

CLASSIFIED INDEX TO 2018

Title	Issue (Page)	Title	Issue (Page)
Reviews			
Membrane materials in the pervaporation separation of aromatic/aliphatic hydrocarbon mixtures—A review	1(1)	Quantifying growth and breakage of agglomerates in fluid-particle flow using discrete particle method	5(914)
Cultivation of microalgae for biodiesel production: A review on upstream and downstream processing	1(17)	Coupling simulation of fluid structure interaction in the stirred vessel with a pitched blade turbine	5(922)
Bioregeneration of spent activated carbon: Review of key factors and recent mathematical models of kinetics	5(893)	An integrated model for predicting the flame propagation in crimped ribbon flame arresters	5(930)
Recent progress in the green synthesis of rare-earth doped upconversion nanophosphors for optical bioimaging from cells to animals	10(2206)	Assessment of k - ε models using tetrahedral grids to describe the turbulent flow field of a PBT impeller and validation through the PIV technique	5(942)
Fluid Dynamics and Transport Phenomena		CFD-PBE simulation of a bubble column in OpenFOAM	9(1773)
Numerical study and acceleration of LBM-RANS simulation of turbulent flow	1(31)	Experimental study on gas-liquid dispersion and mass transfer in shear-thinning system with coaxial mixer	9(1785)
GPU-based discrete element simulation on flow stability of flat-bottomed hopper	1(43)	A three-dimensional CFD study of the hydrodynamic behavior of equal and unequal-sized in-line methane bubbles at high pressure	9(1792)
Investigating the flow characteristics of air-lift pumps operating in gas-liquid two-phase flow	2(219)	Hydrodynamics features of dispersed bubbles in the ventilated wake flow of a cylinder	9(1803)
A CFD model for predicting the heat transfer in the industrial scale packed bed	2(228)	Online measurement of solids motion in fluidized bed reactor with different distributor for Fischer-Tropsch synthesis	10(2003)
Modulating the mean residence time difference of wide-size particles in a fluidized bed	2(238)	Compressibility induced bubble size variation in bubble column reactors: Simulations by the CFD-PBE	10(2009)
Effect of the operation parameters on the Fischer-Tropsch synthesis in fluidized bed reactors	2(245)	Meniscus behaviors and capillary pressures in capillary channels having various cross-sectional geometries	10(2014)
Numerical investigation on flow and heat transfer characteristics of corrugated tubes with non-uniform corrugation in turbulent flow	3(437)	Investigation of the hydrodynamics of slug flow in airlift pumps	12(2391)
Investigations on pool boiling critical heat flux, transient characteristics and bonding strength of heater wire with aqua based reduced graphene oxide nanofluids	3(445)	Dynamic characteristics of charged droplets in an electrostatic spraying process with twin capillaries	12(2403)
CFD modeling of turbulent reacting flow in a semi-batch stirred-tank reactor	4(675)	Extra low friction coefficient caused by the formation of a solid-like layer: A new lubrication mechanism found through molecular simulation of the lubrication of MoS ₂ nanoslits	12(2412)
Synergistic and interference effects in coaxial mixers: Numerical analysis of the power consumption	4(684)	Experimental research on stabilities, thermophysical properties and heat transfer enhancement of nanofluids in heat exchanger systems	12(2420)
CFD simulations of quenching process for partial oxidation of methane: Comparison of jet-in-cross-flow and impinging flow configurations	5(903)	Experimental study on thermo-hydraulic performances of	

- nanofluids flowing through a corrugated tube filled with copper foam in heat exchange systems 12(2431)
- Effects on the mixing process of a coiled tube after a T-junction: Simulation and correlation..... 12(2441)

