

## Subject Index of Volume 109

- Actinometry  
The extended use of actinometry in the interpretation of photochemical reaction engineering data, 67
- Activated carbon  
Non-noble metal catalyst for carbon monoxide selective oxidation in excess hydrogen, 141  
Production of activated carbon from bamboo scaffolding waste—process design, evaluation and sensitivity analysis, 147
- Agitation  
Local bubble size distributions, gas–liquid interfacial areas and gas holdups in a stirred vessel with particle image velocimetry, 37
- Airlift systems  
Liquid circulation rates in two- and three-phase external airlift reactors, 49
- ALR  
Multiphase flow characteristics of a novel internal-loop airlift reactor, 115
- Axial dispersion  
Variation of the local effective axial dispersion coefficient with bed height in expanded beds, 123
- Bamboo scaffolding waste  
Production of activated carbon from bamboo scaffolding waste—process design, evaluation and sensitivity analysis, 147
- Bubble rise velocity  
Multiphase flow characteristics of a novel internal-loop airlift reactor, 115
- Bubble size distribution  
Local bubble size distributions, gas–liquid interfacial areas and gas holdups in a stirred vessel with particle image velocimetry, 37
- Carbon monoxide  
Non-noble metal catalyst for carbon monoxide selective oxidation in excess hydrogen, 141
- Catalyst support  
Intrinsic channel maldistribution in monolithic catalyst support structures, 89
- Ceramic honeycombs  
Monolithic reactors for environmental applications. A review on preparation technologies, 11
- Ceria–zirconia solid solutions  
Effect of preparation methods on the structure and redox behavior of platinum–ceria–zirconia catalysts, 133
- Channel maldistribution  
Intrinsic channel maldistribution in monolithic catalyst support structures, 89
- Concentration profiles  
Approximate expression for the effectiveness factor estimation and a simple numerical method for concentration profile calculation in porous catalyst, 83
- Correlation  
Variation of the local effective axial dispersion coefficient with bed height in expanded beds, 123
- Diffusion and reaction  
Approximate expression for the effectiveness factor estimation and a simple numerical method for concentration profile calculation in porous catalyst, 83
- Economic evaluation  
Production of activated carbon from bamboo scaffolding waste—process design, evaluation and sensitivity analysis, 147
- Effectiveness factor  
Approximate expression for the effectiveness factor estimation and a simple numerical method for concentration profile calculation in porous catalyst, 83
- Energy balance  
Multiphase flow characteristics of a novel internal-loop airlift reactor, 115
- Environmental applications  
Monolithic reactors for environmental applications. A review on preparation technologies, 11
- Excess hydrogen  
Non-noble metal catalyst for carbon monoxide selective oxidation in excess hydrogen, 141
- Expanded bed adsorption  
Variation of the local effective axial dispersion coefficient with bed height in expanded beds, 123
- Fixed bed  
The behaviour of a low-productive non-pretreated  $V_2O_5$ – $TiO_2$  (anatase) catalyst for oxidation of *o*-xylene to phthalic anhydride, 57
- Flow development  
Scale-up effect of riser reactors (3) axial and radial solids flux distribution and flow development, 97
- Fluid catalytic cracking  
Lumps and kinetics for the secondary reactions in catalytically cracked gasoline, 1
- Fluid dynamics  
Liquid circulation rates in two- and three-phase external airlift reactors, 49
- Fluidization  
Scale-up effect of riser reactors (3) axial and radial solids flux distribution and flow development, 97
- Gas holdup  
Local bubble size distributions, gas–liquid interfacial areas and gas holdups in a stirred vessel with particle image velocimetry, 37
- Gasoline  
Lumps and kinetics for the secondary reactions in catalytically cracked gasoline, 1

