ELSEVIER

Chemical Engineering Journal 100 (2004) 189–191

Chemical Engineering Journal

www.elsevier.com/locate/cej

Subject Index of Volume 100

Activation energy
An apparent kinetic model for the carbonation of calcium oxide by carbon dioxide, 71
Air treatment
Biofiltration of xylene emissions: bioreactor response to variations in the pollutant inlet concentration and gas flow rate, 149
Airlift contactor
Internal liquid circulation in annulus sparged internal loop airlift contactors, 1

Biofiltration
Biofiltration of xylene emissions: bioreactor response to variations in the pollutant inlet concentration and gas flow rate, 149
N,*N*-bis(2-ethylhexyl)guanidine (LIX79)
Improved kinetics-based gold cyanide extraction with mixture of LIX79 + TOPO utilizing hollow fiber membrane contactors, 11

Calcium oxide
An apparent kinetic model for the carbonation of calcium oxide by carbon dioxide, 71
Carbon dioxide
An apparent kinetic model for the carbonation of calcium oxide by carbon dioxide, 71
Biofiltration of xylene emissions: bioreactor response to variations in the pollutant inlet concentration and gas flow rate, 149
Carbonation
An apparent kinetic model for the carbonation of calcium oxide by carbon dioxide, 71
Carboxylic acid
Wet air oxidation of long-chain carboxylic acids, 43
Catalyst
Study on kinetics of polymerization of dimer fatty acids with ethylenediamine in the presence of catalyst, 85
Catalytic converter
Unsteady temperature fields of monoliths in catalytic converters, 95
Catalytic cracking
Effect of modelling pressure gradient in the simulation of industrial FCC risers, 181
Catalytic distillation
A comparison of a pseudo-homogeneous non-equilibrium model and a three-phase non-equilibrium model for catalytic distillation, 119
Catalytic membrane reactors
Catalytic combustion of methane in non-permselective membrane reactors with separate reactant feeds, 23
Chlorination by-products
Kinetics of the formation and decomposition of chlorination by-products in surface waters, 139
Coal
The feasibility of a coal gasifier combined with a high-temperature fuel cell, 167
Combustion
Catalytic combustion of methane in non-permselective membrane reactors with separate reactant feeds, 23
Concentration
Biofiltration of xylene emissions: bioreactor response to variations in the pollutant inlet concentration and gas flow rate, 149

Darken equation
The composition dependence of self and transport diffusivities from molecular dynamics simulations, 51
Decomposition
Kinetics of the formation and decomposition of chlorination by-products in surface waters, 139
Degradation
Degradation of salicylic acid by photo-assisted Fenton reaction using Fe ions on strongly acidic ion exchange resin as catalyst, 159
Diacetone alcohol
A comparison of a pseudo-homogeneous non-equilibrium model and a three-phase non-equilibrium model for catalytic distillation, 119
Dimer fatty acid
Study on kinetics of polymerization of dimer fatty acids with ethylenediamine in the presence of catalyst, 85

Effective medium model
Flow through beds of perfusive particles: effective medium model for velocity prediction within the perfusive media, 79
Energy conservation principal
Internal liquid circulation in annulus sparged internal loop airlift contactors, 1
Ethyl cellosolve
A comparison of a pseudo-homogeneous non-equilibrium model and a three-phase non-equilibrium model for catalytic distillation, 119
Ethylenediamine
Study on kinetics of polymerization of dimer fatty acids with ethylenediamine in the presence of catalyst, 85

Fatty acid
Wet air oxidation of long-chain carboxylic acids, 43
Fatty polyamide
Study on kinetics of polymerization of dimer fatty acids with ethylenediamine in the presence of catalyst, 85
Formation
Kinetics of the formation and decomposition of chlorination by-products in surface waters, 139

Gas flow rate
Biofiltration of xylene emissions: bioreactor response to variations in the pollutant inlet concentration and gas flow rate, 149
Gasification
The feasibility of a coal gasifier combined with a high-temperature fuel cell, 167
Gas–solid reaction
An apparent kinetic model for the carbonation of calcium oxide by carbon dioxide, 71
Genetic algorithm
Modeling of a reaction network and its optimization by genetic algorithm, 109

doi:10.1016/S1385-8947(04)00166-4

Hydrodynamics
Effect of modelling pressure gradient in the simulation of industrial FCC risers, 181
Hydrogen peroxide
Degradation of salicylic acid by photo-assisted Fenton reaction using Fe ions on strongly acidic ion exchange resin as catalyst, 159

Internal liquid circulation
Internal liquid circulation in annulus sparged internal loop airlift contactors, 1
Isobaric–isothermal
The composition dependence of self and transport diffusivities from molecular dynamics simulations, 51

Kinetic
Study on kinetics of polymerization of dimer fatty acids with ethylenediamine in the presence of catalyst, 85
Kinetic model
An apparent kinetic model for the carbonation of calcium oxide by carbon dioxide, 71
Kinetics
Wet air oxidation of long-chain carboxylic acids, 43
Kinetics of the formation and decomposition of chlorination by-products in surface waters, 139

Limiting current method
Mass transfer variation within a packed bed and its relation to liquid distribution, 33
Liquid circulation
Internal liquid circulation in annulus sparged internal loop airlift contactors, 1
Liquid distribution
Mass transfer variation within a packed bed and its relation to liquid distribution, 33
Local mass transfer variation
Mass transfer variation within a packed bed and its relation to liquid distribution, 33