Separation Science and Engineering

- Tuning sol size to optimize organosilica membranes for gas separation 1(53)
- Oil-water pre-separation with a novel axial hydrocyclone 1(60)
- Study on extraction kinetics of α -cyclopentylmandelic acid enantiomers with hydroxyethyl- β -cyclodextrin as chiral selector 1(67)
- Distinguished discriminatory separation of CO₂ from its methane-containing gas mixture *via* PEBAX mixed matrix membrane 1(73)
- Hierarchical pore structure of activated carbon fabricated by CO₂/microwave for volatile organic compounds adsorption 1(81)
- Effect of potassium permanganate dosing position on the performance of coagulation/ultrafiltration combined process 1(89)
- Adsorption characteristics of a novel ceramsite for heavy metal removal from stormwater runoff..... 1(96)
- Effective and simple recovery of 1,3-propanediol from a fermented medium by liquid-liquid extraction system with ethanol and K₃PO₄..... 1(104)
- Dissolution of antibiotics mycelium in ionic liquids: Performance and mechanism 2(252)
- Protein adsorption onto diethylaminoethyl dextran modified anion exchanger: Effect of ionic strength and column behavior 2(259)
- Insight into fouling behavior of poly(vinylidene fluoride) (PVDF) hollow fiber membranes caused by dextran with different pore size distributions 2(268)
- Transport hindrances with electrodialytic recovery of citric acid from solution of strong electrolytes 2(278)
- Carbon dioxide induced degradation of diethanolamine during absorption and desorption processes..... 2(293)
- Impacts of different drying strategies on drying characteristics, the retention of bio-active ingredient and colour changes of dried Roselle..... 2(303)
- Heavy metals adsorption by banana peels micro-powder: Equilibrium modeling by non-linear models 3(455)
- Potential aspect of rice husk biomass in Australia for nanocrystalline cellulose production 3(465)
- Fouling evaluation on membrane distillation used for reducing solvent in polyphenol rich propolis extract 3(477)
- Investigation on a vertical radial flow adsorber designed by a novel parallel connection method.....3(484)
- Synthesis, adsorption and selectivity of inverse emulsion Cd(II) imprinted polymers 3(494)
- Partial pore blockage and polymer chain rigidification phenomena in PEO/ZIF-8 mixed matrix membranes synthesized by *in situ* polymerization 3(501)
- Atomic layer deposition of Al₂O₃ on porous polypropylene hollow fibers for enhanced membrane performances 4(695)
- Experimental investigation and cost assessment of the salt production by solar assisted evaporation of saturated brine 4(701)
- Equilibrium of liquid-liquid extraction of 2-phenylbutyric acid enantiomers: Experiment and model 4(708)
- Preparation of PVC/PVP composite polymer membranes *via* phase inversion process for water treatment purposes 4(715)
- Design aspect of a novel L-shaped pulsed column for liquid-liquid extraction applications: Energy consumption and the characteristics velocity concept 4(723)
- The adsorptive properties of UiO-66 towards organic dyes: A record adsorption capacity for the anionic dye Alizarin Red S.....4(731)
- A robust predictive tool for estimating CO₂ solubility in potassium based amino acid salt solutions 4(740)
- Super-hydrophobic and super-lipophilic functionalized graphene oxide/polyurethane sponge applied for oil/water separation 5(957)
- Solubility of red palm oil in supercritical carbon dioxide: Measurement and modelling 5(964)
- Modelling of heat transfer for progressive freeze concentration process by spiral finned crystallizer 5(970)
- Osmotic concentration of succinic acid by forward osmosis: Influence of feed solution pH and evaluation of seawater as draw solution.....5(976)
- Effect of the chelating agents on bio-sorption of hexavalent chromium using *Agave sisalana* fibers.....5(984)
- Effect of thermodynamic parameters on prediction of phase behavior and process design of extractive distillation 5(993)

