CUMULATIVE INDEX FOR VOL. 22 (2005)

■ No. 1 (January)		polysaccharides Production in Batch Culture of Agaricus	
PROCESS SYSTEMS ENGINEERING, PROCESS SAFE-		blazei ····· Hyun Han Kim, Jeong-Geol Na,	
TY, TRANSPORT PHENOMENA		Yong Keun Chang and Sang Jong Lee	80
Risk Assessment of Membrane Type LNG Storage Tanks in		Effects of Free Ammonia and Dissolved Oxygen on Nitrifica-	
Korea-based on Fault Tree Analysis		tion and Nitrite Accumulation in a Biofilm Airlift Reactor	0.5
Hyo Kim, Jae-Sun Koh, Youngsoo Kim and Theofanius G. Theofanous	1	Dong-Jin Kim, Dae Hee Ahn and Dong-Ig Lee	85
Nusselt Numbers for Longitudinal Laminar Flow in Shell-and-	1	SEPARATION TECHNOLOGY, THERMODYNAMICS	
Tube Exchangers		Adsorption of Heavy Metals by Brewery Biomass	
Sangkyun Koo and Sang-Yoon Kang	9	Tae-Young Kim, Sun-Kyu Park, Sung-Yong Cho,	
Dynamics of the Wet-end Section in Paper Mills		Hwan-Beom Kim, Yong Kang,	
Yeong-Koo Yeo, Jae Young Ryu		Sang-Done Kim and Seung-Jai Kim	91
and Sung Chul Yi	17	Measurement of Hysteresis in Crystallization with a Quartz	
Real-Time Risk Monitoring System for Chemical Plants		Crystal Sensor (Short Communication)	
Ky-Soo Kim and Jae-Wook Ko	26	····· Ok Jin Joung, Young Han Kim,	
		Kouji Maeda and Keisuke Fukui	99
CATALYSIS REACTION ENGINEERING, INDUSTRI-		A Simplified Expression for the Hard-Sphere Dimer Fluid Ra-	
AL CHEMISTRY		dial Distribution Function	40.0
Encapsulation of Bis(ethylenediamine) Copper(II) Complex in		Jichul An and Hwayong Kim	
Zeolite Matrices		Effects of the Operating Parameters on the Reverse Osmosis-	
- Comparison with Encapsulation of Natural Enzymes Like		Electrodeionization Performance in the Production of High Purity Water Jung-Hoon Song, Kyeong-Ho Yeon,	
Cytochrome-C and Vitamin-B ₁₂ Raman Ganesan and Balasubramanian Viswanathan	32	Jaeweon Cho and Seung-Hyeon Moon	108
A Study on Selective Oxidation of Hydrogen Sulfide over Zeo-	32	New Concepts in Material and Energy Utilization	100
lite-NaX and -KX Catalysts		Piyasan Praserthdam, Choowong Chaisuk,	
Jong Dae Lee, Jin Hyuk Jun, No-Kuk Park,		Wilasinee Kongsuebchart, Supakanok Thongyai	
Si-Ok Ryu and Tae-Jin Lee	36	and Sirachaya Kunjara Na Ayudhya	115
Activation of Nano-sized Carbon Shells on Carbon Hollow		The Ion-exchange Kinetics of SAM ⁺ /H ⁺ System with JK110	
Spheres under Water Vapor		Resin Yong Chen, Zhinan Xu, Wenhe Shen,	
······ Jae Kwang Lee, Sang Yun Han, Seung-Kyu Park,		Jianping Lin and Peilin Cen	121
Yong-Ki Park and Chul Wee Lee	42	Multi-component Ion Exchange Kinetics with PAN-KCoFC	
		Composite Ion Exchanger	
ENERGY AND ENVIRONMENTAL ENGINEERING		Jei-Kwon Moon, Eil-Hee Lee, Yoon-Ju Han,	
Structural and Electrochemical Characteristics of Li _{0.7} [Li _{1/6} Mn _{5/6}]		Byung-Chul Lee and Hyung-Tae Kim	127
O ₂ Synthesized using Sol-Gel Method		Ambiguity and Non-uniqueness in Nonequilibrium Thermo-	122
Ki Soo Park, Myung Hun Cho, Sung Jang Jin, Chi Hoon Song and Kee Suk Nahm	16	dynamics Sun-Tak Hwang	133
Degradation of Pentachlorophenol by an Electroenzymatic Meth-	46	MATERIALS (Organic, Inorganic, Electronic, Thin Films),	
od using Immobilized Peroxidase Enzyme		POLYMER, FLUIDIZATION, PARTICLE TECHNOL-	
Gha-Young Kim and Seung-Hyeon Moon	52	OGY	
Effect of Ash Compositions on Air Pollutant Emissions dur-	-	Deposition of Submicron Particles in Deep Bed Filtration under	
ing Fluidized Bed Sludge Incineration		Unfavorable Surface Conditions	
Mi-Ran Kim, Jeong-Gook Jang and Jea-Keun Lee	61	Veeriah Jegatheesan, Saravanamuth Vigneswaran	
A Simple Mathematical Analysis on the Effect of Sand in Cr(VI)		and Seung-Hwan Lee	142
Reduction using Zero Valent Iron (Short Communication)		The Morphology of Electrospun Polystyrene Fibers	
····· Dong-Ik Song, Young Hun Kim and Won Sik Shin	67	······ Gil-Tae Kim, Yu-Jin Hwang, Young-Chull Ahn,	
Treatment of Mixed Solvent Vapors with Hybrid System Com-		Hee-Soo Shin, Jae-Keun Lee and Chang-Mo Sung	147
posed of Biofilter and Photo-catalytic Reactor		Influence of Hydrodynamic Parameters on Particle Attrition dur-	
Kwang-Hee Lim, Sang-Won Park,	70	ing Fluidization at High Temperature	154
Eun Ju Lee and Soo-Hyeun Hong	70	Chiou-Liang Lin and Ming-Yen Wey	154
BIOTECHNOLOGY		On the Origin of Electrodeposition Mechanism of ZnO on ITO Substrate Jaeyoung Lee, Sang Cheol Nam	
Effects of Dissolved Oxygen Control on Cell Growth and Exo-		and Yongsug Tak	
Little of Dissolved Onggen Conduction on Cent Grown and LAC		and rongoug run	101

