

Subject Index

ABTS

Production of lactobionic acid with process integrated electrochemical enzyme regeneration and optimisation of process variables using response surface methods (RSM) 64

Adsorption

Immobilization of lipase from *Candida rugosa* on electrospun polysulfone nanofibrous membranes by adsorption 45

Aerogel

Application of silica aerogel encapsulated lipases in the synthesis of biodiesel by transesterification reactions 106

Arthrobacter

Enantioselectivity modulation through immobilization of *Arthrobacter* sp. lipase: Kinetic resolution of fluoxetine intermediate 39

Artichoke

Effects of calcium on the thermal stability, stability in organic solvents and resistance to hydrogen peroxide of artichoke (*Cynara scolymus* L.) peroxidase: A potential method of enzyme control 78

Biodiesel

Application of silica aerogel encapsulated lipases in the synthesis of biodiesel by transesterification reactions 106

Biotransformation

Regio- and stereoselective hydroxylation of bi- and tricyclic enones by fungal strain *Fusarium culmorum* 10

Synthesis of bis-lactone lignans through laccase catalysis 27

Biotransformations

Microbial transformation of 10-deacetylbaconin III (10-DAB) by *Curvularia lunata* and *Trametes hirsuta* 95

Bis-lactone lignan

Synthesis of bis-lactone lignans through laccase catalysis 27

Brassica napus hairy roots

Asymmetric bioreduction of natural xenobiotic diketones by *Brassica napus* hairy roots 71

Calcium

Effects of calcium on the thermal stability, stability in organic solvents and resistance to hydrogen peroxide of artichoke (*Cynara scolymus* L.) peroxidase: A potential method of enzyme control 78

Candida rugosa lipase

The enantioselectivity of *Candida rugosa* lipase is influenced by the particle size of the immobilising support material Accurel 1

Application of binary immobilized *Candida rugosa* lipase for hydrolysis of soybean oil 32

CDH

Production of lactobionic acid with process integrated electrochemical enzyme regeneration and optimisation of process variables using response surface methods (RSM) 64

Cellulose acetate

Immobilization of lipase by filtration into a specially designed microstructure in the CA/PTFE composite membrane 55

α -Chymotrypsin

Conjugation of α -chymotrypsin on a polymeric hydrophilic nanolayer covering magnetic nanoparticles 99

Co-lyophilization

Activation of subtilisin Carlsberg in organic solvents by methyl- β -cyclodextrin: Lyoprotection versus substrate and product-complex effect 20

Composite membrane

Immobilization of lipase by filtration into a specially designed microstructure in the CA/PTFE composite membrane 55

10-DAB

Microbial transformation of 10-deacetylbaconin III (10-DAB) by *Curvularia lunata* and *Trametes hirsuta* 95

13-DeBAC

Microbial transformation of 10-deacetylbaconin III (10-DAB) by *Curvularia lunata* and *Trametes hirsuta* 95

Electrochemical regeneration

Production of lactobionic acid with process integrated electrochemical enzyme regeneration and optimisation of process variables using response surface methods (RSM) 64

Electrospinning

Immobilization of lipase from *Candida rugosa* on electrospun polysulfone nanofibrous membranes by adsorption 45

Enantiomeric ratio

The enantioselectivity of *Candida rugosa* lipase is influenced by the particle size of the immobilising support material Accurel 1

Enantioselective bioreduction

Asymmetric bioreduction of natural xenobiotic diketones by *Brassica napus* hairy roots 71

Enantioselective esterification

The enantioselectivity of *Candida rugosa* lipase is influenced by the particle size of the immobilising support material Accurel 1

Enantioselective hydrolysis

Lipase-catalyzed enantioselective hydrolysis of methyl 2-fluoro-2-arylpropionates in water-saturated isooctane 90

Enantioselectivity

Enantioselectivity modulation through immobilization of *Arthrobacter* sp. lipase: Kinetic resolution of fluoxetine intermediate 39

Enone reduction

Stereoselective enone reductions by *Saccharomyces carlsbergensis* old yellow enzyme 52