- Synthesis of activated carbon from spent tea leaves for aspirin removal 5(1003)
- Water-stable ZIF-300/Ultrason® mixed-matrix membranes for selective CO₂ capture from humid post combustion flue gas 5(1012)
- Experimental and simulation study of nylon 6 solid-liquid extraction process 5(1022)
- Separation of chalcopyrite and pyrite from a copper tailing by ammonium humate 9(1814)
- Simulation of Cefoselis hydrochloride adsorption on macroporous resin in a fixed-bed column using orthogonal collocation 9(1822)
- Evaluation of solvent-mediated phase transformation of glycine using oleic acid: Morphology and characterization study 9(1829)
- Design and control of a middle-vessel batch distillation for separating DMC-EMC-DEC mixture 9(1837)
- The effect of membrane pores wettability on CO₂ removal from CO₂/CH₄ gaseous mixture using NaOH, MEA and TEA liquid absorbents in hollow fiber membrane contactor 9(1845)
- Comparison of continuous homogenous azeotropic and pressure-swing distillation for a minimum azeotropic system ethyl acetate/*n*-hexane separation 10(2023)
- Pressure relief-dipping-microwave assisted polymerization of melamine-L-aspartic acid resin at activated carbon for purification of L-threonine fermented crude product 10(2034)
- Conceptual design of an extractive distillation process for the separation of azeotropic mixture of *n*-butanol-isobutanol-water 10(2040)
- De-emulsification of 2-ethyl-1-hexanol/water emulsion using oil-wet narrow channel combined with low-speed rotation 10(2048)
- Hydrodynamics performance and tray efficiency analysis of the novel vertical spray packing tray 12(2448)
- Thermodynamical and catalytic aspects of zinc separation from aqueous solution 12(2455)
- Effects of pre-oxidant (KmnO₄) on structure and performance of PVDF and PES membranes 12(2461)
- Recovery of polyphenols from camu-camu (*Myrciaria dubia* H.B.K. McVaugh) depulping residue by cloud point extraction 12(2471)
- Gas permeation properties of a metallic ion-cross-linked PIM-1 thin-film composite membrane supported on a UV-cross-linked porous substrate 12(2477)
- An agent-based simulation with NetLogo platform to evaluate forward osmosis process (PRO Mode) 12(2487)
- The combination of 1-octyl-3-methylimidazolium tetrafluoroborate with TBAB or THF on CO₂ hydrate formation and CH₄ separation from biogas 12(2495)
- Modification of PES/PU membrane by supercritical CO₂ to enhance CO₂/CH₄ selectivity: Fabrication and correlation approach using RSM 12(2503)
- Microwave-assisted solvent extraction of castor oil from castor seeds 12(2516)
- Facile synthesis of hierarchically porous carbons by controlling the initial oxygen concentration *in-situ* carbonization of ZIF-8 for efficient water treatment 12(2523)
- ### Catalysis, Kinetics and Reaction Engineering
- Rh₂O₃/monoclinic CePO₄ composite catalysts for N₂O decomposition and CO oxidation 1(109)
- Ethylbenzene disproportionation and *p*-xylene selectivity enhancement in xylene isomerization using high crystallinity desilicated H-ZSM-5 1(116)
- Regulation of isobutane/1-butene adsorption behaviors on the acidic ionic liquids-functionalized MCM-22 zeolite 1(127)
- Solvent extraction kinetics of Sm(III), Eu(III) and Gd(III) with 2-ethylhexyl phosphoric acid-2-ethylhexyl ester 2(317)
- Ni nanoparticles supported on carbon as efficient catalysts for steam reforming of toluene (model tar) 2(322)
- Preparation and characterization of H₄SiW₁₂O₄₀@MIL-100(Fe) and its catalytic performance for synthesis of 4,4'-MDA 2(330)
- A new nanocluster polyoxomolybdate [Mo₃₆O₁₁₀(NO)₄(H₂O)₁₄]52H₂O: Synthesis, characterization and application in oxidative degradation of common organic dyes 2(337)
- Kinetic studies on extra heavy crude oil upgrading using nanocatalysts by applying CFD techniques 2(343)
- Effect of boron addition on the MoO₃/CeO₂-Al₂O₃ catalyst in the sulfur-resistant methanation 3(509)
- Free radical reaction model for *n*-pentane pyrolysis 3(514)
- Benzene selective hydrogenation over supported Ni (nano-) particles catalysts: Catalytic and kinetics studies 3(521)
- Indirect photocatalytic reduction of arsenate to arsenite in aqueous solution with TiO₂ in the presence of hole

- scavengers 3(529)
- Pd catalysts supported on rGO-TiO₂ composites for direct synthesis of H₂O₂: Modification of Pd²⁺/Pd⁰ ratio and hydrophilic property 3(534)
- Preparation of highly active MCM-41 supported Ni₂P catalysts and its dibenzothiophene HDS performance 3(540)
- Dealumination kinetics of composite ZSM-5/mordenite zeolite during steam treatment: An *in-situ* DRIFTS study 3(545)
- Cobalt catalysts for Fischer-Tropsch synthesis: The effect of support, precipitant and pH value 4(747)
- Porous g-C₃N₄ with enhanced adsorption and visible-light photocatalytic performance for removing aqueous dyes and tetracycline hydrochloride 4(753)
- Effect of preparation methods on the structure and catalytic performance of Fe-Zn/K catalysts for CO₂ hydrogenation to light olefins 4(761)
- Influence of Zr, Ce, and La on Co₃O₄ catalyst for CO₂ methanation at low temperature 4(768)
- High-performance phosphate supported on HZSM-5 catalyst for dehydration of glycerol to acrolein 5(1031)
- Kinetic contribution of CO₂/O₂ additive in methane conversion activated by non-equilibrium plasmas 5(1041)
- Effect of copper precursors on the catalytic performance of Cu-ZSM-5 catalysts in N₂O decomposition 5(1051)
- Influence of dehydrating agents on the oxidative carbonylation of methanol for dimethyl carbonate synthesis over a Cu/Y-zeolite catalyst 5(1059)
- Catalyst-free and solvent-free oxidation of cycloalkanes (C5-C8) with molecular oxygen: Determination of autoxidation temperature and product distribution 5(1064)
- Synthesis of ordered mesoporous manganese titanium composite oxide catalyst for catalytic ozonation 9(1862)
- Ultralow-weight loading Ni catalyst supported on two-dimensional vermiculite for carbon monoxide methanation 9(1873)
- A sensitivity analysis and multi-objective optimization to enhance ethylene production by oxidative dehydrogenation of ethane in a membrane-assisted reactor 9(1879)
- Membrane enhanced COD degradation of pulp wastewater using Cu₂O/H₂O₂ heterogeneous Fenton process 9(1896)
- Bi-metallic catalysts of mesoporous Al₂O₃ supported on Fe, Ni and Mn for methane decomposition: Effect of activation temperature 9(1904)
- Production of glycerol carbonate using crude glycerol from biodiesel production with DBU as a catalyst 9(1912)
- Sulfur production from smelter off-gas using CO-H₂ gas mixture as the reducing agent over modified Fe/ γ -Al₂O₃ catalysts 9(1920)
- Development of a CH₄ dehydroaromatization-catalyst regeneration fluidized bed system 9(1928)
- Process optimization study on the carbonylation of methyl acetate 9(1937)
- The influence of different monodentate P-ligand mixtures on Rh-catalyzed 1-butene hydroformylation 9(1943)
- The study of methanol aromatization on transition metal modified ZSM-5 catalyst 9(1949)
- Cerium phosphate-supported Au catalysts for CO oxidation 10(2055)
- CH₄ oxidation to oxygenates with N₂O over iron-containing Y zeolites: Effect of preparation 10(2064)
- Optimization of conditions for preparation of ZSM-5@silicalite-1 core-shell catalysts *via* hydrothermal synthesis 10(2070)
- Catalytic reduction of NO_x by biomass-derived activated carbon supported metals 10(2077)
- Aggregation and fragmentation of agglomerates in a fluidized bed of mixed nanoparticles by adding FCC coarse particles 12(2531)
- Study on the pinene isomerization catalyzed by TiM 12(2537)
- Mechanistic insights into the selective hydrogenation of resorcinol to 1,3-cyclohexanedione over Pd/rGO catalyst through DFT calculation 12(2542)
- ## Process Systems Engineering and Process Safety
- Modeling and identification for soft sensor systems based on the separation of multi-dynamic and static characteristics 1(137)
- Using hot-vapor bypass for pressure control in distillation columns 1(144)
- Gas emission source term estimation with 1-step nonlinear partial swarm optimization-Tikhonov regularization hybrid method 2(356)
- Surface chemical characterization of deactivated low-level mercury catalysts for acetylene hydrochlorination 2(364)
- Online complex nonlinear industrial process operating optimality assessment using modified robust total kernel partial M-regression 4(775)