Filtration Properties of Electrospun Ultrafine Fiber Webs		SEPARATION TECHNOLOGY, THERMODYNAMICS	
····· Hyun-Seol Park and Young Ok Park	165	Powdered Activated Carbon Coated Hollow Fiber Membrane:	
		Preliminary Studies on its Ability to Limit Membrane Foul-	
■ No. 2 (March)		ing and to Remove Organic Materials	
PROCESS SYSTEMS ENGINEERING, PROCESS SAFE-		Ramesh Thiruvenkatachari, Wang Geun Shim,	
TY, TRANSPORT PHENOMENA		Jae Wook Lee and Hee Moon	250
Multiloop PID Controller Design using Partial Least Squares		Liquid-Liquid Equilibrium for the Ternary Systems of Solvents+	
Decoupling Structure Junghui Chen,	172	Water+Propionic Acid at 25 °C and Atmospheric Pressure	256
Yi-Chun Cheng and Yuezhi Yea	1/3	Jae-Kyung Kim and Dong-Won Park	236
Taylor Dispersion Coefficients for Longitudinal Laminar Flow in Shell-and-tube Exchangers		Adsorption Isotherm of Ibuprofen on Molecular Imprinted Polymer	264
Sangkyun Koo and Kwang Ho Song	1.9.4	An Extension of the Group Contribution Method for Estimat-	204
Sangkyun Koo and Kwang no Song	104	ing Thermodynamic and Transport Properties	
CATALYSIS REACTION ENGINEERING, INDUSTRI-		Part II. Polyatomic Gases (F ₂ , Cl ₂ , CS ₂ , H ₂ S, NO and N ₂ O)	
AL CHEMISTRY		Seung-Kyo Oh and Ki-Hark Park	268
Selective Oxidation of Hydrogen Sulfide Containing Excess		Adsorption of Acid Dyes Using Polyelectrolyte Impregnated	
Water and Ammonia over Bi-V-Sb-O Catalysts		Mesoporous Silica Jong Chul Park, Ji Bong Joo	
Dae-Won Park, Byung-Ha Hwang, Wol-Don Ju,		and Jongheop Yi	276
Moon-Il Kim, Kyung-Hoon Kim and Hee-Chul Woo	190	Synthesis and Ionic Conductivities of Lithium-Doped Mor-	
Photocatalytic Decolorization of Rhodamine B by Immobi-		pholinium Salts Sukjeong Choi, Ki-Sub Kim,	
lized TiO2/UV in a Fluidized-bed Reactor		Huen Lee, Jae Seung Oh and Byoung-Bae Lee	281
····· Youngsoo Na, Seungkoo Song and Youngseek Park	196	Polypyrrole Composite Membrane with High Permeability	
		Prepared by Interfacial Polymerization	
ENERGY AND ENVIRONMENTAL ENGINEERING		····· Won-Il Son, Jae-Min Hong and Byoung-Sik Kim	285
Mass Transfer Characteristics and Overall Mass Transfer Co-			
efficient in the Ozone Contactor	201	MATERIALS (Organic, Inorganic, Electronic, Thin Films),	
Jung A Rhim and Jeong Hyo Yoon	201	POLYMER, FLUIDIZATION, PARTICLE TECHNOL-	
Simultaneous Removal of SO ₂ and NO by Sodium Chlorite Solution in Wetted-Wall Column ······ Hyung-Keun Lee,		OGY Development of Carbon Dioxide Adsorbents using Carbon	
Bal Raj Deshwal and Kyung-Seun Yoo	208	Materials Prepared from Coconut Shell	
The Effect of Two-Layer Cathode on the Performance of the	200	Seok-Jin Son, Jung-Sik Choi, Ko-Yeon Choo,	
Direct Methanol Fuel Cell Chanho Pak,		Sun-Dal Song, Savithri Vijayalakshmi and Tae-Hwan Kim	291
Seung Jae Lee, Seol-Ah Lee and Hyuk Chang	214	Effects of Growth Variables on Structural and Optical Prop-	
Studies on the Modeling Calculations of the Unit Molten Car-		erties of InGaN/GaN Triangular-Shaped Quantum Wells	
bonate Fuel Cell Ye-Ro Lee, Min-Jung Yoo,		Rak Jun Choi, Eun-Kyung Suh, Hyung Jae Lee	
Gui-Yung Chung, Hee-Chun Lim, Tae-Hoon Lim,		and Yoon-Bong Hahn	298
Suk-Woo Nam and Seong-Ahn Hong	219	Simulation of Particle Deposition on Filter Fiber in an Exter-	
The Treatment of Waste-air Containing Mixed Solvent using		nal Electric Field ···· Hyun-Seol Park and Young Ok Park	303
a Biofilter. 2. Treatment of Waste-air Containing Ethanol and		Effect of Air Distributor on the Fluidization Characteristics	
Toluene in a Biofilter (Short Communication)		in Conical Gas Fluidized Beds	
Kwang-Hee Lim	228	···· Seong-Yong Son, Dong Hyun Lee, Gui Young Han,	215
New Method for the Preparation of Solid Polymer Electro-		Duk Joon Kim, Sang Jun Sim and Sang Done Kim	315
lyte Based on Poly(vinylidene fluoride-co-hexafluoropro-		Comparison of Mesoporous Aluminas Synthesized using Ste-	
pylene) Taehee Kim, Ik Joong Kang, Gyoujin Cho and Kwon-pil Park	224	aric Acid and Its Salts Younghun Kim, Pil Kim,	221
Development of a Priority Substances List for Integrated En-	234	Changmook Kim and Jongheop Yi Bubble Drift Velocity from the Bed Collapse Technique in	321
vironmental Management		Three-Phase Fluidized Beds	
Mi-Sug Kim, Cheol Kyun Joo, Sang Mok Lee,		Sung Soo Park, Seok Min Kang, Dong Hyun Lee,	
Pil Jae Kim and Jongheop Yi	238	Young Kwan Lee, Ji-Heung Kim, Gui Young Han,	
		Norman Epstein, John R. Grace and Sang Done Kim	328
BIOTECHNOLOGY		Two-Step Growth of ZnO Films on Silicon by Atomic Layer	
