ELSEVIER

Chemical Engineering Journal 73 (1999) 267–270

Chemical Engineering Journal

Subject Index of Volume 73

2-Amino-2-methyl-1,3-propandiol
Reaction mechanism and kinetics of aqueous solutions of 2-amino-2-methyl-1,3-propandiol and carbon dioxide, 67
Absorption
Weir flow and liquid height on sieve and valve trays, 191
Activated carbon
External film control of the fixed bed adsorption, 85
Airlift system
Mixing in circulating flows, 29
Azeotropes
On the effect of inert gases in breaking the formic acid–water azeotrope by gas-gap membrane distillation, 37
Azeotropic separation
Application of Stefan–Maxwell approach to azeotropic separation by membrane distillation, 71

BATNEEC
Life cycle assessment and its application to process selection, design and optimisation, 1
Biodegradability
Wastewater pretreatment with ultrasonic irradiation to reduce toxicity, 93
Biofilm
Membrane aeration bioreactors for wastewater treatment: completely mixed and plug-flow operation, 131
Bioreactor
Membrane aeration bioreactors for wastewater treatment: completely mixed and plug-flow operation, 131
BPEO
Life cycle assessment and its application to process selection, design and optimisation, 1
Break-through curve
External film control of the fixed bed adsorption, 85
Brine recycle
Multi-stage flash desalination: present and future outlook, 173
Bubbleless membrane oxygenation
Membrane aeration bioreactors for wastewater treatment: completely mixed and plug-flow operation, 131
Bypass
A general model for hydrocyclone partition curves, 53

Calming zone
Weir flow and liquid height on sieve and valve trays, 191
Carbon dioxide
Reaction mechanism and kinetics of aqueous solutions of 2-amino-2-methyl-1,3-propandiol and carbon dioxide, 67
Catalysts
Wet air oxidation: a review of process technologies and aspects in reactor design, 143
Catalytic combustion
Modelling catalytic combustion of carbon monoxide and hydrocarbons over catalytically active wire meshes, 205
Cellulose protector
Effect of reaction medium on ozone mass transfer and applications to pulp bleaching, 23
Circulatory flows
Mixing in circulating flows, 29
Completely mixed reactor
Membrane aeration bioreactors for wastewater treatment: completely mixed and plug-flow operation, 131
Crude oil
Modelling of the rate of oil spill disappearance from seawater for Kuwaiti crude and its products, 161
CVD
Extension du procédé de dépôt de silicium par CVD en lit fluidisé à des conditions opératoires peu conventionnelles: dépôts sur poudres poreuses et/ou sous pression réduite, 61

Diffusing species
Application of Stefan–Maxwell approach to azeotropic separation by membrane distillation, 71
Diffusion
On the effect of inert gases in breaking the formic acid–water azeotrope by gas-gap membrane distillation, 37
Dilute solution
Two-phase electrophoresis separation of dyestuffs from dilute solution, 137
Direct methanol fuel cell
Pressure drop modelling for liquid feed direct methanol fuel cells . Part 1. Model development, 217
Pressure drop modelling for liquid feed direct methanol fuel cells Part II. Model based parametric analysis, 229
Dissolution
Modelling of the rate of oil spill disappearance from seawater for Kuwaiti crude and its products, 161
Distillation
Weir flow and liquid height on sieve and valve trays, 191
Drag reduction
Heat transfer in the drag reducing regime of wood pulp fibre suspensions, 247
Dyestuffs
Two-phase electrophoresis separation of dyestuffs from dilute solution, 137
Dynamic surface effects
The effects of a surfactant on the mass transfer in spray-tower extraction column, 77

Electrocatalytic
Towards an electrochemical process for recovering sulphur dioxide, 101
Electrochemical
Towards an electrochemical process for recovering sulphur dioxide, 101
Electrophoresis
Two-phase electrophoresis separation of dyestuffs from dilute solution, 137
Emulsification energy
Effects of preparation variables of enzyme-encapsulating water-in-oil emulsion on enzymatic reaction conversion and emulsion stability in an enzyme–emulsion–liquid–membrane reactor, 43

1385-8947/99/$ – see front matter © 1999 Elsevier Science S.A. All rights reserved.
PII: S1385-8947(99)00080-7

Emulsifying agent concentration
Effects of preparation variables of enzyme-encapsulating water-in-oil emulsion on enzymatic reaction conversion and emulsion stability in an enzyme–emulsion–liquid–membrane reactor, 43
Emulsion drop size
Effects of preparation variables of enzyme-encapsulating water-in-oil emulsion on enzymatic reaction conversion and emulsion stability in an enzyme–emulsion–liquid–membrane reactor, 43
Enzyme–emulsion–liquid–membrane
Effects of preparation variables of enzyme-encapsulating water-in-oil emulsion on enzymatic reaction conversion and emulsion stability in an enzyme–emulsion–liquid–membrane reactor, 43
Evaporation
Modelling of the rate of oil spill disappearance from seawater for Kuwaiti crude and its products, 161
External loop
Mixing in circulating flows, 29
Extraction kinetics
Solid–liquid extraction from plants — experimental kinetics and modelling, 253
Extraction
The effects of a surfactant on the mass transfer in spray-tower extraction column, 77