Enzyme activation in organic solvents

Activation of subtilisin Carlsberg in organic solvents by methyl- β -cyclodextrin: Lyoprotection versus substrate and product-complex effect 20

Enzyme immobilization

Immobilization of lipase from *Candida rugosa* on electrospun polysulfone nanofibrous membranes by adsorption 45

Hollow silica nanotubes for immobilization of penicillin G acylase enzyme 14

Enzyme–substrate interaction

Saturation–transfer–difference NMR to characterize substrate binding recognition and catalysis of two broadly specific glycoside hydrolases 85

- Ferulic acid
Synthesis of bis-lactone lignans through laccase catalysis 27
- Filtration
Immobilization of lipase by filtration into a specially designed microstructure in the CA/PTFE composite membrane 55
- Flavoprotein
Stereoselective enone reductions by *Saccharomyces carlsbergensis* old yellow enzyme 52
- Fungi
Microbial transformation of 10-deacetylbaconin III (10-DAB) by *Curvularia lunata* and *Trametes hirsuta* 95
- Fusarium culmorum*
Regio- and stereoselective hydroxylation of bi- and tricyclic enones by fungal strain *Fusarium culmorum* 10
- Glucose
Effects of calcium on the thermal stability, stability in organic solvents and resistance to hydrogen peroxide of artichoke (*Cynara scolymus* L.) peroxidase: A potential method of enzyme control 78
- β -Glycosidase
Saturation–transfer–difference NMR to characterize substrate binding recognition and catalysis of two broadly specific glycoside hydrolases 85
- Glycoside hydrolysis
Saturation–transfer–difference NMR to characterize substrate binding recognition and catalysis of two broadly specific glycoside hydrolases 85
- Glycosylation
Asymmetric bioreduction of natural xenobiotic diketones by *Brassica napus* hairy roots 71
- Heat stability
Effects of calcium on the thermal stability, stability in organic solvents and resistance to hydrogen peroxide of artichoke (*Cynara scolymus* L.) peroxidase: A potential method of enzyme control 78
- Hollow silica nanotubes
Hollow silica nanotubes for immobilization of penicillin G acylase enzyme 14
- Hydrogen peroxide
Effects of calcium on the thermal stability, stability in organic solvents and resistance to hydrogen peroxide of artichoke (*Cynara scolymus* L.) peroxidase: A potential method of enzyme control 78
- Hydrolysis
Application of binary immobilized *Candida rugosa* lipase for hydrolysis of soybean oil 32
- Hydroxylation
Regio- and stereoselective hydroxylation of bi- and tricyclic enones by fungal strain *Fusarium culmorum* 10
- Immobilization
The enantioselectivity of *Candida rugosa* lipase is influenced by the particle size of the immobilising support material Accurel 1
Application of binary immobilized *Candida rugosa* lipase for hydrolysis of soybean oil 32
Enantioselectivity modulation through immobilization of *Arthrobacter* sp. lipase: Kinetic resolution of fluoxetine intermediate 39
Application of silica aerogel encapsulated lipases in the synthesis of biodiesel by transesterification reactions 106
- Immobilized enzyme
Conjugation of α -chymotrypsin on a polymeric hydrophilic nanolayer covering magnetic nanoparticles 99
- Kinetic resolution
Enantioselectivity modulation through immobilization of *Arthrobacter* sp. lipase: Kinetic resolution of fluoxetine intermediate 39
- Laccase
Synthesis of bis-lactone lignans through laccase catalysis 27
- Lactobionic acid
Production of lactobionic acid with process integrated electrochemical enzyme regeneration and optimisation of process variables using response surface methods (RSM) 64
- Lipase immobilization
Immobilization of lipase by filtration into a specially designed microstructure in the CA/PTFE composite membrane 55
- Lipases
Immobilization of lipase from *Candida rugosa* on electrospun polysulfone nanofibrous membranes by adsorption 45
Lipase-catalyzed enantioselective hydrolysis of methyl 2-fluoro-2-arylpropionates in water-saturated isooctane 90
Application of silica aerogel encapsulated lipases in the synthesis of biodiesel by transesterification reactions 106
- Magnetic nanogel
Conjugation of α -chymotrypsin on a polymeric hydrophilic nanolayer covering magnetic nanoparticles 99
- Methyl 2-fluoro-2-arylpropionates
Lipase-catalyzed enantioselective hydrolysis of methyl 2-fluoro-2-arylpropionates in water-saturated isooctane 90
- Methyl- β -cyclodextrin
Activation of subtilisin Carlsberg in organic solvents by methyl- β -cyclodextrin: Lyoprotection versus substrate and product-complex effect 20
- Morphology
The enantioselectivity of *Candida rugosa* lipase is influenced by the particle size of the immobilising support material Accurel 1
- Nanofibrous membrane
Immobilization of lipase from *Candida rugosa* on electrospun polysulfone nanofibrous membranes by adsorption 45
- Naproxen methyl ester
Lipase-catalyzed enantioselective hydrolysis of methyl 2-fluoro-2-arylpropionates in water-saturated isooctane 90
- Natural prochiral ketones
Asymmetric bioreduction of natural xenobiotic diketones by *Brassica napus* hairy roots 71
- Needle-like CaCO₃
Hollow silica nanotubes for immobilization of penicillin G acylase enzyme 14
- Noncovalent binding recognition
Saturation–transfer–difference NMR to characterize substrate binding recognition and catalysis of two broadly specific glycoside hydrolases 85
- Octalene
Regio- and stereoselective hydroxylation of bi- and tricyclic enones by fungal strain *Fusarium culmorum* 10
- Old yellow enzyme
Stereoselective enone reductions by *Saccharomyces carlsbergensis* old yellow enzyme 52
- Organic solvent
Effects of calcium on the thermal stability, stability in organic solvents and resistance to hydrogen peroxide of artichoke (*Cynara scolymus* L.) peroxidase: A potential method of enzyme control 78
- Particle and pore size
The enantioselectivity of *Candida rugosa* lipase is influenced by the particle size of the immobilising support material Accurel 1
- Penicillin G acylase
Hollow silica nanotubes for immobilization of penicillin G acylase enzyme 14
- Peroxidase
Effects of calcium on the thermal stability, stability in organic solvents and resistance to hydrogen peroxide of artichoke (*Cynara scolymus* L.) peroxidase: A potential method of enzyme control 78
- Photochemical in situ polymerization
Conjugation of α -chymotrypsin on a polymeric hydrophilic nanolayer covering magnetic nanoparticles 99

