

## Subject Index of Volume 86

---

- Absorption  
The influence of HCl on SO<sub>2</sub> absorption in the spray dry scrubbing process, 17  
Modeling of a novel multi-stage bubble column scrubber for flue gas desulfurization, 331
- Acoustic emission  
Modelling of fracture phenomena in dried materials, 145
- Acoustic levitator  
Determination of single-particle drying kinetics in an acoustic levitator, 217
- Admissible stresses  
Modelling of fracture phenomena in dried materials, 145
- Adsorption  
Effects of ultrasound on adsorption equilibrium of phenol on polymeric adsorption resin, 375
- Airless drying  
A theoretical explanation for the inversion temperature, 61
- Alumina  
Influence of the mechanical behavior law on the drying of an alumina gel, 95
- Anisotropic  
A heterogeneous wood drying computational model that accounts for material property variation across growth rings, 117
- Augmented Kalman filter  
Model based predictive control of a rotary dryer, 53
- Axial solid concentration distribution  
Axial solid concentration distribution in tapered and cylindrical bubble columns, 299
- Banana  
Simultaneous moisture transport and shrinkage during drying of solids with ellipsoidal configuration, 85
- Bubble column  
Analysis of flow patterns in bubble and slurry bubble columns based on local heat transfer measurements, 269
- Capillary porous media  
Recent advances in pore-scale models for drying of porous media, 153
- Capillary porous medium  
On a pore-scale film flow approach to describe moisture transfer in a hygroscopic porous medium, 165
- Catalytic plate reactors (CPRs)  
Parametric sensitivity in catalytic plate reactors with first-order endothermic–exothermic reactions, 277
- CFD  
Superheated steam dryer: simulations and experiments on product drying, 75
- CFD calculations of transient flow  
Equipment, technology, perspectives and modeling of pulse combustion drying, 33
- Chemical heat pump  
Effects of heat exchange condition on hot air production by a chemical heat pump dryer using CaO/H<sub>2</sub>O/Ca(OH)<sub>2</sub> reaction, 3
- Claus catalyst  
Influence of fractal pore structure in Claus catalyst performance, 309
- Clay  
Drying induced stresses estimated on the base of elastic and viscoelastic models, 139
- Clay drying  
On the risk of cracking in clay drying, 133
- Colebrook–White equation  
Improved explicit equations for estimation of the friction factor in rough and smooth pipes, 369
- Constant drying rate period  
Drying induced stresses estimated on the base of elastic and viscoelastic models, 139
- Controlled batch polymerization reactor  
The effect of operational conditions on the performance of batch polymerization reactor control, 259
- Control-volume finite-element method  
A heterogeneous wood drying computational model that accounts for material property variation across growth rings, 117
- Convective dryer  
Effects of heat exchange condition on hot air production by a chemical heat pump dryer using CaO/H<sub>2</sub>O/Ca(OH)<sub>2</sub> reaction, 3
- Coupled transport  
Influence of the mechanical behavior law on the drying of an alumina gel, 95
- Cracking criterion  
On the risk of cracking in clay drying, 133
- Critical flux  
Analysis of deposit behaviour in crossflow microfiltration by means of thickness measurement, 251
- 3D gas density  
Visualization of 3D gas density distribution using optical tomography, 243
- Darcy–Weisbach equation  
Improved explicit equations for estimation of the friction factor in rough and smooth pipes, 369
- Deposit thickness  
Analysis of deposit behaviour in crossflow microfiltration by means of thickness measurement, 251
- Desorption isotherm  
Drying of gelled sugar solutions—water diffusion behavior, 179
- Dew point hygrometer  
Determination of single-particle drying kinetics in an acoustic levitator, 217
- Diffusion  
A thin film dryer approach for the determination of water diffusion coefficients in viscous products, 185
- Diffusivity  
Modeling of moisture profiles in paddy rice during drying mapped with magnetic resonance imaging, 173
- Digital camera imaging  
Controlled drying to enhance properties of technical ceramics, 111

- Droplet–particle transformation  
Advanced experimental analysis of drying kinetics in spray drying, 207
- Drying  
Modeling of gas dynamics in a pulse combustion chamber to predict initial drying process parameters, 25  
Simultaneous moisture transport and shrinkage during drying of solids with ellipsoidal configuration, 85  
On a pore-scale film flow approach to describe moisture transfer in a hygroscopic porous medium, 165  
Unsteady and steady-state particle size distributions in batch and continuous fluidized bed granulation systems, 223
- Drying induced stresses  
Drying induced stresses estimated on the base of elastic and viscoelastic models, 139
- Drying kinetics  
Controlled drying to enhance properties of technical ceramics, 111  