Photocatalytic Decomposition of Nonbiodegradable Substances		Deposition	
in Wastewater from an Acrylic Fibre Manufacturing Pro-		Suk Lee, Yong Hwan Im and Yoon-Bong Hahn	334
cess Young Soo Na, Chang Han Lee,			
Tae Kyung Lee, Song Woo Lee,		■ No. 3 (May)	
Young Seek Park, You Kwan Oh,		PROCESS SYSTEMS ENGINEERING, PROCESS SAFE-	
Sung Hoon Park and Seung Koo Song	246	TY, TRANSPORT PHENOMENA	

Model Algorithmic Control of Grade Change Operations in Paper Mills Yeong-Koo Yeo, Jong Ho Park,		Bong-Jae Park, Chong-Ho Lee and Yoon-Mo Koo	425
See-Han Park and Changman Sohn	330	SEPARATION TECHNOLOGY, THERMODYNAMICS	
A Gene Clustering Method with Masking Cross-matching Frag-	337	Study on the Mechanism of Hindered Sedimentation by 'Uni-	
ments Using Modified Suffix Tree Clustering Method		fied Theory on Solid-Liquid Separation'	
Sang II Han, Sung Gun Lee, Bo Kyeng Hou,		Sung-Sam Yim and Yun-Min Song	433
Sunghoon Park, Young Han Kim and Kyu Suk Hwang	345	Simulation and Analysis of Extractive Distillation Process in	155
sungition 1 and, 10 and 11 and 11 and 11 and 11 and	5.0	a Valve Tray Column Using the Rate Based Model	
CATALYSIS REACTION ENGINEERING, INDUSTRI-		Sasmita Pradhan and Aravamudan Kannan	441
AL CHEMISTRY		Prediction of the Infinite-dilution Partial Molar Volumes of Or-	
Transformation of Methanol to Gasoline Range Hydrocarbons		ganic Solutes in Supercritical Carbon Dioxide Using the	
Using HZSM-5 Catalysts Impregnated with Copper Oxide		Kirkwood-Buff Fluctuation Integral with the Hard Sphere	
Hasan Akhtar Zaidi and Kamal Kishore Pant	353	Expansion (HSE) Theory	
Electrochemical Degradation of Aqueous Phenols Using Graph-		Yong Jung Kwon and Won Gyu Lee	452
ite Electrode in a Divided Electrolytic Cell		The Effects of Amine Additives and Flow Rate on the Per-	
Marappan Sathish and Ram Prasad Viswanath	358	formance of Mixed-bed Ion Exchange at Ultralow Concen-	
Photocatalytic Degradation of Toluene with Ozone Addition		trations Byeong Il Noh, Gang Choon Lee	
····· Seok-Jun Yoa, Yong-Soo Cho and Jun-Ho Kim	364	and Tae Kyung Yoon	457
Hydrothermal Synthesis of Titanium Dioxide Using Acidic Pep-		Protein Binding Study of Isoflavone, Perillyl Alcohol and S-	
tizing Agents and Their Photocatalytic Activity		Ibuprofen by High-Performance Frontal Analysis	
Jun Ho Kim, Byung Ho Noh,		Du Young Choi, Long Mei Jin,	
Gun-Dae Lee and Seong-Soo Hong	370	Dexian Wang and Kyung Ho Row	
Raney Ni Catalysts Derived from Different Alloy Precursors		Measurement and Correlation of Vapor-Liquid Equilibria of	
(I) Morphology and Characterization		the Binary Carbon Dioxide-Chloroform Mixture System	
Gun Dae Lee, Cha Soo Suh, Jin Hwan Park,		(Short Communication)	
Seong Soo Park and Seong Soo Hong	375	Jihoon Im, Hun Yong Shin and Hwayong Kim	470
Degradation of Chlorophenol by Photocatalysts with Various Tran-		On the Information and Methods for Computing Phase Equi-	
sition Metals Il-Kyu Kim, Hyun-Jung Ha,	202	libria and Thermodynamic Properties (Short Communica-	
Sang-Keun Lee and Jea-Keun Lee	382	tion) Chul Soo Lee and Jeong Won Kang	4/4
Simulation Studies on Reactive Distillation for Synthesis of		Numerical Mass Balances for Cross Flow Membrane Contac-	
tert-Amyl Ethyl Ether Ukrit Sahapatsombud,		tors and Their Approximations Sung Bin Park,	470
Amornchai Arpornwichanop, Suttichai Assabumrungrat,	207	Jung Woo Lee, Yong Soo Kim and Chul Soo Lee	4/9
Piyasan Praserthdam and Shigeo Goto	38/	Liquid-Liquid Equilibrium for the Quaternary System of o-	
ENERGY AND ENVIRONMENTAL ENGINEERING		Xylene(1)+Water(2)+Propionic Acid(3)+1-Butanol(4) at 298.15 K and Atmospheric Pressure	
Nitrogen Compounds Removal in a Packed Bed External Loop		Jae-Kyung Kim and Dong-Won Park	483
Airlift Bioreactor Siriwan Silapakul,		Jac-Kyung Kini and Dong- won I ark	703
Sorawit Powtongsook and Prasert Pavasant	393	MATERIALS (Organic, Inorganic, Electronic, Thin Films),	
Extraction of Lipids and Cholesterol from Squid Oil with Su-	373	POLYMER, FLUIDIZATION, PARTICLE TECHNOL-	
percritical Carbon Dioxide		OGY	
Kil-Yoon Kang, Dong-Hyun Ahn,		Growth and Formation Mechanism of Sea Urchin-Like ZnO	
Gordon T. Wilkinson and Byung-Soo Chun	399	Nanostructures on Si Sang-Hoon Kim,	
Comparative Studies of a Single Cell and a Stack of Direct		Ahmad Umar and Yoon-Bong Hahn	489
Methanol Fuel Cells Songki Lee, Daejin Kim,		_	
Jaeyoung Lee, Sung Taik Chung and Heung Yong Ha	406	■ No. 4 (July)	
		PROCESS SYSTEMS ENGINEERING, PROCESS SAFE-	
