

Korean Chemical Engineering Research

June 2012
Volume 50, Number 3

Korean Chem. Eng. Res., 50(3) 391-594(2012)
PISSN 0304-128X, EISSN 2233-9558

Article

Industrial Chemistry(Electrochemistry, Analytical Chemistry) · Catalysis/Reaction Engineering · Drug Delivery System · Functional Coating Technology

Study on the Pyrolysis Kinetics of Deasphalted Oil Using Thermogravimetric Analysis	391
.....Sang Cheol Shin, Jung Moo Lee, Ki Bong Lee, Sang Goo Jeon, Jeong Geol Na and Nam Sun Nho	
Selective Oxidation of Hydrogen Sulfide Containing Ammonia and Water Using $\text{Fe}_2\text{O}_3/\text{SiO}_2$ Catalyst	398
.....Moon-il Kim, Gu-Hwa Lee, Sung-Woo Chun and Dae-Won Park	
Preparation and Properties of Aniline Terminated Waterborne Polyurethane/Multi-walled Carbon Nanotube Composite Coating Solutions	403
.....Min Gi Hong, Byung Suk Kim and Ki Chang Song	
Preparation of Waterborne Polyurethane-Acrylic Hybrid Solutions from Different Types of Acrylate Monomers	410
.....Byung Suk Kim, Min Gi Hong, Byung Won Yoo, Myung Goo Lee, Woo Il Lee and Ki Chang Song	
Effect of Pyridine on Toluene Diisocyanate (TDI) Synthesis Using Direct Carbonylation over Pd/SiO_2	417
.....Myung-gi Seo, Seongmin Kim, Dae-Won Lee and Kwan-Young Lee	
Preparation of UV-curable Ozone Resistance Coating Solutions using Fluoromonomer	421
.....Chang Ho Lee, Sang Goo Lee, Sung Rae Kim and Jong Dae Lee	
Preparation of Waterborne Polyurethane Coating Solutions with Antistatic Property from Alkali Metal Salts	427
.....Min Gi Hong, Byung Suk Kim, Yong Woon Lee and Ki Chang Song	
Direct Conversion of Cellulose into Polyols over Pt Catalysts Supported on Zeolites	435
.....Su Jin You, In Gu Baek and Eun Duck Park	
The Effects of Zeolite-Type Catalysts on the Pyrolysis Reaction of PP to Produce Fuel-oil	442
.....Young-Cheol Bak, Joo-Hong Choi and Se-Hui Oh	

Process System Engineering · Plant Design, Transport Phenomena · Process Safety · Plant Engineering

An Economic Analysis of Solvent Extraction Process under Mild Condition for Production of Ash-Free Coal	
.....Ho-Kyung Choi, Sang-Do Kim, Ji-Ho Yoo, Dong-Hyuk Chun, Jeong-Hwan Lim, Young-Joon Rhim and Si-Hyun Lee	449
Measurement of an Isoelectric Point and Softness of a EO-PO Adducted Zwitterionic Surfactant	455
.....JongChoo Lim, DaHee Mo, JinSun Lee, JunSeok Park and DongSung Han	
Mixing Characteristics of Sequential Blending with DME and LPG in Mixing Drum	464
.....Suk Hoon Cheon, Cha Hwan Kim, Dong Woo Shin, Lae Hyun Kim, Hyun Chan Lee and Young Soon Baek	
Strategic Planning of Carbon Capture & Storage (CCS) Infrastructure Considering the Uncertainty in the Operating Cost and Carbon Tax	471
.....Jee-Hoon Han and In-Beum Lee	
Optimization of Integrated District Heating System (IDHS) Based on the Forecasting Model for System Marginal Prices (SMP)	479
.....Ki-Jun Lee, Lae-Hyun Kim and Yeong-Koo Yeo	