Fibre suspensions
Heat transfer in the drag reducing regime of wood pulp fibre suspensions, 247
Fibres
Heat transfer in the drag reducing regime of wood pulp fibre suspensions, 247
Fixed bed adsorption
External film control of the fixed bed adsorption, 85
Flocculation
Heat transfer in the drag reducing regime of wood pulp fibre suspensions, 247
Fluidization
Extension du procédé de dépôt de silicium par CVD en lit fluidisé à des conditions opératoires peu conventionnelles: dépôts sur poudres poreuses et/ou sous pression réduite, 61
Formic acid
On the effect of inert gases in breaking the formic acid–water azeotrope by gas-gap membrane distillation, 37

Heat transfer coefficient
Heat transfer in the drag reducing regime of wood pulp fibre suspensions, 247
Heat transfer
Heat transfer in the drag reducing regime of wood pulp fibre suspensions, 247
Hindered amine
Reaction mechanism and kinetics of aqueous solutions of 2-amino-2-methyl-1,3-propandiol and carbon dioxide, 67
Hollow fibres
Membrane aeration bioreactors for wastewater treatment: completely mixed and plug-flow operation, 131
Hydrocyclones
A general model for hydrocyclone partition curves, 53

Interfacial area
The effects of a surfactant on the mass transfer in spray-tower extraction column, 77

Kinetics
Reaction mechanism and kinetics of aqueous solutions of 2-amino-2-methyl-1,3-propandiol and carbon dioxide, 67
Wet air oxidation: a review of process technologies and aspects in reactor design, 143

Life cycle assessment
Life cycle assessment and its application to process selection, design and optimisation, 1
Liquid height
Weir flow and liquid height on sieve and valve trays, 191

Mass transfer coefficient
The effects of a surfactant on the mass transfer in spray-tower extraction column, 77
Mass transfer in adsorption
External film control of the fixed bed adsorption, 85
Mass transfer
Wet air oxidation: a review of process technologies and aspects in reactor design, 143
Mathematical model
Modelling of the rate of oil spill disappearance from seawater for Kuwaiti crude and its products, 161
Membrane distillation
Application of Stefan–Maxwell approach to azeotropic separation by membrane distillation, 71
On the effect of inert gases in breaking the formic acid–water azeotrope by gas-gap membrane distillation, 37
Mixing
Mixing in circulating flows, 29
Model
Towards an electrochemical process for recovering sulphur dioxide, 101
Modeling and simulation
Multi-stage flash desalination: present and future outlook, 173
Modelling
Modelling catalytic combustion of carbon monoxide and hydrocarbons over catalytically active wire meshes, 205
Pressure drop modelling for liquid feed direct methanol fuel cells Part II. Model based parametric analysis, 229
Solid–liquid extraction from plants — experimental kinetics and modelling, 255
Module design
Organophilic pervaporation: prospects and performance, 113
Monolith
Modelling catalytic combustion of carbon monoxide and hydrocarbons over catalytically active wire meshes, 205
Multi-objective optimisation
Life cycle assessment and its application to process selection, design and optimisation, 1
Multi-stage flashing
Multi-stage flash desalination: present and future outlook, 173

Oil spill
Modelling of the rate of oil spill disappearance from seawater for Kuwaiti crude and its products, 161
Oxidation recycling
Towards an electrochemical process for recovering sulphur dioxide, 101
Ozonation process
Effect of reaction medium on ozone mass transfer and applications to pulp bleaching, 23
Ozone
Effect of reaction medium on ozone mass transfer and applications to pulp bleaching, 23

Partition curve
A general model for hydrocyclone partition curves, 53
Pellets
Modelling catalytic combustion of carbon monoxide and hydrocarbons over catalytically active wire meshes, 205
Pentachlorophenol
Wastewater pretreatment with ultrasonic irradiation to reduce toxicity, 93