BIOTECHNOLOGY		TY, TRANSPORT PHENOMENA	
Characteristics of the Lipase from Candida rugosa Modified		Finite-Amplitude Surface Waves on a Thin Film Flow Sub-	
with Copolymers of Polyoxyethylene Derivative and Maleic		ject to a Unipolar-Charge Injection Hyo Kim	495
Acid Anhydride		An Automatic Synthesis System for Start-Up Operating Pro-	
Kwinam Park, Honghyun Kim, Sanjeev Maken,		cedures of Boiler Plants Sung Gun Lee,	
Yeounsoo Kim, Byoungryul Min and Jinwon Park	412	Sang Il Han, Yoon Sup Byun, Kyu Suk Hwang,	
Degradation of Styrene by a New Isolate Pseudomonas putida		Young Han Kim, Dongil Shin and En Sup Yoon	503
SN1 Mi So Park, Ju Hee Han, Seung Shick Yoo,	410	Molecular Dynamics Simulation Study of the Effect of PMMA	
Eun Yeol Lee, Sun Gu Lee and Sunghoon Park	418	Tacticity on Free Volume Morphology in Membranes	
Development of Novel Protein Refolding Using Simulated			512
Moving Bed Chromatography		Enhancement of Oxygen Transfer in Hollow Fiber Membrane	

by the Vibration Method		Byung-Ki Na and Hyung Keun Song	585
······ Gi-Beum Kim, Seong-Jong Kim, Chul-Un Hong,		Characterization of Fractured Basement Reservoir Using Sta-	
Tae-Kyu Kwon and Nam-Gyun Kim	521	tistical and Fractal Methods	
The Electrokinetic Microfluidic Flow in Multi-Channels with		Jaehyeon Park, Sunil Kwon and Wonmo Sung	591
Emergent Applicability Toward Micro Power Generation		Cadmium Removal by Juniperus monosperma: the Role of	
····· Tae Seok Lee, Myung-Suk Chun, Dae Ki Choi,		Calcium Oxalate Monohydrate Structure in Bark	
Suk Woo Nam and Tae-Hoon Lim	528	Eun Woo Shin	599
		Preparation of Laminated Composite Membranes by Impreg-	
CATALYSIS REACTION ENGINEERING, INDUSTRI-		nation of Polypropylene with Styrene in Supercritical CO ₂	
AL CHEMISTRY		for Direct Methanol Fuel Cells Junho Sauk,	
Catalytic Ozonation of Humic Acids with Fe/MgO		Jungyeon Byun, Yuchan Kang and Hwayong Kim	605
Ji-Eun Lee, Byung-Suk Jin, Sung-Hoon Cho,			
Sung-Hwan Han, Oh-Shim Joo and Kwang-Deog Jung	536	SEPARATION TECHNOLOGY, THERMODYNAMICS	
Raney Ni Catalysts Derived from Different Alloy Precursors		Interaction between Reverse Micelles as a Key Factor Gov-	
Part II. CO and CO ₂ Methanation Activity		erning Back-Extraction of Proteins and Its Control Systems	
······ Gun Dae Lee, Myung Jun Moon, Jeong Hwan Park,		Sung-Sik Lee, Kyung-Su Hwang, Bong-Kuk Lee,	
Seong Soo Park and Seong Soo Hong	541	Dong-Pyo Hong and Ryoich Kuboi	611
Preparation of Nanosized TiO2 Particles via Ultrasonic Irra-		Comments on Special Distillation Processes (Letters to the Ed-	
diation and Their Photocatalytic Activity on the Decompo-		itor) Jianwei Li, Zhigang Lei, Chengyue Li	
sition of 4-Nitrophenol		and Biaohua Chen	617
Chang Wook Oh, Gun-Dae Lee, Seong Soo Park,		Use of Two Feeds in Simulated Moving Beds for Binary Sep-	
Chang-Sik Ju and Seong-Soo Hong	547	arations Jeung Kun Kim, Nadia Abunasser	
Mixing and Enzyme Reactions in a Microchannel Packed with		and Phillip C. Wankat	619
Glass Beads		A Simple Model for the Calculation of Entrainment in Flo-	
Ken-Ichiro Sotowa, Ryo Miyoshi, Chan-Gi Lee,		tation ····· Ozcan Y. Gulsoy	628
Yong Kang and Katsuki Kusakabe	552		
Copolymerization of Phenyl Glycidyl Ether with Carbon Diox-		MATERIALS (Organic, Inorganic, Electronic, Thin Films),	
ide Catalyzed by Ionic Liquids (Short Communication)		POLYMER, FLUIDIZATION, PARTICLE TECHNOL-	
····· Na-Young Mun, Kyung-Hoon Kim,		OGY	
Dae-Won Park, Youngson Choe and Il Kim	556	Fabrication of Submicron-Sized Copper Structures on Pre-Pat-	
=,8	220	rabilication of Submicron-Sized Copper Structures on Tie-rat-	
,	330	terned Self-Assembled Monolayer and Langmuir-Blodgett	
ENERGY AND ENVIRONMENTAL ENGINEERING	330		
	330	terned Self-Assembled Monolayer and Langmuir-Blodgett	
ENERGY AND ENVIRONMENTAL ENGINEERING	330	terned Self-Assembled Monolayer and Langmuir-Blodgett Films (Short Communication)	635
ENERGY AND ENVIRONMENTAL ENGINEERING The Effects of Sulfur Doping on the Performance of O_3 -Li _{0.7}		terned Self-Assembled Monolayer and Langmuir-Blodgett Films (Short Communication) Inhee Choi, Younghun Kim, Sung Koo Kang,	635
ENERGY AND ENVIRONMENTAL ENGINEERING The Effects of Sulfur Doping on the Performance of O_3 -Li _{0.7} $[Li_{1/12}Ni_{1/12}Mn_{5/6}]O_2$ Powder		terned Self-Assembled Monolayer and Langmuir-Blodgett Films (Short Communication) Inhee Choi, Younghun Kim, Sung Koo Kang, Jeongjin Lee and Jongheop Yi	635