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

A Study of Hydrodynamics and Reaction Characteristics in Relation to the Desulfurization Temperatures of Zn-Based Solid Sorbent in the Lab-scale High Pressure and High Temperature Desulfurization Process	
.....Dae-Hyun Kyung, Jae-young Kim, Sung-Ho Jo, Young Cheol Park, Jong-Ho Moon, Chang-Keun Yi and Jeom-In Baek	492
Effects of Liquid Surface Tension on the Heat Transfer Coefficient in a Three-Phase Slurry Bubble Column	499
.....Ho Lim, Dae Ho Lim, Hae-Ryong Jin, Yong Kang and Heon Jung	
The Effect of Partitioning Porous Plate on Bubble Behavior and Gas Hold-up in a Bench Scale (0.36 m × 22 m) Trayed Bubble Column	505
.....Jung Hoon Yang, Young Gul Hur, Ho-Tae Lee, Jung-Il Yang, Hak-Joo Kim, Dong Hyun Chun, Ji Chan Park and Heon Jung	
The Computer-Aided Simulation Study on the Gasification Characteristics of the Roto Coal in the Partitioned Fluidized-Bed Gasifier	511
.....Young Cheol Park, Jong-Ho Moon, Seung-Yong Lee, Dong-Ho Lee and Gyoung Tae Jin	
A Model on a Bubbling Fluidized Bed Process for CO_2 Capture from Flue Gas	516
.....Jeong-Hoo Choi, Pil-Sang Youn, Ki-Chan Kim, Chang-Keun Yi, Sung-Ho Jo, Ho-Jung Ryu and Young-Cheol Park	
Solid Descending Velocity by Gravity in a Vertical Downcomer	522
.....Ho-Jung Ryu, Jaehyeon Park, Do-won Shun and Seung-Yong Lee	

Separation · Technology, Thermodynamics, Membrane Technology, Supercritical Fluid Extraction, Ionic Liquids		
Adsorption Dynamics of Activated Carbon and Carbon Molecular Sieve Beds for Ethylene Recovery	Ki-Yong Yoon, Phillip Jun, En-ji Woo, HyungwoongAhn and Chang-Ha Lee	527
Filtration with Sedimentation II: New Analysis and Solid Mass Fraction of Suspension Entering Cake	Sung Sam Yim	535
Optimization Condition of Astaxanthin Extract from Shrimp Waste Using Response Surface Methodology	Chang Hwan Yoon, Hee Sung Bok, Dae Ki Choi and Kyung Ho Row	545
A Study on the Thermal Adsorption and Desorption Characteristics of Industrial Odorants using Activated Carbon	Joo Yeon Kim, Young Woo Rhee and Mun Hee Han	551
Energy/Environment · New Renewable Energy · Waste Treatment/Energy Recovery Technology		
Numerical Study on the Effect of Gas Diffusion Layer (GDL) Properties in Cathode on the Performance of Polymer Electrolyte Membrane Fuel Cell (PEMFC)	Jeong Hwan Chun, Dong Hyun Jo, Ji Young Lee and Sung Hyun Kim	556
Fabrication and Property Evaluation of Tubular Segmented-in-Series Solid Oxide Fuel Cell (SOFC)	Ui-Jin Yun, Jong-Won Lee, Seung-Bok Lee, Tak-Hyoung Lim, Seok-Joo Park, Rak-Hyun Song, Dong-Ryul Shin and Kyoo-Seung Han	562
A Study on Recovery of Aluminum Oxide from Artificial Marble Waste by Pyrolysis	Bok Roen Kim, Chang Woo Kim, Yang Gon Seo and Young Soon Lee	567
Materials(Inorganics/Organics, Electronics, Semiconductor) · Polymers · Nano Technology · Semiconductor Technology · Microreactor		
Characterization of Thin Film Passivation for OLED by PECVD	KwanDo Kim, SeokHee Jang, JongMin Kim and SangMok Chang	574
Study on Isothermal Crystallization Characteristics of PLA Film by Adding APP as a Nucleation Agent	Gyu-sun Kim, Moon-Sun Kim and Byung-Woo Kim	582
Preparation and Characteristic of Sheet Molding Compound using Unsaturated Polyester Resin with Low Profile Agent of Polystyrene	Gi Boong Bae, Sang Goo Lee, Hong Jin Yoon and Jong Dae Lee	588