

Subject Index

ABTS

Kinetics of mediator-dependent pseudocatalytic activity of fungal peroxidases 93

Abzyme

Preparation of heterocyclic compounds via carbon–carbon bond formation catalyzed by an antibody 27

Activity

Application of a chemoenzymatic glycosylation method to α -chymotrypsin and *Candida rugosa* lipase surface modifications 281

Acylation

Application of lipase-catalyzed transformations for the synthesis of insect pheromones and related compounds 257

Agglomeration

Enhanced catalytic efficiency of enzymes in organic media with the addition of the solid support: Effect of silica gel on reaction rates and enzyme agglomeration 127

Alanine aminotransferase

Activity and stability of native and modified alanine aminotransferase in cosolvent systems and denaturants 271

Alcohol oxidation

Enantioselective oxidation of secondary alcohols by quinoxaloprotein alcohol dehydrogenase from *Comamonas testosteroni* 291

Alcohols

A new enzymatic one-pot procedure for the synthesis of carboxylic amides from carboxylic acids 19

Alcoholysis

Stability of invertase in alcoholysis reactions with methanol 299

Amides

Lipase-catalysed ammoniolysis of lipids. A facile synthesis of fatty acid amides [J. Mol. Catal. B, 1 (1996) 109–113] 141

Ammoniolysis

A new enzymatic one-pot procedure for the synthesis of carboxylic amides from carboxylic acids 19

Lipase-catalysed ammoniolysis of lipids. A facile synthesis of fatty acid amides [J. Mol. Catal. B, 1 (1996) 109–113] 141

Antibody

Preparation of heterocyclic compounds via carbon–carbon bond formation catalyzed by an antibody 27

Arthomyces ramosus

Kinetics of mediator-dependent pseudocatalytic activity of fungal peroxidases 93

Aspergillus niger

Aspergillus niger lipases: induction, isolation and characterization of two lipases from a MZKI A116 strain 215

Azino-thiazoline-sulfonic acid derivatives

Kinetics of mediator-dependent pseudocatalytic activity of fungal peroxidases 93

Baeyer–Villiger monooxygenase

Oxidations by microbial NADH plus FMN-dependent luciferases from *Photobacterium phosphoreum* and *Vibrio fischeri* 193

Bakers' yeast

Efficient kinetic resolution of 2-benzenesulfonylcyclopentanone derivatives [J. Mol. Catal., 1 (1996) 115–126] 147

Biocatalysis

Biocatalysis by tyrosinase in organic solvent media; a model system using catechin and vanillin as substrates 199

Bioconjugate

Bioconjugates of proteins and polyethylene glycol: potent tools in biotechnological processes 1

Biooxidations

Oxidations by microbial NADH plus FMN-dependent luciferases from *Photobacterium phosphoreum* and *Vibrio fischeri* 193

tert-Butyl alcohol

Synthesis of substituted oxindoles by chloroperoxidase catalyzed oxidation of indoles 33

Candida rugosa

Covalent immobilization of pure lipases A and B from *Candida rugosa* 177

Candida rugosa lipase

Enhanced catalytic efficiency of enzymes in organic media with the addition of the solid support: Effect of silica gel on reaction rates and enzyme agglomeration 127

Carbamoyl amino acid

Diversity and versatility of microbial hydantoin-transforming enzymes 163

Carbinol

Preparation of substituted (*R*)-2-alkanols by microbial hydroxylation L253

Carbon–carbon bond formation

Preparation of heterocyclic compounds via carbon–carbon bond formation catalyzed by an antibody 27

Catalase

Kinetics of mediator-dependent pseudocatalytic activity of fungal peroxidases 93

Pyruvic acid production using methylotrophic yeast transformants as catalyst 223

Catechin

Biocatalysis by tyrosinase in organic solvent media; a model system using catechin and vanillin as substrates 199

Characterization

Discovery, purification, and properties of *o*-phthalyl amidase from *Xanthobacter agilis* 53

Chemical modification

Bioconjugates of proteins and polyethylene glycol: potent tools in biotechnological processes 1

Chiral derivatives

Efficient kinetic resolution of 2-benzenesulfonylcyclopentanone derivatives [J. Mol. Catal., 1 (1996) 115–126] 147

Chiral lactones

Oxidations by microbial NADH plus FMN-dependent luciferases from *Photobacterium phosphoreum* and *Vibrio fischeri* 193

Chloroperoxidase

Synthesis of substituted oxindoles by chloroperoxidase catalyzed oxidation of indoles 33