Determination of single-particle drying kinetics in an acoustic levitator, 217
- Drying model  
Investigation of effects of wood variability and rheological properties on lumber drying: application of mathematical models, 103
- Drying process intensification  
Equipment, technology, perspectives and modeling of pulse combustion drying, 33
- Drying rate  
Drying with superheated steam: maximum drying rate as a linear function of pressure, 69  
Drying of gelled sugar solutions—water diffusion behavior, 179
- Drying stress  
Investigation of effects of wood variability and rheological properties on lumber drying: application of mathematical models, 103
- Dynamic model  
New simple mathematical model of a honeycomb rotary absorption-type dehumidifier, 11
- Effective diffusivity  
Osmotic dehydration of tilapia fillets in limited volume of ternary solutions, 199
- Efficiency  
Effects of heat exchange condition on hot air production by a chemical heat pump dryer using  $\text{CaO}/\text{H}_2\text{O}/\text{Ca}(\text{OH})_2$  reaction, 3
- Elasticity  
On the risk of cracking in clay drying, 133
- Electroconductivity  
Drying of gelled sugar solutions—water diffusion behavior, 179
- Ellipsoidal geometry  
Simultaneous moisture transport and shrinkage during drying of solids with ellipsoidal configuration, 85
- Environment  
Modeling of a novel multi-stage bubble column scrubber for flue gas desulfurization, 331
- Films  
On a pore-scale film flow approach to describe moisture transfer in a hygroscopic porous medium, 165
- Filtered-backprojection  
Visualization of 3D gas density distribution using optical tomography, 243
- First principles modeling  
Model based predictive control of a rotary dryer, 53
- Fixed bed reactor  
A study of the influence of the operating parameters on the temperature of the hot spot in a fixed bed reactor, 287
- Flow patterns  
Analysis of flow patterns in bubble and slurry bubble columns based on local heat transfer measurements, 269
- Flow structures  
Analysis of flow patterns in bubble and slurry bubble columns based on local heat transfer measurements, 269
- Flue gas  
Modeling of a novel multi-stage bubble column scrubber for flue gas desulfurization, 331
- Fluidized bed  
Unsteady and steady-state particle size distributions in batch and continuous fluidized bed granulation systems, 223
- Flux limiting  
A heterogeneous wood drying computational model that accounts for material property variation across growth rings, 117
- Fouling  
Analysis of deposit behaviour in crossflow microfiltration by means of thickness measurement, 251
- Fractal dimension  
Influence of fractal pore structure in Claus catalyst performance, 309
- Fracture criterion  
Modelling of fracture phenomena in dried materials, 145
- Friction factor  
Improved explicit equations for estimation of the friction factor in rough and smooth pipes, 369
- Gas dynamics  
Modeling of gas dynamics in a pulse combustion chamber to predict initial drying process parameters, 25
- Gel  
Influence of the mechanical behavior law on the drying of an alumina gel, 95  
Drying of gelled sugar solutions—water diffusion behavior, 179
- Globally convergent Newton method  
A heterogeneous wood drying computational model that accounts for material property variation across growth rings, 117
- Granulation  
Unsteady and steady-state particle size distributions in batch and continuous fluidized bed granulation systems, 223
- Head loss in pipes  
Improved explicit equations for estimation of the friction factor in rough and smooth pipes, 369
- Heat and mass transfer  
Effects of heat exchange condition on hot air production by a chemical heat pump dryer using  $\text{CaO}/\text{H}_2\text{O}/\text{Ca}(\text{OH})_2$  reaction, 3  
A theoretical explanation for the inversion temperature, 61  
Drying behavior of polymer solution containing two volatile solvents, 193
- Heat recovery  
Effects of heat exchange condition on hot air production by a chemical heat pump dryer using  $\text{CaO}/\text{H}_2\text{O}/\text{Ca}(\text{OH})_2$  reaction, 3
- Heat transfer coefficient  
The effect of operational conditions on the performance of batch polymerization reactor control, 259  
Analysis of flow patterns in bubble and slurry bubble columns based on local heat transfer measurements, 269
- Heterogeneous  
A heterogeneous wood drying computational model that accounts for material property variation across growth rings, 117
- Honeycomb  
New simple mathematical model of a honeycomb rotary absorption-type dehumidifier, 11
- Hot spot  
A study of the influence of the operating parameters on the temperature of the hot spot in a fixed bed reactor, 287
- Hydrated lime  
The influence of HCl on  $\text{SO}_2$  absorption in the spray dry scrubbing process, 17

- Hydrogen chloride  
The influence of HCl on SO<sub>2</sub> absorption in the spray dry scrubbing process, 17
- Induction time  
Effect of ultrasound on the induction time and the metastable zone widths of potassium sulphate, 233