A novel process integrating vacuum distillation with atmospheric chlorination reaction for flexible production of tetrachloroethane and pentachloroethane.....	4(786)
Study on reactions of gaseous P_2O_5 with $Ca_3(PO_4)_2$ and SiO_2 during a rotary kiln process for phosphoric acid production.....	4(795)
A sludge volume index (SVI) model based on the multivariate local quadratic polynomial regression method	5(1071)
A risk-based methodology for the optimal placement of hazardous gas detectors	5(1078)
Composition control and temperature inferential control of dividing wall column based on model predictive control and PI strategies	5(1087)
Modeling and optimization of industrial Fischer-Tropsch synthesis with the slurry bubble column reactor and iron-based catalyst	5(1102)
Adiabatic correction for the esterification of acetic anhydride by methanol <i>via</i> accurate kinetics	9(1954)
Multi-objective optimization of methane production system from biomass through anaerobic digestion	10(2084)
Data-driven intelligent monitoring system for key variables in wastewater treatment process	10(2093)
Investigation on and industrial application of degrading of methanol feed in methanol to propylene process.....	10(2102)
Batch process monitoring based on WGNPE-GSVDD related and independent variables	12(2549)
Application of convolutional neural networks to large-scale naphtha pyrolysis kinetic modeling	12(2562)

Chemical Engineering Thermodynamics

Experimental investigation and development of new correlation for influences of temperature and concentration on dynamic viscosity of MWCNT-SiO ₂ (20-80)/20W50 hybrid nano-lubricant.....	1(152)
Interaction of cetyltrimethylammonium bromide with drug in aqueous/electrolyte solution: A combined conductometric and molecular dynamics method study.....	1(159)
Density, refractive index and liquid-liquid equilibrium data of polyethylene glycol 3000 + potassium formate + water at different pH values	1(168)
Experimental investigation on CO ₂ -light crude oil interfacial and swelling behavior.....	2(373)
An improved theoretical procedure for the pore-size analysis of activated carbon by gas adsorption	3(551)

Isobaric vapor-liquid equilibrium for ternary system of ethanol, ethyl propionate and para-xylene at 101.3 kPa.....	3(560)
Interaction of antipsychotic drug with novel surfactants: Micellization and binding studies.....	3(566)
Measurement and correlation of solid-liquid phase equilibria for binary and ternary systems consisting of <i>N</i> -vinylpyrrolidone, 2-pyrrolidone and water.....	4(806)
Effect of different additives on the phase separation behavior and thermodynamics of <i>p</i> - <i>tert</i> -alkylphenoxy poly(oxyethylene) ether in absence and presence of drug	5(1110)
Temperature-dependent aggregation of bio-surfactants in aqueous solutions of galactose and lactose: Volumetric and viscometric approach	5(1119)
Transformation of microstructure and phase of disodium guanosine 5'-monophosphate: Thermodynamic perspectives.....	10(2112)
Equilibrium morphology of gas-liquid Janus droplets: A numerical analysis of buoyancy effect	10(2121)
Commentary on the "Measurement and correlation of solubility of meropenem trihydrate in binary (water + acetone/tetrahydrofuran) solvent mixtures"	10(2127)
Measurement and correlation of phase equilibrium data of the mixtures consisting of water, resorcinol, mesityl oxide at different temperatures	12(2573)
Electric conductivity and electric convertibility of potassium acetate in water, ethanol, 2,2,2-trifluoroethanol, 2-propanol and their binary blends	12(2581)