 α -Chymotrypsin

Preparations and properties of temperature-sensitive poly(*N*-isopropylacrylamide)-chymotrypsin conjugates 233

Temperature effects on protease catalyzed acyl transfer reactions in organic media 43

 α -Chymotrypsin

Application of a chemoenzymatic glycosylation method to α -chymotrypsin and *Candida rugosa* lipase surface modifications 281

Cryoenzymology

Temperature effects on protease catalyzed acyl transfer reactions in organic media 43

Cultivation temperature

Production of high levels of soluble recombinant *Streptomyces clavuligerus* isopenicillin N synthase in *Escherichia coli* 71

Cyclopentane derivatives

Efficient kinetic resolution of 2-benzenesulfonylcyclopentanone derivatives [J. Mol. Catal., 1 (1996) 115–126] 147

Denaturants

Activity and stability of native and modified alanine aminotransferase in cosolvent systems and denaturants 271

 $E_T(30)$

Effects of water-miscible organic solvents on the reaction of lignin peroxidase of *Phanerochaete chrysosporium* 243

Enantioselective

Application of lipase-catalyzed transformations for the synthesis of insect pheromones and related compounds 257

Enantioselectivity

Enantioselective oxidation of secondary alcohols by quino-haemoprotein alcohol dehydrogenase from *Comamonas testosteroni* 291

Enzyme

Application of lipase-catalyzed transformations for the synthesis of insect pheromones and related compounds 257

Enzyme discovery

Discovery, purification, and properties of *o*-phthalyl amidase from *Xanthobacter agilis* 53

Enzyme reaction in organic media

Enhanced catalytic efficiency of enzymes in organic media with the addition of the solid support: Effect of silica gel on reaction rates and enzyme agglomeration 127

Esterification

A new enzymatic one-pot procedure for the synthesis of carboxylic amides from carboxylic acids 19

Expression

Production of high levels of soluble recombinant *Streptomyces clavuligerus* isopenicillin N synthase in *Escherichia coli* 71

Fatty acid amides

Lipase-catalysed ammoniolysis of lipids. A facile synthesis of fatty acid amides [J. Mol. Catal. B, 1 (1996) 109–113] 141

 β -Fructofuranosidase

Stability of invertase in alcoholysis reactions with methanol 299

Glycolate oxidase

Pyruvic acid production using methylotrophic yeast transformants as catalyst 223

Glycosylation

Application of a chemoenzymatic glycosylation method to α -chymotrypsin and *Candida rugosa* lipase surface modifications 281

Hansenula polymorpha

Pyruvic acid production using methylotrophic yeast transformants as catalyst 223

Helminthosporium

Preparation of substituted (*R*)-2-alkanols by microbial hydroxylation L253

Horseradish peroxidase

Kinetic investigations of horseradish peroxidase in AOT/n-heptane reverse micelles 185

Host

Production of high levels of soluble recombinant *Streptomyces clavuligerus* isopenicillin N synthase in *Escherichia coli* 71

Hydantoin transformation

Diversity and versatility of microbial hydantoin-transforming enzymes 163

Hydrogen peroxide

Kinetics of mediator-dependent pseudocatalytic activity of fungal peroxidases 93

Hydrophilicity

Application of a chemoenzymatic glycosylation method to α -chymotrypsin and *Candida rugosa* lipase surface modifications 281

Hydroxylation

Preparation of substituted (*R*)-2-alkanols by microbial hydroxylation L253

Imidates

Activity and stability of native and modified alanine aminotransferase in cosolvent systems and denaturants 271

Immobilization

Covalent immobilization of pure lipases A and B from *Candida rugosa* 177

Enzyme immobilization in MCM-41 molecular sieve 115

Indole

Synthesis of substituted oxindoles by chloroperoxidase catalyzed oxidation of indoles 33

Inhibition

A new enzymatic one-pot procedure for the synthesis of carboxylic amides from carboxylic acids 19