- Industrial applications  
Equipment, technology, perspectives and modeling of pulse combustion drying, 33
- Inversion temperature  
A theoretical explanation for the inversion temperature, 61
- Irreducible saturation  
On a pore-scale film flow approach to describe moisture transfer in a hygroscopic porous medium, 165
- Isotherm  
Effects of ultrasound on adsorption equilibrium of phenol on polymeric adsorption resin, 375
- Lithium chloride salt  
New simple mathematical model of a honeycomb rotary absorption-type dehumidifier, 11
- Lumber drying  
Investigation of effects of wood variability and rheological properties on lumber drying: application of mathematical models, 103
- Macro-cracking  
Controlled drying to enhance properties of technical ceramics, 111
- Maltodextrin  
A thin film dryer approach for the determination of water diffusion coefficients in viscous products, 185
- Mass  
Simultaneous moisture transport and shrinkage during drying of solids with ellipsoidal configuration, 85
- Maxwell model  
Drying induced stresses estimated on the base of elastic and viscoelastic models, 139
- Mechanical strength  
Modelling of fracture phenomena in dried materials, 145
- Mechanism of pulse combustion  
Equipment, technology, perspectives and modeling of pulse combustion drying, 33
- Membrane  
Analysis of deposit behaviour in crossflow microfiltration by means of thickness measurement, 251
- Metastable zone  
Effect of ultrasound on the induction time and the metastable zone widths of potassium sulphate, 233
- Microfiltration  
Analysis of deposit behaviour in crossflow microfiltration by means of thickness measurement, 251
- Microseparator measurements  
Advanced experimental analysis of drying kinetics in spray drying, 207
- Mineral processing  
Environmental rheology for waste minimisation in the minerals industry, 319
- Minerals  
Environmental rheology for waste minimisation in the minerals industry, 319
- Model  
Modeling of a novel multi-stage bubble column scrubber for flue gas desulfurization, 331
- Model based predictive control  
Model based predictive control of a rotary dryer, 53
- Modeling  
Influence of the mechanical behavior law on the drying of an alumina gel, 95
- A thin film dryer approach for the determination of water diffusion coefficients in viscous products, 185
- Drying behavior of polymer solution containing two volatile solvents, 193
- Unsteady and steady-state particle size distributions in batch and continuous fluidized bed granulation systems, 223
- Modified sedimentation–dispersion model  
Axial solid concentration distribution in tapered and cylindrical bubble columns, 299
- Moisture content  
Investigation of effects of wood variability and rheological properties on lumber drying: application of mathematical models, 103
- Moisture transport phenomena  
Modeling of moisture profiles in paddy rice during drying mapped with magnetic resonance imaging, 173
- Multi-component  
Drying behavior of polymer solution containing two volatile solvents, 193
- Multicomponent diffusion  
Osmotic dehydration of tilapia fillets in limited volume of ternary solutions, 199
- Municipal solid waste incineration  
Dioxin characterisation, formation and minimisation during municipal solid waste (MSW) incineration: review, 343
- NMR  
Modeling of moisture profiles in paddy rice during drying mapped with magnetic resonance imaging, 173
- Non-linear regression  
Improved explicit equations for estimation of the friction factor in rough and smooth pipes, 369
- Novel dryer  
Effects of heat exchange condition on hot air production by a chemical heat pump dryer using CaO/H<sub>2</sub>O/Ca(OH)<sub>2</sub> reaction, 3
- Nucleation  
Effect of ultrasound on the induction time and the metastable zone widths of potassium sulphate, 233
- Operating parameters  
A study of the influence of the operating parameters on the temperature of the hot spot in a fixed bed reactor, 287
- Optical tomography  
Visualization of 3D gas density distribution using optical tomography, 243
- Optimum pressure  
Drying with superheated steam: maximum drying rate as a linear function of pressure, 69
- Parameter estimation  
Modeling of moisture profiles in paddy rice during drying mapped with magnetic resonance imaging, 173
- Parametric sensitivity analysis (PSA)  
Parametric sensitivity in catalytic plate reactors with first-order endothermic–exothermic reactions, 277
- PDA analysis  
Advanced experimental analysis of drying kinetics in spray drying, 207
- Percolation theory  
Recent advances in pore-scale models for drying of porous media, 153
- Phenol  
Effects of ultrasound on adsorption equilibrium of phenol on polymeric adsorption resin, 375
- Poling  
Controlled drying to enhance properties of technical ceramics, 111
- Polychlorinated dibenzodioxins  
Dioxin characterisation, formation and minimisation during municipal solid waste (MSW) incineration: review, 343

- Polychlorinated dibenzofurans  