Biotechnology and Bioengineering

Lipid enhancement in microalgae by temporal phase separation: Use of indigenous sources of nutrients.....	1(175)
Determination of 4-nonylphenol and 4- <i>tert</i> -octylphenol compounds in various types of wastewater and their removal rates in different treatment processes in nine wastewater treatment plants of Iran	1(183)
The green hydrolysis technology of hemicellulose in corncob by the repeated use of hydrolysate	1(191)
Biosynthesis of 4-hydroxyphenylpyruvic acid from L-tyrosine using recombinant <i>Escherichia coli</i> cells expressing membrane bound L-amino acid deaminase	2(380)
Process development for producing a food-grade glucose solution from rice straws	2(386)
Biodegradation of natural and synthetic estrogens in moving	

- bed bioreactor 2(393)
- Novel kinetic model for the simulation analysis of the butanol productivity of *Clostridium acetobutylicum* ATCC 824 under different reactor configurations 4(812)
- Evaluation of the effects of AlkylPhenolic compounds on kinetic coefficients and biomass activity in MBBR by means of respirometric techniques 4(822)
- The occurrence, fate, and distribution of natural and synthetic hormones in different types of wastewater treatment plants in Iran 5(1132)
- Adaptation of intestine-based microbial functions to bioethanol production 5(1140)
- Biochar-mediated regulation of greenhouse gas emission and toxicity reduction in bioremediation of organophosphorus pesticide-contaminated soils 12(2592)
- A cold adapt and ethanol tolerant endoglucanase from a marine *Bacillus subtilis* 12(2601)
- Stability improvement of human collagen $\alpha 1(I)$ chain using insulin as a fusion partner 12(2607)
- Reconstruction of tyrosol synthetic pathways in *Escherichia coli* 12(2615)
- Energy, Resources and Environmental Technology**
- Molten waste plastic pyrolysis in a vertical falling film reactor and the influence of temperature on the pyrolysis products 2(400)
- Characteristics of oil shale pyrolysis in a two-stage fluidized bed 2(407)
- Effect of endogenous hydrogen utilization on improved methane production in an integrated microbial electrolysis cell and anaerobic digestion: Employing catalyzed stainless steel mesh cathode 3(574)
- Indirect mineral carbonation of titanium-bearing blast furnace slag coupled with recovery of TiO_2 and Al_2O_3 3(583)
- Oxidative desulfurization of dibenzothiophene over Fe promoted Co-Mo/ Al_2O_3 and Ni-Mo/ Al_2O_3 catalysts using hydrogen peroxide and formic acid as oxidants 3(593)
- Ozonation of *o*-phenylenediamine in the presence of hydrogen peroxide by high-gravity technology 3(601)
- Variation of toxic pollutants emission during a feeding cycle from an updraft fixed bed gasifier for disposing rural solid waste 3(608)
- Adsorptive potential of *Acacia nilotica* based adsorbent for chromium(VI) from an aqueous phase 3(614)
- Effect of heat flux and inlet temperature on the fouling characteristics of nanoparticles 3(623)
- Parametric study and effect of calcination and carbonation conditions on the CO_2 capture performance of lithium orthosilicate sorbent 3(631)
- Doping effects on the electro-degradation of phenol on doped titanium suboxide anodes 4(830)
- Decomposition behavior of $CaSO_4$ during potassium extraction from a potash feldspar- $CaSO_4$ binary system by calcination 4(838)
- The extraction of potassium from K-feldspar ore by low temperature molten salt method 4(845)
- Transesterification of sunflower oil in microchannels with circular obstructions 4(852)
- 17 α -Ethinylestradiol removal from water by magnetic ion exchange resin 4(864)
- From pollutant to solution of wastewater pollution: Synthesis of activated carbon from textile sludge for dye adsorption 4(870)
- Oilfield produced water treatment in internal-loop airlift reactor using electrocoagulation/flotation technique 4(879)
- An innovative design of septic tank for wastewater treatment and its performance evaluation: An applicable model for developing countries 4(886)
- Integration of high-solid digestion and gasification to dispose horticultural waste and chicken manure 5(1145)
- Enhanced electrokinetic remediation of cadmium-contaminated natural clay using organophosphonates in comparison with EDTA 5(1152)
- Thermodynamic behaviors of Cu in interaction with chlorine, sulfur, phosphorus and minerals during sewage sludge co-incineration 5(1160)
- Effect of industrial microwave irradiation on the physicochemical properties and pyrolysis characteristics of lignite 5(1171)
- An innovative trigeneration system using biogas as renewable energy 5(1179)
- Cr(III) removal from simulated solution using hydrous magnesium oxide coated fly ash: Optimization by response surface methodology (RSM) 5(1192)
- Antioxidant activity of phytosynthesized biomatrix-loaded noble metallic nanoparticles 5(1200)
- Life cycle assessment of oxygen-18 production using cryogenic oxygen distillation 9(1960)