ENERGY AND ENVIRONMENTAL ENGINEERING The Effects of Sulfur Doping on the Performance of O_3 -Li $_{0.7}$ [Li $_{1/12}$ Ni $_{1/12}$ Mn $_{5/6}$]O $_2$ Powder Ki Soo Park, Myung Hun Cho, Sung Jang Jin,		terned Self-Assembled Monolayer and Langmuir-Blodgett Films (Short Communication) Inhee Choi, Younghun Kim, Sung Koo Kang, Jeongjin Lee and Jongheop Yi Structural Properties of Amorphous Carbon Thin Films De-	
ENERGY AND ENVIRONMENTAL ENGINEERING The Effects of Sulfur Doping on the Performance of O ₃ -Li _{0.7} [Li _{1/12} Ni _{1/12} Mn _{5/6}]O ₂ Powder Ki Soo Park, Myung Hun Cho, Sung Jang Jin, Chi Hoon Song and Kee Suk Nahm	560	terned Self-Assembled Monolayer and Langmuir-Blodgett Films (Short Communication) Inhee Choi, Younghun Kim, Sung Koo Kang, Jeongjin Lee and Jongheop Yi Structural Properties of Amorphous Carbon Thin Films Deposited by LF (100 kHz), RF (13.56 MHz), and Pulsed RF	
ENERGY AND ENVIRONMENTAL ENGINEERING The Effects of Sulfur Doping on the Performance of O ₃ -Li _{0.7} [Li _{1/12} Ni _{1/12} Mn _{5/6}]O ₂ Powder	560	terned Self-Assembled Monolayer and Langmuir-Blodgett Films (Short Communication) Inhee Choi, Younghun Kim, Sung Koo Kang, Jeongjin Lee and Jongheop Yi Structural Properties of Amorphous Carbon Thin Films Deposited by LF (100 kHz), RF (13.56 MHz), and Pulsed RF (13.56 MHz) Plasma CVD	
ENERGY AND ENVIRONMENTAL ENGINEERING The Effects of Sulfur Doping on the Performance of O ₃ -Li _{0.7} [Li _{1/12} Ni _{1/12} Mn _{5/6}]O ₂ Powder	560	terned Self-Assembled Monolayer and Langmuir-Blodgett Films (Short Communication)	
ENERGY AND ENVIRONMENTAL ENGINEERING The Effects of Sulfur Doping on the Performance of O ₃ -Li _{0,7} [Li _{1/12} Ni _{1/12} Mn _{5/6}]O ₂ Powder	560	terned Self-Assembled Monolayer and Langmuir-Blodgett Films (Short Communication)	639
ENERGY AND ENVIRONMENTAL ENGINEERING The Effects of Sulfur Doping on the Performance of O ₃ -Li _{0.7} [Li _{1/12} Ni _{1/12} Mn _{5/6}]O ₂ Powder	560	terned Self-Assembled Monolayer and Langmuir-Blodgett Films (Short Communication)	639
ENERGY AND ENVIRONMENTAL ENGINEERING The Effects of Sulfur Doping on the Performance of O ₃ -Li _{0.7} [Li _{1/12} Ni _{1/12} Mn _{5/6}]O ₂ Powder	560 566	terned Self-Assembled Monolayer and Langmuir-Blodgett Films (Short Communication)	639
ENERGY AND ENVIRONMENTAL ENGINEERING The Effects of Sulfur Doping on the Performance of O ₃ -Li _{0.7} [Li _{1/12} Ni _{1/12} Mn _{5/6}]O ₂ Powder	560 566	terned Self-Assembled Monolayer and Langmuir-Blodgett Films (Short Communication)	639
ENERGY AND ENVIRONMENTAL ENGINEERING The Effects of Sulfur Doping on the Performance of O ₃ -Li _{0.7} [Li _{1/12} Ni _{1/12} Mn _{5/6}]O ₂ Powder	560 566	terned Self-Assembled Monolayer and Langmuir-Blodgett Films (Short Communication)	639
ENERGY AND ENVIRONMENTAL ENGINEERING The Effects of Sulfur Doping on the Performance of O ₃ -Li _{0.7} [Li _{1/12} Ni _{1/12} Mn _{5/6}]O ₂ Powder	560566569	terned Self-Assembled Monolayer and Langmuir-Blodgett Films (Short Communication)	639
ENERGY AND ENVIRONMENTAL ENGINEERING The Effects of Sulfur Doping on the Performance of O ₃ -Li _{0.7} [Li _{1/12} Ni _{1/12} Mn _{5/6}]O ₂ Powder	560566569	terned Self-Assembled Monolayer and Langmuir-Blodgett Films (Short Communication)	639
ENERGY AND ENVIRONMENTAL ENGINEERING The Effects of Sulfur Doping on the Performance of O ₃ -Li _{0.7} [Li _{1/12} Ni _{1/12} Mn _{5/6}]O ₂ Powder	560566569	terned Self-Assembled Monolayer and Langmuir-Blodgett Films (Short Communication)	639
ENERGY AND ENVIRONMENTAL ENGINEERING The Effects of Sulfur Doping on the Performance of O ₃ -Li _{0.7} [Li _{1/12} Ni _{1/12} Mn _{5/6}]O ₂ Powder	560566569	terned Self-Assembled Monolayer and Langmuir-Blodgett Films (Short Communication)	639
ENERGY AND ENVIRONMENTAL ENGINEERING The Effects of Sulfur Doping on the Performance of O ₃ -Li _{0.7} [Li _{1/12} Ni _{1/12} Mn _{5/6}]O ₂ Powder	560566569573	terned Self-Assembled Monolayer and Langmuir-Blodgett Films (Short Communication)	639
ENERGY AND ENVIRONMENTAL ENGINEERING The Effects of Sulfur Doping on the Performance of O ₃ -Li _{0.7} [Li _{1/12} Ni _{1/12} Mn _{5/6}]O ₂ Powder	560566569573	terned Self-Assembled Monolayer and Langmuir-Blodgett Films (Short Communication)	639
ENERGY AND ENVIRONMENTAL ENGINEERING The Effects of Sulfur Doping on the Performance of O ₃ -Li _{0.7} [Li _{1/12} Ni _{1/12} Mn _{5/6}]O ₂ Powder	560566569573	terned Self-Assembled Monolayer and Langmuir-Blodgett Films (Short Communication)	639
