

Subject Index

Acidophilic bacteria

Purification and characterization of a sulfite:cytochrome *c* oxidoreductase from *Thiobacillus acidophilus* 61

Active site model

Development of the active site model for calcium-containing quinoprotein alcohol dehydrogenases 85

Acyl donor

Influence of substituents on enantiomeric ratio in transesterification of racemic C-3 synthons using lipase B from *Candida antarctica* 51

Acyl transfer

Effects of chemical modification of lysine residues in trypsin 193

Alcohol dehydrogenase

Nicotinoprotein methanol dehydrogenase enzymes in Gram-positive methylotrophic bacteria 103

The enantioselectivity of quinohaemoprotein alcohol dehydrogenases: mechanistic and structural aspects 121

Amine oxidase

Investigation into the mechanism of λ_{\max} shifts and their dependence on pH for the 2-hydrazinopyridine derivatives of two copper amine oxidases 17

A spectroscopic and kinetic study of *Escherichia coli* amine oxidase 111

Amphiphilic

Organic solvent functional group effect on enzyme inactivation by the interfacial mechanism 183

Amycolatopsis

Nicotinoprotein methanol dehydrogenase enzymes in Gram-positive methylotrophic bacteria 103

Antiferromagnetic coupling

Kinetic and paramagnetic NMR investigations of the inhibition of *Streptomyces antibioticus* tyrosinase 27

Aqueous–organic interface

Organic solvent functional group effect on enzyme inactivation by the interfacial mechanism 183

Aromatic amine dehydrogenase

Reaction products and intermediates of tryptophan tryptophylquinone enzymes 69

Aromatic glycolipids

Substrate specificity of lipase B from *Candida antarctica* in the synthesis of arylaliphatic glycolipids 201

Aspergillus niger

Purification of α -galactosidase from *Aspergillus niger* for application in the synthesis of complex oligosaccharides 175

Astasia longa

Biotransformation of enones with biocatalysts — two enone reductases from *Astasia longa* 255

Bacillus

Nicotinoprotein methanol dehydrogenase enzymes in Gram-positive methylotrophic bacteria 103

Biocatalysis

Asymmetric bioreduction of a bisaryl ketone to its corresponding (*S*)-bisaryl alcohol, by the yeast *Rhodotorula pilimanae* ATCC 32762 285

Biocatalytic membranes

Non-isothermal cephalixin hydrolysis by penicillin G acylase immobilized on grafted nylon membranes 221

Characterization of the activity of penicillin G acylase immobilized onto nylon membranes grafted with different acrylic monomers by means of γ -radiation 233

Bioconversion

Asymmetric bioreduction of a bisaryl ketone to its corresponding (*S*)-bisaryl alcohol, by the yeast *Rhodotorula pilimanae* ATCC 32762 285

Bioelectrocatalysis

Bioelectrochemical transformation of nicotinic acid into 6-hydroxynicotinic acid on *Pseudomonas fluorescens* TN5-immobilized column electrolytic flow system 265

Bioreduction

Asymmetric bioreduction of a bisaryl ketone to its corresponding (*S*)-bisaryl alcohol, by the yeast *Rhodotorula pilimanae* ATCC 32762 285

Biotransformation

Asymmetric bioreduction of a bisaryl ketone to its corresponding (*S*)-bisaryl alcohol, by the yeast *Rhodotorula pilimanae* ATCC 32762 285

Calcium-containing quinoprotein alcohol dehydrogenase

Development of the active site model for calcium-containing quinoprotein alcohol dehydrogenases 85

Candida antarctica lipase B

Influence of substituents on enantiomeric ratio in transesterification of racemic C-3 synthons using lipase B from *Candida antarctica* 51

Substrate specificity of lipase B from *Candida antarctica* in the synthesis of arylaliphatic glycolipids 201

