

Chemical Engineering Journal 83 (2001) 227-229



www.elsevier.com/locate/cej

Subject Index of Volume 83

Adsorption

Application of branched pore diffusion model in the adsorption of reactive dyes on activated carbon, 15

Adsorption by particles injected into a gas stream, 165

Adsorption of dyes from aqueous solution — the effect of adsorbent pore size distribution and dye aggregation, 201

Alamine 336

Extraction equilibria of nicotinic acid using Alamine 336 and conventional solvents: effect of diluent, 155

AlCl₃-impregnation

Kinetics of alkylation of benzene with ethanol on AlCl₃-impregnated 13X zeolites, 185

Alkylation

Kinetics of alkylation of benzene with ethanol on AlCl₃-impregnated 13X zeolites, 185

Amino acids

Selective recovery of amino acids by aqueous two-phase electrophoresis, 55

Analytical solution

Multicomponent unsteady-state film model: a general analytical solution to the linearized diffusion–reaction problem, 85

Aqueous two-phase system

Selective recovery of amino acids by aqueous two-phase electrophoresis, 55

Axial dispersion model

Highly accurate solution of the axial dispersion model expressed in S-system canonical form by Taylor series method, 175

Baroeffect

On the isothermal binary mass transport in a single pore, 107 Benzene ethylation

Kinetics of alkylation of benzene with ethanol on AlCl₃-impregnated 13X zeolites, 185

Binary friction model

On the isothermal binary mass transport in a single pore, 107

Mechanism of bioleaching of coal fly ash by *Thiobacillus thiooxidans*, 123

Bioprocess

Mechanism of bioleaching of coal fly ash by *Thiobacillus thiooxidans*, 123

Bioreactor

Sliding mode observer-based control for a class of bioreactors, 25 Branched pore diffusion model

Application of branched pore diffusion model in the adsorption of reactive dyes on activated carbon, 15

Bubbly flow

A study of bubbly flow using resistivity probes in a novel configuration, 45

Calcination kinetics

Calcination kinetics of high purity limestones, 131

Calcination rate

Calcination kinetics of high purity limestones, 131

Carbon adsorbents

Adsorption of dyes from aqueous solution — the effect of adsorbent pore size distribution and dye aggregation, 201

Carbon particles

Effect of physicochemical and hydrodynamic conditions on kinetics of carbon particles deposition on plastic particles, 79

Chloramine

Synthesis of enriched solutions of chloramine starting from hypochlorite at high chlorometric degree, 219

Coal fly ash

Mechanism of bioleaching of coal fly ash by *Thiobacillus thiooxidans*, 123

Coating

Experimental investigation of droplet deposition on a single particle, 1

An assessment of supercritical water oxidation (SCWO). Existing problems, possible solutions and new reactor concepts, 207

Deposition

Effect of physicochemical and hydrodynamic conditions on kinetics of carbon particles deposition on plastic particles, 79

Diffusion

Diffusion in surface-wetting films in a two-phase saturated porous solid characterised by pulsed magnetic field gradient NMR, 33

Diffusion-reaction coupling

Multicomponent unsteady-state film model: a general analytical solution to the linearized diffusion–reaction problem, 85

Diluent

Extraction equilibria of nicotinic acid using Alamine 336 and conventional solvents: effect of diluent, 155

Dry sorption

Adsorption by particles injected into a gas stream, 165

Dusty gas model

On the isothermal binary mass transport in a single pore, 107

Dye aggregation

Adsorption of dyes from aqueous solution — the effect of adsorbent pore size distribution and dye aggregation, 201

Electrophoresis

Selective recovery of amino acids by aqueous two-phase electrophoresis, 55

Energy balance

Characteristics of turbulence in a multigrid mixer, 67

Energy dissipation

Characteristics of turbulence in a multigrid mixer, 67

Eulerian time scale

Characteristics of turbulence in a multigrid mixer, 67

Extraction equilibria

Extraction equilibria of nicotinic acid using Alamine 336 and conventional solvents: effect of diluent, 155

Fast Fourier transform

An improved on-line monitoring procedure for multiloop control systems, 145

1385-8947/01/\$ - see front matter © 2001 Elsevier Science B.V. All rights reserved.