- Conversions of fuel-N, volatile-N, and char-N to NO and N₂O during combustion of a single coal particle in O₂/N₂ and O₂/H₂O at low temperature 9(1967)
- Magnéli phases Ti_nO_{2n-1} as novel ozonation catalysts for effective mineralization of phenol 9(1978)
- Ferroelectric solid solution Li_{1-x}Ta_{1-x}W_xO₃ as potential photocatalysts in microbial fuel cells: Effect of the W content 9(1985)
- Poly (ether ether ketone ketone) based imidazolium as anion exchange membranes for alkaline fuel cells 10(2130)
- Feasibility analysis of SO₂ absorption using a hydrophilic ceramic membrane contactor 10(2139)
- Comparative analysis of residence and diffusion times in rotating bed used for biogas upgrading 10(2148)
- Characteristics of reactivity and structures of palm kernel shell (PKS) biochar during CO₂/H₂O mixture gasification 10(2153)
- Insight into the structural features of organic species in Fushun oil shale *via* thermal dissolution 10(2162)
- Reliable, environmentally friendly method for the recycling of spent Ag/ α -Al₂O₃ catalysts using (NH₄)₂Ce(NO₃)₆ .. 10(2169)
- Co-pyrolysis characteristics of typical components of waste plastics in a falling film pyrolysis reactor 10(2176)
- Distribution and degradation kinetics of cyhalodiamide in Chinese rice field environment 10(2185)
- Preparation optimization of multilayer-structured SnO₂-Sb-Ce/Ti electrode for efficient electrocatalytic oxidation of tetracycline in water 12(2622)
- Facile ultrasonic-assisted synthesis of micro-nanosheet structure Bi₄Ti₃O₁₂/g-C₃N₄ composites with enhanced photocatalytic activity on organic pollutants 12(2628)
- Effect of monovalent anions on cationic Gemini micro-emulsion 12(2636)
- Materials and Product Engineering**
- Comparative experimental study on reactive crystallization of Ni(OH)₂ in an airlift-loop reactor and a stirred reactor 1(196)
- Bi-/multi-modal pore formation of PLGA/hydroxyapatite composite scaffolds by heterogeneous nucleation in supercritical CO₂ foaming 1(207)
- Preparation of water-soluble magnetic nanoparticles with controllable silica coating 1(213)
- Carbon foams prepared from coal tar pitch for building thermal insulation material with low cost 2(415)
- Electrodeposition and characterization of Cu₂O thin films using sodium thiosulfate as an additive for photovoltaic solar cells 2(421)
- Comparison of the effect of carbon, halloysite and titania nanotubes on the mechanical and thermal properties of LDPE based nanocomposite films 2(428)
- Effects of nitrogen doping on surface-enhanced Raman scattering (SERS) performance of bicrystalline TiO₂ nanofibres 3(642)
- The combined effects of lysozyme and ascorbic acid on microstructure and properties of zein-based films 3(648)
- Fabrication of chitosan microspheres for efficient adsorption of methyl orange 3(657)
- Synthesis of butterfly-like BiVO₄/RGO nanocomposites and their photocatalytic activities 3(667)
- A simple strategy to synthesize and characterization of zirconium modified PCs/ γ -Al₂O₃ 5(1209)
- Thermal conductivity of PVDF/PANI-nanofiber composite membrane aligned in an electric field 5(1213)
- Morphological, mechanical and thermal properties of cyanate ester/benzoxazine resin composites reinforced by silane treated natural hemp fibers 5(1219)
- Controlling dispersion and morphology of MoS₂ nanospheres by hydrothermal method using SiO₂ as template 5(1229)
- Characterization and thrust measurements from electrolytic decomposition of ammonium dinitramide (ADN) based liquid monopropellant FLP-103 in MEMS thrusters 9(1992)
- Controllable preparation of ZnO porous flower through a membrane dispersion reactor and their photocatalytic properties 10(2192)
- One-step synthesis of hydrophobic magnesium hydroxide nanoparticles and their application in flame-retardant polypropylene composites 10(2199)
- Red tetrazolium as an effective inhibitor for the corrosion of cold rolled steel in 7.0 mol·L⁻¹ H₂SO₄ solution 12(2641)
- Synthesis, optimization and characterization of biochar based catalyst from sawdust for simultaneous esterification and transesterification 12(2654)
- Preparation and characterization of tung oil-based flame retardant polyols 12(2664)
- Special Issue of the 10th International Symposium**

on Catalysis in Multiphase Reactors (CAMURE-10) and the 9th International Symposium on Multifunctional Reactors (ISMR-9)