Intrinsic fluorescence

Stability of invertase in alcoholysis reactions with methanol 299

Invertase

Stability of invertase in alcoholysis reactions with methanol 299

- Irreversible denaturation
Stability of invertase in alcoholysis reactions with methanol 299
- Isopenicillin N synthase
Production of high levels of soluble recombinant *Streptomyces clavuligerus* isopenicillin N synthase in *Escherichia coli* 71
- N*-Isopropylacrylamide
Preparations and properties of temperature-sensitive poly(*N*-isopropylacrylamide)-chymotrypsin conjugates 233
- β -Keto sulfones
Efficient kinetic resolution of 2-benzenesulfonylcyclopentanone derivatives [J. Mol. Catal., 1 (1996) 115–126] 147
- Kinetic constants
Application of a chemoenzymatic glycosylation method to α -chymotrypsin and *Candida rugosa* lipase surface modifications 281
- Kinetic resolution
Efficient kinetic resolution of 2-benzenesulfonylcyclopentanone derivatives [J. Mol. Catal., 1 (1996) 115–126] 147
- L-Lactic acid oxidation
Pyruvic acid production using methylotrophic yeast transformants as catalyst 223
- LCST
Preparations and properties of temperature-sensitive poly(*N*-isopropylacrylamide)-chymotrypsin conjugates 233
- Lignin peroxidase
Effects of water-miscible organic solvents on the reaction of lignin peroxidase of *Phanerochaete chrysosporium* 243
- Lipase
A new enzymatic one-pot procedure for the synthesis of carboxylic amides from carboxylic acids 19
Application of a chemoenzymatic glycosylation method to α -chymotrypsin and *Candida rugosa* lipase surface modifications 281
Application of lipase-catalyzed transformations for the synthesis of insect pheromones and related compounds 257
Lipase-catalysed ammoniolysis of lipids. A facile synthesis of fatty acid amides [J. Mol. Catal. B, 1 (1996) 109–113] 141
- Lipases
Aspergillus niger lipases: induction, isolation and characterization of two lipases from a MZKI A116 strain 215
Covalent immobilization of pure lipases A and B from *Candida rugosa* 177
- Lipids
Lipase-catalysed ammoniolysis of lipids. A facile synthesis of fatty acid amides [J. Mol. Catal. B, 1 (1996) 109–113] 141
- Low temperature
Temperature effects on protease catalyzed acyl transfer reactions in organic media 43
- Luciferase
Oxidations by microbial NADH plus FMN-dependent luciferases from *Photobacterium phosphoreum* and *Vibrio fischeri* 193
- MCM-41
Enzyme immobilization in MCM-41 molecular sieve 115
- Mediator
Kinetics of mediator-dependent pseudocatalytic activity of fungal peroxidases 93
- Microbial transformants
Pyruvic acid production using methylotrophic yeast transformants as catalyst 223
- Microemulsion
Kinetic investigations of horseradish peroxidase in AOT/n-heptane reverse micelles 185
- Modification
Activity and stability of native and modified alanine aminotransferase in cosolvent systems and denaturants 271
- Molecular Sieves
Enzyme immobilization in MCM-41 molecular sieve 115
- Morpholine-benzene derivatives
Kinetics of mediator-dependent pseudocatalytic activity of fungal peroxidases 93
- Mushroom tyrosinase
Biocatalysis by tyrosinase in organic solvent media; a model system using catechin and vanillin as substrates 199
- NRRL 4671
Preparation of substituted (*R*)-2-alkanols by microbial hydroxylation L253
- One-pot procedure
A new enzymatic one-pot procedure for the synthesis of carboxylic amides from carboxylic acids 19
- Optical resolution
Application of lipase-catalyzed transformations for the synthesis of insect pheromones and related compounds 257
- Organic solvent
Temperature effects on protease catalyzed acyl transfer reactions in organic media 43
- Organic solvents
Activity and stability of native and modified alanine aminotransferase in cosolvent systems and denaturants 271
Biocatalysis by tyrosinase in organic solvent media; a model system using catechin and vanillin as substrates 199
Effects of water-miscible organic solvents on the reaction of lignin peroxidase of *Phanerochaete chrysosporium* 243
- Oxindole
Synthesis of substituted oxindoles by chloroperoxidase catalyzed oxidation of indoles 33
- Oxyanion
Oxyanion formation in phosphoryl transfer catalyzed by protein kinases A and C 85
- Oxygen
Kinetics of mediator-dependent pseudocatalytic activity of fungal peroxidases 93
- Papain
Enzyme immobilization in MCM-41 molecular sieve 115
- Peptide synthesis
Temperature effects on protease catalyzed acyl transfer reactions in organic media 43
- Peroxidase
Kinetics of mediator-dependent pseudocatalytic activity of fungal peroxidases 93
- Phanerochaete chrysosporium*
Effects of water-miscible organic solvents on the reaction of lignin peroxidase of *Phanerochaete chrysosporium* 243
- p*-Phenylenediamine
Kinetics of mediator-dependent pseudocatalytic activity of fungal peroxidases 93
- Phosphoryl transfer
Oxyanion formation in phosphoryl transfer catalyzed by protein kinases A and C 85