PII: S1385-8947(01)00182-6

Film model

Multicomponent unsteady-state film model: a general analytical solution to the linearized diffusion-reaction problem, 85

Fluidized bed

Experimental investigation of droplet deposition on a single particle, 1 Fluidized-bed reactor

Methanol synthesis in a fluidized-bed reactor coupled with an external heat exchanger. The effect of feedback deformation, 191

Freundlich equilibrium relation

Adsorption by particles injected into a gas stream, 165

Fritz-Schlünder isotherm

Application of branched pore diffusion model in the adsorption of reactive dyes on activated carbon, 15

General initial and boundary conditions

Multicomponent unsteady-state film model: a general analytical solution to the linearized diffusion–reaction problem, 85

Growth mechanism

Experimental investigation of droplet deposition on a single particle, 1

Heat exchanger

Methanol synthesis in a fluidized-bed reactor coupled with an external heat exchanger. The effect of feedback deformation, 191

Heat transfer coefficient

Heat transfer at solid melting in solutions, 39

Ice melting

Heat transfer at solid melting in solutions, 39

Impinger

Velocity profiles of air impinging on a two-dimensional confined rigid surface, 215

Industrial-scale

On the importance of non-ideal flow effects in the operation of industrial-scale adiabatic membrane reactors, 95

Isotherm analysis

Adsorption of dyes from aqueous solution — the effect of adsorbent pore size distribution and dye aggregation, 201

Kinetics

Application of branched pore diffusion model in the adsorption of reactive dyes on activated carbon, 15

Kinetics of alkylation of benzene with ethanol on AlCl₃-impregnated 13X zeolites, 185

Laminar flow

Enhancement of absorption efficiency for a laminar film flow by hydrodynamic conditions generated by a new type of column wall, 7

Langmuir model

Effect of physicochemical and hydrodynamic conditions on kinetics of carbon particles deposition on plastic particles, 79

Limestone

Calcination kinetics of high purity limestones, 131

Liquid-solid contacting operation

Dissolution of solid body in a tubular reactor with reciprocating plate agitator, 139

Mass transfer

Dissolution of solid body in a tubular reactor with reciprocating plate agitator, 139

Mass transfer parameters

Application of branched pore diffusion model in the adsorption of reactive dyes on activated carbon, 15

Maxwell-Stefan

On the isothermal binary mass transport in a single pore, 107 Melting heat transfer

Heat transfer at solid melting in solutions, 39

Melting mass transfer

Heat transfer at solid melting in solutions, 39

Membrane

On the importance of non-ideal flow effects in the operation of industrial-scale adiabatic membrane reactors, 95

Methanol

Methanol synthesis in a fluidized-bed reactor coupled with an external heat exchanger. The effect of feedback deformation, 191

Microbial growth

Mechanism of bioleaching of coal fly ash by *Thiobacillus thiooxidans*, 123

Modeling

Extraction equilibria of nicotinic acid using Alamine 336 and conventional solvents: effect of diluent, 155

Module design

On the importance of non-ideal flow effects in the operation of industrial-scale adiabatic membrane reactors, 95

Multicomponent diffusion

On the isothermal binary mass transport in a single pore, 107

Multicomponent systems

Multicomponent unsteady-state film model: a general analytical solution to the linearized diffusion-reaction problem, 85

Multigrid oscillatory mixer

Characteristics of turbulence in a multigrid mixer, 67

Multiloop control systems

An improved on-line monitoring procedure for multiloop control systems. 145

NaOCl·5H2O

Synthesis of enriched solutions of chloramine starting from hypochlorite at high chlorometric degree, 219