Period of the bed protection
External film control of the fixed bed adsorption, 85
Pervaporation
Organophilic pervaporation: prospects and performance, 113
Petroleum products
Modelling of the rate of oil spill disappearance from seawater for Kuwaiti crude and its products, 161
Plate
Towards an electrochemical process for recovering sulphur dioxide, 101
Plug flow reactor
Membrane aeration bioreactors for wastewater treatment: completely mixed and plug-flow operation, 131
Polarization effects
Application of Stefan–Maxwell approach to azeotropic separation by membrane distillation, 71
Porous powders
Extension du procédé de dépôt de silicium par CVD en lit fluidisé à des conditions opératoires peu conventionnelles: dépôts sur poudres poreuses et/ou sous pression réduite, 61
Pressure drop modelling
Pressure drop modelling for liquid feed direct methanol fuel cells . Part 1. Model development, 217
Pressure drop
Pressure drop modelling for liquid feed direct methanol fuel cells Part II. Model based parametric analysis, 229
Process design
Life cycle assessment and its application to process selection, design and optimisation, 1
Organophilic pervaporation: prospects and performance, 113
Process technology
Wet air oxidation: a review of process technologies and aspects in reactor design, 143
Pseudocomponents
Modelling of the rate of oil spill disappearance from seawater for Kuwaiti crude and its products, 161
Pulp bleaching
Effect of reaction medium on ozone mass transfer and applications to pulp bleaching, 23
Pure oxygen
Membrane aeration bioreactors for wastewater treatment: completely mixed and plug-flow operation, 131

Rate of disappearance
Modelling of the rate of oil spill disappearance from seawater for Kuwaiti crude and its products, 161
Reactor design
Towards an electrochemical process for recovering sulphur dioxide, 101
Reduced pressure
Extension du procédé de dépôt de silicium par CVD en lit fluidisé à des conditions opératoires peu conventionnelles: dépôts sur poudres poreuses et/ou sous pression réduite, 61
Regime
Weir flow and liquid height on sieve and valve trays, 191

Sedimentation
Modelling of the rate of oil spill disappearance from seawater for Kuwaiti crude and its products, 161
Sieve tray
Weir flow and liquid height on sieve and valve trays, 191
Silane
Extension du procédé de dépôt de silicium par CVD en lit fluidisé à des conditions opératoires peu conventionnelles: dépôts sur poudres poreuses et/ou sous pression réduite, 61
Silicon
Extension du procédé de dépôt de silicium par CVD en lit fluidisé à des conditions opératoires peu conventionnelles: dépôts sur poudres poreuses et/ou sous pression réduite, 61
Single-stage flashing
Multi-stage flash desalination: present and future outlook, 173
Solid–liquid extraction
Solid–liquid extraction from plants — experimental kinetics and modelling, 255
Spray
Weir flow and liquid height on sieve and valve trays, 191
Stacks
Pressure drop modelling for liquid feed direct methanol fuel cells . Part 1. Model development, 217
Pressure drop modelling for liquid feed direct methanol fuel cells Part II. Model based parametric analysis, 229
Stefan–Maxwell
On the effect of inert gases in breaking the formic acid–water azeotrope by gas-gap membrane distillation, 37
Stopped-flow
Reaction mechanism and kinetics of aqueous solutions of 2-amino-2-methyl-1,3-propandiol and carbon dioxide, 67
Sulphur dioxide
Towards an electrochemical process for recovering sulphur dioxide, 101
Surfactant
The effects of a surfactant on the mass transfer in spray-tower extraction column, 77
System analysis
Life cycle assessment and its application to process selection, design and optimisation, 1

Thermal spraying
Modelling catalytic combustion of carbon monoxide and hydrocarbons over catalytically active wire meshes, 205
Toxicity
Wastewater pretreatment with ultrasonic irradiation to reduce toxicity, 93
Tracer studies
Mixing in circulating flows, 29
Two-phase flow
Pressure drop modelling for liquid feed direct methanol fuel cells. Part 1. Model development, 217
Pressure drop modelling for liquid feed direct methanol fuel cells Part II. Model based parametric analysis, 229
Two-phase
Two-phase electrophoresis separation of dyestuffs from dilute solution, 137

Ultrasound
Wastewater pretreatment with ultrasonic irradiation to reduce toxicity, 93

Valve tray
Weir flow and liquid height on sieve and valve trays, 191
Viscoelastic suspensions
Heat transfer in the drag reducing regime of wood pulp fibre suspensions, 247

Waste minimisation
Life cycle assessment and its application to process selection, design and optimisation, 1
Wastewater treatment
Membrane aeration bioreactors for wastewater treatment: completely mixed and plug-flow operation, 131
Wastewater pretreatment with ultrasonic irradiation to reduce toxicity, 93
Wastewater
Organophilic pervaporation: prospects and performance, 113

Water desalination
Multi-stage flash desalination: present and future outlook, 173
Water-to-oil volume ratio
Effects of preparation variables of enzyme-encapsulating water-in-oil emulsion on enzymatic reaction conversion and emulsion stability in an enzyme–emulsion–liquid–membrane reactor, 43
Weir
Weir flow and liquid height on sieve and valve trays, 191
Wet air oxidation
Wet air oxidation: a review of process technologies and aspects in reactor design, 143
Wire mesh
Modelling catalytic combustion of carbon monoxide and hydrocarbons over catalytically active wire meshes, 205
Wood pulp
Heat transfer in the drag reducing regime of wood pulp fibre suspensions, 247