ENERGY AND ENVIRONMENTAL ENGINEERING The Effects of Sulfur Doping on the Performance of O ₃ -Li _{0.7} [Li _{1/12} Ni _{1/12} Mn _{5/6}]O ₂ Powder	560566569573	terned Self-Assembled Monolayer and Langmuir-Blodgett Films (Short Communication)	639
ENERGY AND ENVIRONMENTAL ENGINEERING The Effects of Sulfur Doping on the Performance of O ₃ -Li _{0.7} [Li _{1/12} Ni _{1/12} Mn _{5/6}]O ₂ Powder Ki Soo Park, Myung Hun Cho, Sung Jang Jin, Chi Hoon Song and Kee Suk Nahm Reactivity of Bio-sorbent Prepared by Waste Shells of Shell- fish in Acid Gas Cleaning Reaction (Short Communication) Jong-Hyeon Jung, Young-Soo Lee, Kyung-Seun Yoo, Hyung-Keun Lee, Kwang-Joong Oh and Byung-Hyun Shon Compositional and Structural Identification of Natural Gas Hydrates Collected at Site 1249 on Ocean Drilling Program Leg 204 ——— Do-Youn Kim, Tae-Won Uhm, Huen Lee, Young-Joo Lee, Byong-Jae Ryu and Ji-Hoon Kim Pyrolysis Kinetics and Characteristics of the Mixtures of Waste Ship Lubricating Oil and Waste Fishing Rope Seung-Ho Kim, Seung-Soo Kim, Byung-Hee Chun and Jong-Ki Jeon Total Organic Carbon Disappearance Kinetics for Supercritical Water Oxidation of Dimethyl Methylphospate Used as a Chemical Agent Simulant Byoung Min Lee, Bambang Veriansyah, Sung-Hyun Kim, Jae-Duck Kim and Youn-Woo Lee	560566569573	terned Self-Assembled Monolayer and Langmuir-Blodgett Films (Short Communication)	639
ENERGY AND ENVIRONMENTAL ENGINEERING The Effects of Sulfur Doping on the Performance of O ₃ -Li _{0.7} [Li _{1/12} Ni _{1/12} Mn _{5/6}]O ₂ Powder Ki Soo Park, Myung Hun Cho, Sung Jang Jin, Chi Hoon Song and Kee Suk Nahm Reactivity of Bio-sorbent Prepared by Waste Shells of Shell- fish in Acid Gas Cleaning Reaction (Short Communication) Jong-Hyeon Jung, Young-Soo Lee, Kyung-Seun Yoo, Hyung-Keun Lee, Kwang-Joong Oh and Byung-Hyun Shon Compositional and Structural Identification of Natural Gas Hydrates Collected at Site 1249 on Ocean Drilling Program Leg 204 ——— Do-Youn Kim, Tae-Won Uhm, Huen Lee, Young-Joo Lee, Byong-Jae Ryu and Ji-Hoon Kim Pyrolysis Kinetics and Characteristics of the Mixtures of Waste Ship Lubricating Oil and Waste Fishing Rope Seung-Ho Kim, Seung-Soo Kim, Byung-Hee Chun and Jong-Ki Jeon Total Organic Carbon Disappearance Kinetics for Supercritical Water Oxidation of Dimethyl Methylphospate Used as a Chemical Agent Simulant Byoung Min Lee, Bambang Veriansyah, Sung-Hyun Kim, Jae-Duck Kim and Youn-Woo Lee Methane Conversion over Nanostructured Pt/2-Al ₂ O ₃ Catalysts	560566569573	terned Self-Assembled Monolayer and Langmuir-Blodgett Films (Short Communication)	639
ENERGY AND ENVIRONMENTAL ENGINEERING The Effects of Sulfur Doping on the Performance of O ₃ -Li _{0.7} [Li _{1/12} Ni _{1/12} Mn _{5/6}]O ₂ Powder	560566569573	terned Self-Assembled Monolayer and Langmuir-Blodgett Films (Short Communication)	639 643
ENERGY AND ENVIRONMENTAL ENGINEERING The Effects of Sulfur Doping on the Performance of O ₃ -Li _{0.7} [Li _{1/12} Ni _{1/12} Mn _{5/6}]O ₂ Powder Ki Soo Park, Myung Hun Cho, Sung Jang Jin, Chi Hoon Song and Kee Suk Nahm Reactivity of Bio-sorbent Prepared by Waste Shells of Shell- fish in Acid Gas Cleaning Reaction (Short Communication) Jong-Hyeon Jung, Young-Soo Lee, Kyung-Seun Yoo, Hyung-Keun Lee, Kwang-Joong Oh and Byung-Hyun Shon Compositional and Structural Identification of Natural Gas Hydrates Collected at Site 1249 on Ocean Drilling Program Leg 204 ——— Do-Youn Kim, Tae-Won Uhm, Huen Lee, Young-Joo Lee, Byong-Jae Ryu and Ji-Hoon Kim Pyrolysis Kinetics and Characteristics of the Mixtures of Waste Ship Lubricating Oil and Waste Fishing Rope Seung-Ho Kim, Seung-Soo Kim, Byung-Hee Chun and Jong-Ki Jeon Total Organic Carbon Disappearance Kinetics for Supercritical Water Oxidation of Dimethyl Methylphospate Used as a Chemical Agent Simulant Byoung Min Lee, Bambang Veriansyah, Sung-Hyun Kim, Jae-Duck Kim and Youn-Woo Lee Methane Conversion over Nanostructured Pt/2-Al ₂ O ₃ Catalysts	560566569573	terned Self-Assembled Monolayer and Langmuir-Blodgett Films (Short Communication)	639 643

ENERGY AND ENVIRONMENTAL ENGINEERING		Adhesion Enhancement of Polyurethane Coated Leather and	
Effect of Temperature, Oxidant and Catalyst Loading on the		Polyurethane Foam with Plasma Treatment	
Performance of Direct Formic Acid Fuel Cell		Soo Duk Seul, Jong Min Lim, Sun Hee Ha	
Jeong Soo Kim, Jae Keun Yu, Hyo Song Lee,		and Young Han Kim	745
Jin Yong Kim, Young Chun Kim, Jong Hee Han,		Photopolymerization of Thermoplastic Polyurethane/Acrylate	