- Carvone
 Biotransformation of enones with biocatalysts — two enone reductases from *Astasia longa* 255
- Catalysis-associated inactivation
 Increased catalytic performance of the 2-oxoacid dehydrogenase complexes in the presence of thioredoxin, a thiol–disulfide oxidoreductase 165
- Celite
 Controlling the hydration of covalently immobilised penicillin G amidase in low-water medium: properties and use of Celite R-640 245
- Cephalexin
 Non-isothermal cephalexin hydrolysis by penicillin G acylase immobilized on grafted nylon membranes 221
 Characterization of the activity of penicillin G acylase immobilized onto nylon membranes grafted with different acrylic monomers by means of γ -radiation 233
- Chiral alcohols
 The enantioselectivity of quinohaemoprotein alcohol dehydrogenases: mechanistic and structural aspects 121
- C1 metabolism
 Coping with formaldehyde during C1 metabolism of *Paracoccus denitrificans* 37
- Coenzyme PQQ
 Development of the active site model for calcium-containing quinoprotein alcohol dehydrogenases 85
- Cofactor
 Whence topa? Models for the biogenesis of topa quinone in copper amine oxidases 95
- Column electrolysis
 Bioelectrochemical transformation of nicotinic acid into 6-hydroxynicotinic acid on *Pseudomonas fluorescens* TN5-immobilized column electrolytic flow system 265
- Computer-aided molecular modeling
 Substrate specificity of lipase B from *Candida antarctica* in the synthesis of arylaliphatic glycolipids 201
- Control of water activity
 Controlling the hydration of covalently immobilised penicillin G amidase in low-water medium: properties and use of Celite R-640 245
- Copper
 Spectroscopic and magnetochemical studies on the active site copper complex in galactose oxidase 3
 Kinetic and paramagnetic NMR investigations of the inhibition of *Streptomyces antibioticus* tyrosinase 27
 Whence topa? Models for the biogenesis of topa quinone in copper amine oxidases 95
- Cosmetics
 Enzymatic synthesis of derivatives of vitamin A in organic media 275
- Cysteine
 Increased catalytic performance of the 2-oxoacid dehydrogenase complexes in the presence of thioredoxin, a thiol–disulfide oxidoreductase 165
- 1-(3,4-Dimethoxyphenyl)-1-propene
 Laccase-catalyzed oxidation of 1-(3,4-dimethoxyphenyl)-1-propene using ABTS as mediator 213
- Dinuclear
 Kinetic and paramagnetic NMR investigations of the inhibition of *Streptomyces antibioticus* tyrosinase 27
- Enantiomeric ratio
 Influence of substituents on enantiomeric ratio in transesterification of racemic C-3 synthons using lipase B from *Candida antarctica* 51
- Enantioselective oxidation
 The enantioselectivity of quinohaemoprotein alcohol dehydrogenases: mechanistic and structural aspects 121
- Enone
 Biotransformation of enones with biocatalysts — two enone reductases from *Astasia longa* 255
- Enone reductase
 Biotransformation of enones with biocatalysts — two enone reductases from *Astasia longa* 255
- Enzymatic glycosylation
 Purification of α -galactosidase from *Aspergillus niger* for application in the synthesis of complex oligosaccharides 175
- Enzymatic synthesis
 Enzymatic synthesis of derivatives of vitamin A in organic media 275
 Enzymatic synthesis of UDP-galactose on a gram scale 281
- Enzyme
 Whence topa? Models for the biogenesis of topa quinone in copper amine oxidases 95
- Enzyme-catalyzed oxidation
 Laccase-catalyzed oxidation of 1-(3,4-dimethoxyphenyl)-1-propene using ABTS as mediator 213
- Enzyme modification
 Effects of chemical modification of lysine residues in trypsin 193
- Enzyme specificity
 Effects of chemical modification of lysine residues in trypsin 193
- EPR
 Spectroscopic and magnetochemical studies on the active site copper complex in galactose oxidase 3
- Escherichia coli*
 A spectroscopic and kinetic study of *Escherichia coli* amine oxidase 111
- Euglenales*
 Biotransformation of enones with biocatalysts — two enone reductases from *Astasia longa* 255
- Fermentation
 Asymmetric bioreduction of a bisaryl ketone to its corresponding (S)-bisaryl alcohol, by the yeast *Rhodotorula pilimanae* ATCC 32762 285
- Formaldehyde dismutase
 Nicotinoprotein methanol dehydrogenase enzymes in Gram-positive methylotrophic bacteria 103
- Free radical
 Spectroscopic and magnetochemical studies on the active site copper complex in galactose oxidase 3