Reviews

- Polyethoxylation and polypropoxylation reactions: Kinetics,
mass transfer and industrial reactor design 6(1235)
- Inherently safer reactors and procedures to prevent reaction
runaway 6(1252)

Catalysis

- Ag-Co₃O₄: Synthesis, characterization and evaluation of its
photo-catalytic activity towards degradation of rhodamine B
dye in aqueous medium 6(1264)
- One-pot synthesis of 5-hydroxymethylfurfural from glucose
over zirconium doped mesoporous KIT-6 6(1270)
- Selective propylene epoxidation in liquid phase using highly
dispersed Nb catalysts incorporated in mesoporous
silicates 6(1278)
- High-efficiency acetaldehyde removal during solid-state
polycondensation of poly(ethylene terephthalate) assisted by
supercritical carbon dioxide 6(1285)
- A phase inversion based sponge-like polysulfonamide/SiO₂
composite separator for high performance lithium-ion
batteries 6(1292)
- Synthesis and catalytic activity of SBA-15 supported catalysts
for styrene oxidation 6(1300)

Catalytic reactor & ISMR

- The effect of operating conditions on acylation of
2-methylnaphthalene in a microchannel reactor 6(1307)
- Experimental study of partially decoupled oxidation of ethane
for producing ethylene and acetylene 6(1312)
- Modeling and optimization of the cyclic steady state operation
of adsorptive reactors 6(1321)
- n*-Decane hydro-conversion over bi- and tri-metallic Al-HMS
catalyst in a mini-reactor 6(1330)
- CFD simulation of homogeneous reaction characteristics of
dehydration of fructose to HMF in micro-channel
reactors 6(1340)

General reactor

- CFD simulation of gas-liquid flow in a high-pressure bubble
column with a modified population balance model 6(1350)

- Hydrodynamics and bubble behaviour in a three-phase
two-stage internal loop airlift reactor 6(1359)
- Features of the motion of gel particles in a three-phase bubble
column under foaming and non-foaming
conditions 6(1370)
- Effects of rotational speed and fill level on particle mixing in a
stirred tank with different impellers 6(1383)
- Characterization on the hydrodynamics of a covering-plate
Rushton impeller 6(1392)
- Comparison between the new mechanistic and the chaos
scale-up methods for gas-solid fluidized beds 6(1401)
- Modeling of segregation in magnetized fluidized bed with
binary mixture of Geldart-B magnetizable and
nonmagnetizable particles 6(1412)
- Critical impeller speeds for a gas-inducing stirring tank loaded
with solid particles 6(1423)
- Stability of penicillin G in ionic liquid [Bmim]PF₆ 6(1430)
- A novel constant interfacial area cell for determining the
extraction kinetics of Er(III) from chloride
medium 6(1435)
- Preface: Selected papers from The 7th Global Chinese
Chemical Engineers Symposium 7(1443)

Separation Science and Engineering

- Degradation and mineralization of aniline by O₃/Fenton process
enhanced using high-gravity technology 7(1444)
- Three-liquid-phase extraction and separation of V(V) and
Cr(VI) from acidic leach solutions of high-chromium
vanadium-titanium magnetite 7(1451)
- Insight into the degradation mechanism of cefixime under
crystallization condition 7(1458)
- Experimental and simulation of the reactive dividing wall
column based on ethyl acetate synthesis 7(1468)
- Modeling investigation of geometric size effect on
pervaporation dehydration through scaled-up hollow fiber
NaA zeolite membranes 7(1477)
- Understanding the influence of microwave on the relative
volatility used in the pyrolysis of Indonesia oil
sands 7(1485)

Catalysis, Kinetics and Reaction Engineering

- Selective aerobic oxidation of *p*-cresol with co-catalysts
between metalloporphyrins and metal salts 7(1493)
- Optimal reaction conditions for pyridine synthesis in riser

reactor.....	7(1499)
Desulfurization of liquid hydrocarbon fuels <i>via</i> Cu ₂ O catalyzed photo-oxidation coupled with liquid-liquid extraction.....	7(1508)

Chemical Engineering Thermodynamics

Densities and surface tensions of ionic liquids/sulfuric acid binary mixtures.....	7(1513)
---	---------