In Hwan Oh and Young Woo Rhee	661	Blends Youngson Choe, Siyoung Park, Wonho Kim	
Control and Nitrogen Load Estimation of Aerobic Stage in Full-		and Daewon Park	750
Scale Sequencing Batch Reactor to Treat Strong Nitrogen		Cure Kinetics and Mechanical Properties of the Blend Sys-	
Swine Wastewater		tem of Epoxy/Diaminodiphenyl Sulfone and Amine Termi-	
······· Kyung-Min Poo, Jeong-Hoon Im, Joo-Hyung Ko,		nated Polyetherimide-Carboxyl Terminated Poly(butadiene-	
Ye-Jin Kim, Hae-Jin Woo and Chang-Won Kim	666	co-acrylonitrile) Block Copolymer Donghyon Kim,	
Gas Hydrates: A Cleaner Source of Energy and Opportunity		Jung-ok Beak, Youngson Choe and Wonho Kim	755
for Innovative Technologies (Review)		Ion Dynamics in Plasma Processing for the Fabrication of Ul-	
Peter Englezos and Ju Dong Lee	671	trafine Structures Chang-Koo Kim	762
Removal of Freshwater Diatoms (Synedra acus and Stepha-		Comparative Study of Diamond Films Grown on Silicon Sub-	
nodiscus sp.) by Preozonation and Addition of Polyamine		strate Using Microwave Plasma Chemical Vapor Deposition	
Coagulant-aid Ju Dong Lee, Man Sig Lee,		and Hot-Filament Chemical Vapor Deposition Technique	
Won Sik Shin, Young-Hun Kim and Sang June Choi	682	Mushtaq Ahmad Dar, Young-Soon Kim,	
DIOTE CHIVOLOGY		Shafeeque G. Ansari, Hyung-il Kim, Gilson Khang,	==0
BIOTECHNOLOGY		Chu Van Chiem and Hyung-Shik Shin	//0
Influence of Ionic Liquids on the Growth of Escherichia coli		Performance Evaluation of a Pilot Scale Vortexing Fluidized	
(Short Communication) Sang-Mok Lee,	607	Bed Combustor ·······Chien-Song Chyang, Kuo-Chao Lo	774
Woo-Jin Chang, Ah-Rom Choi and Yoon-Mo Koo	68/	and Kuo-Lian Wang	/ /4
CEDAD ATION TECHNOLOGY THEOMODYNAMICS		Investigation of Pore Formation for Polystyrene Electrospun	
SEPARATION TECHNOLOGY, THERMODYNAMICS		Fiber: Effect of Relative Humidity	
Adsorption Equilibria of Reactive Dye onto Highly Polyam- inated Porous Chitosan Beads		Gil-Tae Kim, Jun-Seok Lee, Jin-Hyouk Shin,	
	601	Young-Chull Ahn, Yu-Jin Hwang, Hee-Soo Shin, Jae-Keun Lee and Chang-Mo Sung	792
Numerical Simulation of the Effects of the Design Feature	091	Side Wall Anodization of Aluminum Thin Film on Silicon	103
of a Cyclone and the Inlet Flow Velocity on the Separation		Substrate	
of CO ₂ Particles from a CO ₂ -COF ₂ Mixture		Kyungtae Kim, Moonjung Kim and Sung Min Cho	789
Younggeun Park, Chang Yeon Yun,		Submicron Patterning of Ta, NiFe, and Pac-man Type Ta/NiFe/	707
Jongheop Yi and Honggon Kim	697	Ta Magnetic Elements	
Effect of Surface Properties of Activated Carbons on Surfac-	03,	Kwang Sup Song and Yoon-Bong Hahn	793
tant Adsorption Kinetics Jung-Hee Kim,		Triang sup song and room Bong raum	,,,,
Sophie H. Wu and Phillip Pendleton	705	■ No. 6 (November)	
A Study on Nickel Hydroxide Crystallization Characteristics		PROCESS SYSTEMS ENGINEERING, PROCESS SAFE-	
Chang-Hwan Lee and Choul-Ho Lee	712	TY, TRANSPORT PHENOMENA	
One-Phase Preparation of Palladium Nanoparticles Using Thiol-		Thermal Hazard Simulations for Methyl Ethyl Ketone Perox-	
Functionalized Ionic LiquidKi-Sub Kim,		ide Induced by Contaminants	
Naiman Dorjnamjingiin Demberelnyamba,		Jo-Ming Tseng, Chi-Min Shu and Yi-Chun Yu	797
Sun-Wha Yeon, Sukjoeng Choi, Jong-Ho Cha		Flammability Studies of Benzene and Methanol with Various	
and Huen Lee	717	Vapor Mixing Ratios at 150 °C ····· Yi-Min Chang,	
Gas Permeation Properties in a Composite Mesoporous Alu-		Jo-Ming Tseng, Chi-Min Shu and Kwan-Hua Hu	803
mina Ceramic Membrane		Dynamic Neural Network Modeling for Hydrochloric Acid	
········· Hong-Joo Lee, Hiroyuki Suda and Kenji Haraya	721	Recovery Process ····· Paisan Kittisupakorn,	
Analysis of the Constant Molar Flow Semi-Batch Adsorber		Pantapong Tangteerasunun and Piyanuch Thitiyasook	813
Loaded with Inert Core Adsorbents In-Soo Park	729	Run-to-Run Control of Inductively Coupled C ₂ F ₆ Plasma Etch-	
Pervaporation of Flavors with Hydrophobic Membrane		ing of SiO2: Construction of a Numerical Process with a Com-	
Kun-Ho Song and Kwang-Rae Lee	735	putational Fluid Dynamics Code	
		Seung Taek Seo, Yong Hee Lee,	
MATERIALS (Organic, Inorganic, Electronic, Thin Films),		Kwang Soon Lee, Bum Kyoo Choi and Dae Rook Yang	822
POLYMER, FLUIDIZATION, PARTICLE TECHNOL-		Nonlinear Model-based Repetitive Control of Simulated Mov-	
OGY		ing Bed Process	000
Nanoporous Phloroglucinol-Formaldehyde Carbon Aerogels		····· In Seop Kim, Kwang Soon Lee and Yoon-Mo Koo	830