- Hybrid genetic algorithm  
Lumps and kinetics for the secondary reactions in catalytically cracked gasoline, 1
- Hydrodynamics  
Scale-up effect of riser reactors (3) axial and radial solids flux distribution and flow development, 97
- Identification problem  
The behaviour of a low-productive non-pretreated  $V_2O_5$ - $TiO_2$  (anatase) catalyst for oxidation of *o*-xylene to phthalic anhydride, 57
- Interfacial area  
Local bubble size distributions, gas-liquid interfacial areas and gas holdups in a stirred vessel with particle image velocimetry, 37
- Isomerization  
A moving bed reactor concept for alkane isomerization, 107
- Kinetic parameters  
The behaviour of a low-productive non-pretreated  $V_2O_5$ - $TiO_2$  (anatase) catalyst for oxidation of *o*-xylene to phthalic anhydride, 57
- Kinetics  
Lumps and kinetics for the secondary reactions in catalytically cracked gasoline, 1
- Langmuir-Hinshelwood kinetics  
A moving bed reactor concept for alkane isomerization, 107
- Liquid circulation rate  
Liquid circulation rates in two- and three-phase external airlift reactors, 49
- Liquid velocity  
Multiphase flow characteristics of a novel internal-loop airlift reactor, 115
- Lumping  
Lumps and kinetics for the secondary reactions in catalytically cracked gasoline, 1
- Metallic substrates  
Monolithic reactors for environmental applications. A review on preparation technologies, 11
- Monolith  
Intrinsic channel maldistribution in monolithic catalyst support structures, 89
- Monolithic catalyst  
Monolithic reactors for environmental applications. A review on preparation technologies, 11
- Non-linear kinetics  
Approximate expression for the effectiveness factor estimation and a simple numerical method for concentration profile calculation in porous catalyst, 83
- Non-noble metal catalyst  
Non-noble metal catalyst for carbon monoxide selective oxidation in excess hydrogen, 141
- Numerical solutions  
Approximate expression for the effectiveness factor estimation and a simple numerical method for concentration profile calculation in porous catalyst, 83
- Packed bed reactor  
A moving bed reactor concept for alkane isomerization, 107
- Particle image velocimetry  
Local bubble size distributions, gas-liquid interfacial areas and gas holdups in a stirred vessel with particle image velocimetry, 37
- Photochemical reaction  
The extended use of actinometry in the interpretation of photochemical reaction engineering data, 67
- Photoreactor modelling  
The extended use of actinometry in the interpretation of photochemical reaction engineering data, 67
- Platinum  
Effect of preparation methods on the structure and redox behavior of platinum-ceria-zirconia catalysts, 133
- Potassium ferrioxalate  
The extended use of actinometry in the interpretation of photochemical reaction engineering data, 67
- Powder technology  
Scale-up effect of riser reactors (3) axial and radial solids flux distribution and flow development, 97
- Pressure drop  
Liquid circulation rates in two- and three-phase external airlift reactors, 49
- Process design  
Production of activated carbon from bamboo scaffolding waste—process design, evaluation and sensitivity analysis, 147
- Residence time distribution  
Variation of the local effective axial dispersion coefficient with bed height in expanded beds, 123
- Scale-up  
Scale-up effect of riser reactors (3) axial and radial solids flux distribution and flow development, 97
- Secondary reaction  
Lumps and kinetics for the secondary reactions in catalytically cracked gasoline, 1
- Selective oxidation  
Non-noble metal catalyst for carbon monoxide selective oxidation in excess hydrogen, 141
- Simulated moving bed reactor  
A moving bed reactor concept for alkane isomerization, 107
- Simulation  
The behaviour of a low-productive non-pretreated  $V_2O_5$ - $TiO_2$  (anatase) catalyst for oxidation of *o*-xylene to phthalic anhydride, 57
- Solids flux  
Scale-up effect of riser reactors (3) axial and radial solids flux distribution and flow development, 97
- Synthesis  
Effect of preparation methods on the structure and redox behavior of platinum-ceria-zirconia catalysts, 133
- Thiele modulus  
Approximate expression for the effectiveness factor estimation and a simple numerical method for concentration profile calculation in porous catalyst, 83
- Three-way catalysts  
Effect of preparation methods on the structure and redox behavior of platinum-ceria-zirconia catalysts, 133
- Triangle theory  
A moving bed reactor concept for alkane isomerization, 107
- True moving bed  
A moving bed reactor concept for alkane isomerization, 107
- Washcoating  
Monolithic reactors for environmental applications. A review on preparation technologies, 11
- o*-Xylene  
The behaviour of a low-productive non-pretreated  $V_2O_5$ - $TiO_2$  (anatase) catalyst for oxidation of *o*-xylene to phthalic anhydride, 57
- Zeolite catalysis  
A moving bed reactor concept for alkane isomerization, 107