Electrochemistry, Analytical Chemistry) · Drug Delivery System · Functional Coating Technology · Biomedical Materials**
Enhancement of Glucose Oxidation Reaction in Enzyme Biofuel Cell Utilizing Anthracene Dicarboxyl acid Cross-linker
.....Kyuhan Hyun, Jungyeon Ji and Yongchai Kwon 1
- Electrochemical Characteristics of Artificial Graphite Anode Coated with Petroleum Pitch treated by Solvent
..... Yoon Ji Jo and Jong Dae Lee 5
- Temperature Dependence of Cr Impurity in $\text{La}_{0.6}\text{Sr}_{0.4}\text{Ti}_{0.3}\text{Fe}_{0.7}\text{O}_{3-\delta}$ Coated $\text{Ba}_{0.5}\text{Sr}_{0.5}\text{Co}_{0.8}\text{Fe}_{0.2}\text{O}_{3-\delta}$ Ion Conducting Membrane for oxygen Separation
..... Yu Gang Park and Jung Hoon Park 11
- Active Material Crossover through Sulfonated Poly (Ether Ether Ketone) Membrane in Iron-Chrome Redox Flow Battery
..... Young-Sook Kim, So-Hyeong Oh, You-Jeong Kim, Seong-ji Kim, Cheun-Ho Chu and Kwonpil Park 17
- Development of Low Irritative, Eco-friendly Nail Polish Including Shellac/gelatin
..... Haeun Shim, Daeyoung Noh, Jimin Kim, Doyeon Kim, Myungsuk Nam and Donguk Kim 22
- Process System Engineering · Plant Design · Process Safety · Plant Engineering**
Investigation on Performance Analysis of Sodium-Water Reaction Pressure Relief System of Prototype Generation-IV Sodium-Cooled Fast Reactor
..... Sun Hee Park and Ji-Woong Han 28
- Numerical Modeling for Effect on Bund Overtopping Caused by a Catastrophic Failure of Chemical Storage Tanks
..... Dong Seok Min, Chuntak Phark and Seungho Jung 42
- The Research of Layout Optimization for LNG Liquefaction Plant to Save the Capital Expenditures
..... Jin Seok Yang and Chang Jun Lee 51
- Multi-phase Flow Process · Multi-phase Reaction · Polymer · New Energy**
Preparation of Monodisperse PEGDA Microparticles Using a Dispensing Needle Based Microfluidic Device
..... Si Hyung Jin, Taewan Kim, Dongseok Oh, Kyoung-Ku Kang and Chang-Soo Lee 58
- Preparation of Heterogeneous Bipolar Membranes Using Poly (phenylene oxide, PPO) Polyelectrolyte and Their Water Splitting Properties
..... In Sik Kim, Seong Yeon Hwang, Byung Gwan Kang and Taek Sung Hwang 65
- Separation Technology · Thermodynamics · Membrane Technology · Supercritical Fluid Extraction · Ionic Liquids**
Phase Equilibrium of Binary Mixture for the (propylene oxide + 1-pentanol) System at Several Temperatures
..... Jeong-lae Kim, Hakmin Kim, Su In Park, Gyu Min An, Min Gi Kim and Moon Sam Shin 73
- Solid-Liquid Equilibria and Excess Molar Volumes, Refractive Indices and Deviation in Viscosity for Binary Systems of $\text{C}_3\text{-C}_6$ Carboxylic Acids
..... Ji-Eun Gu, Ha-Young Oh and So-Jin Park 78
- Biochemical Engineering · Biochip Technology · Biomedical Technology**
Enhancement of Glucose-Fueled Cell-Free Protein Synthesis by the Addition of Lipids
..... So Jeong Lee, Ho-Cheol Kim and Dong-Myung Kim 85
- Energy/Environment · New Renewable Energy · Waste Treatment/Energy Recovery Technology**
CALPUFF Modeling of Odor/suspended Particulate in the Vicinity of Poultry Farms
..... Kwang-Hee Lim 90
- Fluidization Engineering · Climate Change Technology · Fuel Conversion Technology**
Effect of Height on CNT Aggregates Size and Shape in Freeboard Region of a Fluidized Bed
..... Sung Won Kim 105
- Materials(Inorganics/Organics, Electronics, Semiconductor) · Nano Technology · Semiconductor Technology · Microreactor**
Dye-sensitized Solar Cells Utilizing Core/Shell Structure Nanoparticle Fabrication and Deposition Process
..... Hongin Jeong, Jongryul Yoo and Sungho Park 111
- Electrochemical Performance of Graphite/Silicon/Pitch Anode Composites Bonded with Graphite Surface PVP and Silica Amine Function Group
..... Su Hyeon Lee and Jong Dae Lee 118
- Preparation of Water-Repellent Coating Films from Tetraethoxysilane and Chlorotrimethylsilane on PMMA Substrates
..... Jong Ho Park, Byung Wha Lee and Ki Chang Song 124
- Synthesis and Characterization of High Surface Area of Zirconia: Effect of pH
..... Ye-Seul Jeong and Chae-Ho Shin 133
- Catalysis/Reaction Engineering · Reactor Development/Modeling · Numerical Analysis · Transport Phenomena**
Energy Stability Analysis on the Onset of Buoyancy-Driven Convection in a Horizontal Fluid Layer Subject to Evaporative Cooling
..... Min Chan Kim 142