Material conservation principal
Internal liquid circulation in annulus sparged internal loop airlift contactors, 1
Mathematical model
Internal liquid circulation in annulus sparged internal loop airlift contactors, 1
Mathematical modeling
Modeling of a reaction network and its optimization by genetic algorithm, 109
MCFC
The feasibility of a coal gasifier combined with a high-temperature fuel cell, 167
Measurement
Unsteady temperature fields of monoliths in catalytic converters, 95
Membrane extraction
Treatment of phenol-containing aqueous solutions by membrane-based solvent extraction in coupled ultrafiltration modules, 129
Methane
Catalytic combustion of methane in non-permselective membrane reactors with separate reactant feeds, 23
Modeling
Study on kinetics of polymerization of dimer fatty acids with ethylenediamine in the presence of catalyst, 85
Unsteady temperature fields of monoliths in catalytic converters, 95
Modelling
Wet air oxidation of long-chain carboxylic acids, 43
Effect of modelling pressure gradient in the simulation of industrial FCC risers, 181
Molecular dynamics
The composition dependence of self and transport diffusivities from molecular dynamics simulations, 51

Non-equilibrium model
A comparison of a pseudo-homogeneous non-equilibrium model and a three-phase non-equilibrium model for catalytic distillation, 119
Numerical analysis
Modeling of a reaction network and its optimization by genetic algorithm, 109

Optimum design
Unsteady temperature fields of monoliths in catalytic converters, 95

Pd
Catalytic combustion of methane in non-permselective membrane reactors with separate reactant feeds, 23
Perfusive packed bed
Flow through beds of perfusive particles: effective medium model for velocity prediction within the perfusive media, 79
Perfusive particle
Flow through beds of perfusive particles: effective medium model for velocity prediction within the perfusive media, 79
Permeability
Flow through beds of perfusive particles: effective medium model for velocity prediction within the perfusive media, 79
Phenol removal
Treatment of phenol-containing aqueous solutions by membrane-based solvent extraction in coupled ultrafiltration modules, 129
Phosphoric acid
Study on kinetics of polymerization of dimer fatty acids with ethylenediamine in the presence of catalyst, 85
Photo-assisted Fenton reaction
Degradation of salicylic acid by photo-assisted Fenton reaction using Fe ions on strongly acidic ion exchange resin as catalyst, 159
Pressure
The composition dependence of self and transport diffusivities from molecular dynamics simulations, 51
Pressure gradient
Effect of modelling pressure gradient in the simulation of industrial FCC risers, 181
Pseudo-homogeneous model
A comparison of a pseudo-homogeneous non-equilibrium model and a three-phase non-equilibrium model for catalytic distillation, 119
Pt
Catalytic combustion of methane in non-permselective membrane reactors with separate reactant feeds, 23
Purification
Treatment of phenol-containing aqueous solutions by membrane-based solvent extraction in coupled ultrafiltration modules, 129

Reaction engineering
Modeling of a reaction network and its optimization by genetic algorithm, 109
Riser reactor
Effect of modelling pressure gradient in the simulation of industrial FCC risers, 181

Salicylic acid
Degradation of salicylic acid by photo-assisted Fenton reaction using Fe ions on strongly acidic ion exchange resin as catalyst, 159
Selectivity
Modeling of a reaction network and its optimization by genetic algorithm, 109
Self-diffusivity
The composition dependence of self and transport diffusivities from molecular dynamics simulations, 51

SOFC
The feasibility of a coal gasifier combined with a high-temperature fuel cell, 167
Styrene
Modeling of a reaction network and its optimization by genetic algorithm, 109
Subcritical hydrothermal oxidation
Wet air oxidation of long-chain carboxylic acids, 43
System
The feasibility of a coal gasifier combined with a high-temperature fuel cell, 167

Technical evaluation
The feasibility of a coal gasifier combined with a high-temperature fuel cell, 167
Temperature
The composition dependence of self and transport diffusivities from molecular dynamics simulations, 51
Biofiltration of xylene emissions: bioreactor response to variations in the pollutant inlet concentration and gas flow rate, 149
Temperature field
Unsteady temperature fields of monoliths in catalytic converters, 95
The Dispersion-free membrane extraction
Improved kinetics-based gold cyanide extraction with mixture of LIX79 + TOPO utilizing hollow fiber membrane contactors, 11
Three-phase model
A comparison of a pseudo-homogeneous non-equilibrium model and a three-phase non-equilibrium model for catalytic distillation, 119
Transport diffusivity
The composition dependence of self and transport diffusivities from molecular dynamics simulations, 51
Trioctylphosphine oxide (TOPO)
Improved kinetics-based gold cyanide extraction with mixture of LIX79 + TOPO utilizing hollow fiber membrane contactors, 11

Velocity profile
Flow through beds of perfusive particles: effective medium model for velocity prediction within the perfusive media, 79

Waste water treatment
Treatment of phenol-containing aqueous solutions by membrane-based solvent extraction in coupled ultrafiltration modules, 129
Wet air oxidation
Wet air oxidation of long-chain carboxylic acids, 43

Xylene
Biofiltration of xylene emissions: bioreactor response to variations in the pollutant inlet concentration and gas flow rate, 149