Photobacterium phosphoreum

Oxidations by microbial NADH plus FMN-dependent luciferases from *Photobacterium phosphoreum* and *Vibrio fischeri* 193

Pichia pastoris

Pyruvic acid production using methylotrophic yeast transformants as catalyst 223

Polyethylene glycol

Bioconjugates of proteins and polyethylene glycol: potent tools in biotechnological processes 1

Promoter

Production of high levels of soluble recombinant *Streptomyces clavuligerus* isopenicillin N synthase in *Escherichia coli* 71

Protein kinases

Oxyanion formation in phosphoryl transfer catalyzed by protein kinases A and C 85

Purification

Discovery, purification, and properties of *o*-phthalyl amidase from *Xanthobacter agilis* 53

Pyruvic acid production

Pyruvic acid production using methylotrophic yeast transformants as catalyst 223

Quinohaemoprotein alcohol dehydrogenase

Enantioselective oxidation of secondary alcohols by quinohaemoprotein alcohol dehydrogenase from *Comamonas testosteroni* 291

Reaction kinetics

Kinetic investigations of horseradish peroxidase in AOT/*n*-heptane reverse micelles 185

Reduction

Efficient kinetic resolution of 2-benzenesulfonylcyclopentanone derivatives [J. Mol. Catal., 1 (1996) 115–126] 147

Reverse micelle

Kinetic investigations of horseradish peroxidase in AOT/*n*-heptane reverse micelles 185

Ring-opening hydrolysis

Diversity and versatility of microbial hydantoin-transforming enzymes 163

Secondary alcohols

Enantioselective oxidation of secondary alcohols by quinohaemoprotein alcohol dehydrogenase from *Comamonas testosteroni* 291

Selective oxidation

Synthesis of substituted oxindoles by chloroperoxidase catalyzed oxidation of indoles 33

Selectivity

Aspergillus niger lipases: induction, isolation and characterization of two lipases from a MZKI A116 strain 215

Sex pheromone

Application of lipase-catalyzed transformations for the synthesis of insect pheromones and related compounds 257

Shaking rate

Enhanced catalytic efficiency of enzymes in organic media

with the addition of the solid support: Effect of silica gel on reaction rates and enzyme agglomeration 127

Silica gel

Enhanced catalytic efficiency of enzymes in organic media with the addition of the solid support: Effect of silica gel on reaction rates and enzyme agglomeration 127

Specificity

Discovery, purification, and properties of *o*-phthalyl amidase from *Xanthobacter agilis* 53

Stopped-flow

Kinetic investigations of horseradish peroxidase in AOT/*n*-heptane reverse micelles 185

Streptomyces clavuligerus

Production of high levels of soluble recombinant *Streptomyces clavuligerus* isopenicillin N synthase in *Escherichia coli* 71

Structure–activity relationships

Oxyanion formation in phosphoryl transfer catalyzed by protein kinases A and C 85

Substrate specificity

Effects of water-miscible organic solvents on the reaction of lignin peroxidase of *Phanerochaete chrysosporium* 243

Subtilisin Carlsberg

Temperature effects on protease catalyzed acyl transfer reactions in organic media 43

Sulfoxidation

Oxidations by microbial NADH plus FMN-dependent luciferases from *Photobacterium phosphoreum* and *Vibrio fischeri* 193

Temperature sensitivity

Preparations and properties of temperature-sensitive poly(*N*-isopropylacrylamide)–chymotrypsin conjugates 233

1,2,4,5-Tetramethoxybenzene

Kinetics of mediator-dependent pseudocatalytic activity of fungal peroxidases 93

Transesterification

Application of lipase-catalyzed transformations for the synthesis of insect pheromones and related compounds 257

Trypsin

Enzyme immobilization in MCM-41 molecular sieve 115

Ureides

Diversity and versatility of microbial hydantoin-transforming enzymes 163

Vanillin

Biocatalysis by tyrosinase in organic solvent media; a model system using catechin and vanillin as substrates 199

Vibrio fischeri

Oxidations by microbial NADH plus FMN-dependent luciferases from *Photobacterium phosphoreum* and *Vibrio fischeri* 193

Water content

Enhanced catalytic efficiency of enzymes in organic media with the addition of the solid support: Effect of silica gel on reaction rates and enzyme agglomeration 127