for Electrochemical Use	740	CATALVOIC DEACTION ENGINEEDING INDUCTOR	
Jin-Hong Kim, Won-Il Kim and Dong Jin Suh	/40	CATALYSIS REACTION ENGINEERING, INDUSTRI-	

AL CHEMISTRY		Kyu-Min Song, Yang Geun Chung,	
Surface Chemical Structures of CoO _x /TiO ₂ Catalysts for Con-		Kyungwha Kim and Choong Sub Yeom	905
tinuous Wet Trichloroethylene Oxidation		The Feasibility of Using Spent Sulfidic Caustic as Alternative	
Moon Hyeon Kim	839	Sulfur and Alkalinity Sources in Autotrophic Denitrification	
Pt-V ₂ O ₅ -WO ₃ /TiO ₂ Catalysts Supported on SiC Filter for NO		······ Im-Gyu Byun, Ju-Hyun Ko, Young-Rok Jung,	
Reduction at Low Temperature Joo-Hong Choi,		Tae-Ho Lee, Chang-Won Kim and Tae-Joo Park	910
Jin-Hyun Kim, Young-Cheoul Bak,		Monitoring of Bioventing Process for Diesel-Contaminated	
Rose Amal and Jason Scott	844	Soil by Dehydrogenase Activity, Microbial Counts and the	
Synthesis of Single Phase Aragonite Precipitated Calcium Car-		Ratio of <i>n</i> -Alkane/Isoprenoid	
bonate in Ca(OH) ₂ -Na ₂ CO ₃ -NaOH Reaction System		Im-Gyu Byun, Hae-Uk Nam, Seung Koo Song,	
Ji-Whan Ahn, Jeong-Hwan Kim, Hyun-Seo Park,		In-Seong Hwang, Tae-Ho Lee and Tae-Joo Park	917
Jung-Ah Kim, Choon Han and Hwan Kim	852	Effect of Temperature on the Performance of a Biofilter Inoculated with <i>Pseudomonas putida</i> to Treat Waste-Air Contain-	
ENERGY AND ENVIRONMENTAL ENGINEERING		ing Ethanol (Short Communication)Kwang-Hee Lim,	
Sorption and Desorption Kinetics of Chlorophenols in Hexade-		Sang-Won Park and Eun-Ju Lee	922
cyltrimethyl Ammonium-Montmorillonites and Their Model		·	
Analysis Ji-Hoon Kim, Won Sik Shin,		BIOTECHNOLOGY	
Young-Hun Kim, Sang-June Choi,		Characteristics of Selective Adsorption Using D-Phenylalanine	
Wan-Keun Jo and Dong-Ik Song	857	Imprinted Terpolymer Beads (Short Communication)	
Effect of Different Reduction Methods on the Efficiencies in		Joong Kon Park and Jeong Woo Lee	927
the Chemical Decontamination Processes			
····· Hong-Joo Lee, Kyeongsook Kim,		SEPARATION TECHNOLOGY, THERMODYNAMICS	
Duk-Won Kang and Young Ju Lee	865	High Pressure Vapor-Liquid Equilibria of Binary System 1,1,1-	
Lead Recovery from Waste Frit Glass Residue of Electronic		trifluoroethane (HFC-143a)+Propane (HC-290)	
Plant by Chemical-Electrochemical Methods		Jong Sung Lim, Ji-Young Park	
Kejvalee Pruksathorn and Somsak Damronglerd	873	and Byung-Gwon Lee	932
Characteristics of Membrane Humidifiers for Polymer Electro-		A Total Solution for Simultaneous Organic Degradation and	
lyte Membrane Fuel Cells		Particle Separation Using Photocatalytic Oxidation and Sub-	
Se-Kyu Park, Eun Ae Cho and In-Hwan Oh	877	merged Microfiltration Membrane Hybrid Process	
Kinetic Analysis for Decomposition of 2,4-Dichlorophenol by		Ramesh Thiruvenkatachari, Tae Ouk Kwon	
Supercritical Water Oxidation		and Il Shik Moon	938
······ Hyeon-Cheol Lee, Jung-Hyun In, Jong-Hwa Kim,		Thermal and Electrochemical Properties of Morpholinium Salts	
Kyung-Yub Hwang and Chang-Ha Lee	882	with Bromide Anion Jong-Ho Cha, Ki-Sub Kim,	
A Study of Desulfurization Ability and Activation Energy for		Sukjeong Choi, Sun-Hwa Yeon, Huen Lee,	
CuO-AgO Sorbents Hyo-Song Lee,		Hoon Sik Kim and Honggon Kim	945
Jin-Yong Kim, Jae-Keun Yu, In-Sub Kil,		An Extension of the Group Contribution Method for Estimat-	
Duk-Hyun Kim, Tae-Jin Lee and Young-Woo Rhee	889	ing Thermodynamic and Transport Properties. Part III. Noble	
Chromium(VI) Removal in a Semi-Continuous Process of Hol-		Gases Seung-Kyo Oh	
low Fiber Membrane with Organic Extractants		Frequency Response of the Adsorption Vessel Loaded with Inert	
Dae Woong Choi and Young Han Kim	894	Core Adsorbents (Short Communication) ···· In-Soo Park	960
Manufacturing Process of Self-Luminous Glass Tube Utilizing		MATERIALS (O. A. I. A. E.	
Tritium Gas: Optimization of Phosphor Coating Conditions		MATERIALS (Organic, Inorganic, Electronic, Thin Films),	
Kyeongsook Kim, Kwang Sin Kim,		POLYMER, FLUIDIZATION, PARTICLE TECHNOL-	
Eun-Su Chung, Soon Hwan Son, Duk-Won Kang,	000	OGY	
Kyungwha Kim and Ki-Seok An	899	Investigations of Local Pressure Drop Fluctuation Signals in	
Manufacturing Process of Self-Luminous Glass Tube Utiliz-		Annular Type Fluidized Bed Photoreactor by Continuous	
ing Tritium Gas: Experimental Results for DB Construction		Wavelet Transform (Short Communication) Wooseok Nam and Gui Young Han	064
Kycongsook Kiin, Kwang Sin Kiin, Soon Hwan Son,		WOOSEOK Main and Our Toung Hair	2U 4