- Polypropylene carrier Accurel
The enantioselectivity of *Candida rugosa* lipase is influenced by the particle size of the immobilising support material Accurel 1
- Polysulfone
Immobilization of lipase from *Candida rugosa* on electrospun polysulfone nanofibrous membranes by adsorption 45
- PTFE
Immobilization of lipase by filtration into a specially designed microstructure in the CA/PTFE composite membrane 55
- Reduction
Stereoselective enone reductions by *Saccharomyces carlsbergensis* old yellow enzyme 52
- RSM
Production of lactobionic acid with process integrated electrochemical enzyme regeneration and optimisation of process variables using response surface methods (RSM) 64
- Sesquiterpenoids
Regio- and stereoselective hydroxylation of bi- and tricyclic enones by fungal strain *Fusarium culmorum* 10
- Silica
Application of silica aerogel encapsulated lipases in the synthesis of biodiesel by transesterification reactions 106
- Sinapinic acid
Synthesis of bis-lactone lignans through laccase catalysis 27
- Soybean oil
Application of binary immobilized *Candida rugosa* lipase for hydrolysis of soybean oil 32
- STD NMR
Saturation-transfer-difference NMR to characterize substrate binding recognition and catalysis of two broadly specific glycoside hydrolases 85
- Subtilisin Carlsberg
Activation of subtilisin Carlsberg in organic solvents by methyl- β -cyclodextrin: Lyoprotection versus substrate and product-complex effect 20
- Taxanes
Microbial transformation of 10-deacetylbaccatin III (10-DAB) by *Curvularia lunata* and *Trametes hirsuta* 95
- Transesterification
Application of silica aerogel encapsulated lipases in the synthesis of biodiesel by transesterification reactions 106