Needle probes

A study of bubbly flow using resistivity probes in a novel configuration, 45

Nicotinic acid

Extraction equilibria of nicotinic acid using Alamine 336 and conventional solvents: effect of diluent, 155

NMR

Diffusion in surface-wetting films in a two-phase saturated porous solid characterised by pulsed magnetic field gradient NMR, 33

Non-ideal flow

On the importance of non-ideal flow effects in the operation of industrial-scale adiabatic membrane reactors, 95

Novel configuration

A study of bubbly flow using resistivity probes in a novel configuration, 45

Numerical solution

Application of branched pore diffusion model in the adsorption of reactive dyes on activated carbon, 15

On-line monitoring procedure

An improved on-line monitoring procedure for multiloop control systems, 145

Plastic spheres

Effect of physicochemical and hydrodynamic conditions on kinetics of carbon particles deposition on plastic particles, 79

Pore structure

Adsorption of dyes from aqueous solution — the effect of adsorbent pore size distribution and dye aggregation, 201

Porous media

On the isothermal binary mass transport in a single pore, 107

Reactor

An assessment of supercritical water oxidation (SCWO). Existing problems, possible solutions and new reactor concepts, 207

Reciprocating plate agitator

Dissolution of solid body in a tubular reactor with reciprocating plate agitator, 139

Resistivity

A study of bubbly flow using resistivity probes in a novel configuration, 45

Reynolds number

Characteristics of turbulence in a multigrid mixer, 67

Rigid surface

Velocity profiles of air impinging on a two-dimensional confined rigid surface, 215

Salt plugging

An assessment of supercritical water oxidation (SCWO). Existing problems, possible solutions and new reactor concepts, 207

Scale observers

Sliding mode observer-based control for a class of bioreactors, 25 Shooting method

Highly accurate solution of the axial dispersion model expressed in S-system canonical form by Taylor series method, 175

Simulations

Sliding mode observer-based control for a class of bioreactors, 25 Sliding mode

Sliding mode observer-based control for a class of bioreactors, 25 Sodium hypochlorite

Synthesis of enriched solutions of chloramine starting from hypochlorite at high chlorometric degree, 219

Solid-waste treatment

Mechanism of bioleaching of coal fly ash by *Thiobacillus thiooxidans*, 123

Spray granulation

Experimental investigation of droplet deposition on a single particle, 1 8-system

Highly accurate solution of the axial dispersion model expressed in S-system canonical form by Taylor series method, 175

Supercritical water oxidation

An assessment of supercritical water oxidation (SCWO). Existing problems, possible solutions and new reactor concepts, 207

Superhigh-order accuracy

Highly accurate solution of the axial dispersion model expressed in S-system canonical form by Taylor series method, 175

Surface

Diffusion in surface-wetting films in a two-phase saturated porous solid characterised by pulsed magnetic field gradient NMR, 33

Taylor series method

Highly accurate solution of the axial dispersion model expressed in S-system canonical form by Taylor series method, 175

Thiobacillus thiooxidans

Mechanism of bioleaching of coal fly ash by *Thiobacillus thiooxidans*, 123

Two-dimensional

Velocity profiles of air impinging on a two-dimensional confined rigid surface, 215

Two-point boundary value problem

Highly accurate solution of the axial dispersion model expressed in S-system canonical form by Taylor series method, 175

Unsteady-state formulation

Multicomponent unsteady-state film model: a general analytical solution to the linearized diffusion-reaction problem, 85

Velocity

Velocity profiles of air impinging on a two-dimensional confined rigid surface, 215

Vortex

Enhancement of absorption efficiency for a laminar film flow by hydrodynamic conditions generated by a new type of column wall, 7

Wavy wall column

Enhancement of absorption efficiency for a laminar film flow by hydrodynamic conditions generated by a new type of column wall, 7

13X zeolite

Kinetics of alkylation of benzene with ethanol on AlCl₃-impregnated 13X zeolites, 185