Energy, Resources and Environmental Technology

Dissolution-regrowth synthesis of SiO ₂ nanoplates and embedment into two carbon shells for enhanced lithium-ion storage	7(1522)
Distinct synergetic effects in the ozone enhanced photocatalytic degradation of phenol and oxalic acid with Fe ³⁺ /TiO ₂ catalyst.....	7(1528)
A study on simultaneous removal of NO and SO ₂ by using sodium persulfate aqueous scrubbing	7(1536)
Experimental study on the effects of drying methods on the stabilities of lignite	7(1545)
Degradation analysis of A ² /O combined with AgNO ₃ + K ₂ FeO ₄ on coking wastewater	7(1555)

Materials and Product Engineering

Hierarchical porous MgBO ₂ (OH) microspheres: Hydrothermal synthesis, thermal decomposition, and application as adsorbents for Congo red removal.....	7(1561)
On the database-based strategy of candidate extractant generation for de-phenol process in coking wastewater treatment.....	7(1570)
DNA-assisted rational design of BaF ₂ linear and erythrocyte-shaped nanocrystals.....	7(1581)
Preparation of vapreotide-templated silver nanocages and their photothermal therapy efficacy	7(1586)
High efficiency production of ginsenoside compound K by catalyzing ginsenoside Rb1 using snailase	7(1591)

Selected Papers from the Chinese Process Systems Engineering Annual Meeting 2017

Feature selection for chemical process fault diagnosis by artificial immune systems	8(1599)
A decision tree based decomposition method for oil refinery scheduling.....	8(1605)
Synthesis of refrigeration system based on generalized	

disjunctive programming model.....	8(1613)
Control structure comparison for three-product Petlyuk column.....	8(1621)
Process optimization of an industrial acetic acid dehydration progress <i>via</i> heterogeneous azeotropic distillation	8(1631)
Synthesis of indirect work exchange networks considering both isothermal and adiabatic process together with exergy analysis.....	8(1644)
PCA weight and Johnson transformation based alarm threshold optimization in chemical processes	8(1653)
Optimal synthesis of compression refrigeration system using a novel MINLP approach	8(1662)
Investigation of the operability for four-product dividing wall column with two partition walls.....	8(1670)
Molecular reconstruction model based on structure oriented lumping and group contribution methods.....	8(1677)
Logarithm-transform piecewise linearization method for the optimization of fasoline blending processes.....	8(1684)
Design of heat exchanger network based on entransy theory	8(1692)
Process optimization with consideration of uncertainties—An overview.....	8(1700)
Equipment selection knowledge base system for industrial styrene process	8(1707)

Selected Papers from the 28th Chinese Process Control Conference

Just-in-time learning based integrated MPC-ILC control for batch processes.....	8(1713)
DTCWT-based zinc fast roughing working condition identification	8(1721)
An improved artificial bee colony algorithm for steelmaking-refining-continuous casting scheduling problem	8(1727)
Total plant performance evaluation based on big data: Visualization analysis of TE process.....	8(1736)
Enhanced exergy cost optimization of operating conditions in FCCU main fractionator.....	8(1750)
Optimization for ASP flooding based on adaptive rationalized Haar function approximation.....	8(1758)
Prediction model of slurry pH based on mechanism and error compensation for mineral flotation process.....	8(1766)

Special issue of Carbon Capture, Utilisation and

Storage

- Critical review of strategies for CO₂ delivery to large-scale microalgae cultures 11(2219)
- Carbon dioxide capture by solvent absorption using amino acids: A review 11(2229)
- Recent advances in polymeric membranes for CO₂ capture 11(2238)
- Recent developments in aqueous ammonia-based post-combustion CO₂ capture technologies 11(2255)
- Recent advances on the reduction of CO₂ to important C₂+ oxygenated chemicals and fuels 11(2266)
- Recent advances on the membrane processes for CO₂ separation 11(2280)
- Recent progress of amine modified sorbents for capturing CO₂ from flue gas 11(2292)
- Recent developments and consideration issues in solid adsorbents for CO₂ capture from flue gas 11(2303)
- CO₂ absorption into a phase change absorbent: water-lean potassium proline/ethanol solution 11(2318)
- Modelling of a post-combustion carbon dioxide capture absorber using potassium carbonate solvent in Aspen Custom Modeller 11(2327)
- Mass transfer correlations for membrane gas-solvent contactors undergoing carbon dioxide desorption 11(2337)
- Carbon deposition and catalytic deactivation during CO₂ reforming of CH₄ over Co/MgO catalyst 11(2344)
- The CO₂ absorption and desorption performance of the triethylenetetramine + *N,N*-diethylethanolamine + H₂O system 11(2351)
- Ni/bentonite catalysts prepared by solution combustion method for CO₂ methanation 11(2361)
- High-efficiency and pollution-controlling *in-situ* gasification chemical looping combustion system by using CO₂ instead of steam as gasification agent 11(2368)
- Supported ionic liquid sorbents for CO₂ capture from simulated flue-gas 11(2377)
- Impregnation of carbonaceous nanofibers into glassy polymer-based composite membrane for CO₂ separation 11(2385)