Dioxin characterisation, formation and minimisation during municipal solid waste (MSW) incineration: review, 343
- Polymer solution  
Drying behavior of polymer solution containing two volatile solvents, 193
- Polymeric resin  
Effects of ultrasound on adsorption equilibrium of phenol on polymeric adsorption resin, 375
- Population balance  
Unsteady and steady-state particle size distributions in batch and continuous fluidized bed granulation systems, 223
- Pore networks  
Recent advances in pore-scale models for drying of porous media, 153
- Potassium sulphate  
Effect of ultrasound on the induction time and the metastable zone widths of potassium sulphate, 233
- Pulse combustion  
Modeling of gas dynamics in a pulse combustion chamber to predict initial drying process parameters, 25
- Pure and binary liquids  
Recent advances in pore-scale models for drying of porous media, 153
- Reactor control  
The effect of operational conditions on the performance of batch polymerization reactor control, 259
- Relative permeabilities  
On a pore-scale film flow approach to describe moisture transfer in a hygroscopic porous medium, 165
- Residence time distribution  
Superheated steam dryer: simulations and experiments on product drying, 75
- Rheology  
Influence of the mechanical behavior law on the drying of an alumina gel, 95  
Environmental rheology for waste minimisation in the minerals industry, 319
- Robust control  
Robustness of a proportional-integral with feedforward action control in a plant pilot spray dryer, 47
- Rotary dehumidifier  
New simple mathematical model of a honeycomb rotary absorption-type dehumidifier, 11
- Rotary dryer  
Model based predictive control of a rotary dryer, 53
- Salt  
Osmotic dehydration of tilapia fillets in limited volume of ternary solutions, 199
- Shrinkage  
Simultaneous moisture transport and shrinkage during drying of solids with ellipsoidal configuration, 85  
Influence of the mechanical behavior law on the drying of an alumina gel, 95  
Controlled drying to enhance properties of technical ceramics, 111  
A thin film dryer approach for the determination of water diffusion coefficients in viscous products, 185
- Simulation  
Simultaneous moisture transport and shrinkage during drying of solids with ellipsoidal configuration, 85  
Recent advances in pore-scale models for drying of porous media, 153
- Single particle  
Determination of single-particle drying kinetics in an acoustic levitator, 217
- Slurry bubble column  
Analysis of flow patterns in bubble and slurry bubble columns based on local heat transfer measurements, 269
- SO<sub>2</sub>  
Modeling of a novel multi-stage bubble column scrubber for flue gas desulfurization, 331
- Softwood  
Investigation of effects of wood variability and rheological properties on lumber drying: application of mathematical models, 103
- Solid absorbent  
New simple mathematical model of a honeycomb rotary absorption-type dehumidifier, 11
- Spray dry scrubbing  
The influence of HCl on SO<sub>2</sub> absorption in the spray dry scrubbing process, 17
- Spray dryer  
Superheated steam dryer: simulations and experiments on product drying, 75
- Spray drying  
Robustness of a proportional-integral with feedforward action control in a plant pilot spray dryer, 47
- Stress model  
Investigation of effects of wood variability and rheological properties on lumber drying: application of mathematical models, 103
- Sucrose  
Osmotic dehydration of tilapia fillets in limited volume of ternary solutions, 199
- Sugar beet drying  
Model based predictive control of a rotary dryer, 53
- Sulfur dioxide  
The influence of HCl on SO<sub>2</sub> absorption in the spray dry scrubbing process, 17
- Superheated steam  
A theoretical explanation for the inversion temperature, 61  
Drying with superheated steam: maximum drying rate as a linear function of pressure, 69
- Tailing disposal  
Environmental rheology for waste minimisation in the minerals industry, 319
- Tapered slurry bubble column  
Axial solid concentration distribution in tapered and cylindrical bubble columns, 299
- Thiele modulus  
Influence of fractal pore structure in Claus catalyst performance, 309
- Thin film dryer  
A thin film dryer approach for the determination of water diffusion coefficients in viscous products, 185
- Topography  
Environmental rheology for waste minimisation in the minerals industry, 319
- Ultrasound  
Effect of ultrasound on the induction time and the metastable zone widths of potassium sulphate, 233  
Effects of ultrasound on adsorption equilibrium of phenol on polymeric adsorption resin, 375
- Viscosity  
Drying of gelled sugar solutions—water diffusion behavior, 179
- Water diffusivity  
Drying of gelled sugar solutions—water diffusion behavior, 179
- Weibull modulus  
Controlled drying to enhance properties of technical ceramics, 111
- Wet scrubber  
Modeling of a novel multi-stage bubble column scrubber for flue gas desulfurization, 331