- Fungal laccases
Laccase-catalyzed oxidation of 1-(3,4-dimethoxyphenyl)-1-propene using ABTS as mediator 213
- α -Galactosidase
Purification of α -galactosidase from *Aspergillus niger* for application in the synthesis of complex oligosaccharides 175
- Glutathione
Increased catalytic performance of the 2-oxoacid dehydrogenase complexes in the presence of thioredoxin, a thiol–disulfide oxidoreductase 165
- Gram-positive bacteria
Nicotinoprotein methanol dehydrogenase enzymes in Gram-positive methylotrophic bacteria 103
- Halohydrins
Influence of substituents on enantiomeric ratio in transesterification of racemic C-3 synthons using lipase B from *Candida antarctica* 51
- Hydrazone-azo conversion
Investigation into the mechanism of λ_{\max} shifts and their dependence on pH for the 2-hydrazinopyridine derivatives of two copper amine oxidases 17
- Hydrophobicity
Organic solvent functional group effect on enzyme inactivation by the interfacial mechanism 183
- 6-Hydroxynicotinic acid
Bioelectrochemical transformation of nicotinic acid into 6-hydroxynicotinic acid on *Pseudomonas fluorescens* TN5-immobilized column electrolytic flow system 265
- Immobilized enzymes
Non-isothermal cephalaxin hydrolysis by penicillin G acylase immobilized on grafted nylon membranes 221
Characterization of the activity of penicillin G acylase immobilized onto nylon membranes grafted with different acrylic monomers by means of γ -radiation 233
- Inhibition
Investigation into the mechanism of λ_{\max} shifts and their dependence on pH for the 2-hydrazinopyridine derivatives of two copper amine oxidases 17
Kinetic and paramagnetic NMR investigations of the inhibition of *Streptomyces antibioticus* tyrosinase 27
- Interfacial inactivation
Organic solvent functional group effect on enzyme inactivation by the interfacial mechanism 183
- Kinetics
A spectroscopic and kinetic study of *Escherichia coli* amine oxidase 111
The enantioselectivity of quinoxaemoprotein alcohol dehydrogenases: mechanistic and structural aspects 121
- Laccase-mediator system
Laccase-catalyzed oxidation of 1-(3,4-dimethoxyphenyl)-1-propene using ABTS as mediator 213
- Lipase
Enzymatic synthesis of derivatives of vitamin A in organic media 275
- Lipoate
Increased catalytic performance of the 2-oxoacid dehydrogenase complexes in the presence of thioredoxin, a thiol–disulfide oxidoreductase 165
- Magnetic susceptibility
Spectroscopic and magnetochemical studies on the active site copper complex in galactose oxidase 3
- Mechanism
The enantioselectivity of quinoxaemoprotein alcohol dehydrogenases: mechanistic and structural aspects 121
- Methanol dehydrogenase
Coping with formaldehyde during C1 metabolism of *Paracoccus denitrificans* 37
Nicotinoprotein methanol dehydrogenase enzymes in Gram-positive methylotrophic bacteria 103
- Methylamine dehydrogenase
Coping with formaldehyde during C1 metabolism of *Paracoccus denitrificans* 37
Reaction products and intermediates of tryptophan tryptophylquinone enzymes 69
- Molecular modeling
The enantioselectivity of quinoxaemoprotein alcohol dehydrogenases: mechanistic and structural aspects 121
- Molybdenum
Purification and characterization of a sulfite:cytochrome *c* oxidoreductase from *Thiobacillus acidophilus* 61
- Mycobacterium*
Nicotinoprotein methanol dehydrogenase enzymes in Gram-positive methylotrophic bacteria 103
- Nicotinic acid
Bioelectrochemical transformation of nicotinic acid into 6-hydroxynicotinic acid on *Pseudomonas fluorescens* TN5-immobilized column electrolytic flow system 265
- Nicotinoprotein
Nicotinoprotein methanol dehydrogenase enzymes in Gram-positive methylotrophic bacteria 103
- NMR
Kinetic and paramagnetic NMR investigations of the inhibition of *Streptomyces antibioticus* tyrosinase 27
- Non-isothermal bioreactors
Non-isothermal cephalaxin hydrolysis by penicillin G acylase immobilized on grafted nylon membranes 221
- Nucleotide sugars
Enzymatic synthesis of UDP-galactose on a gram scale 281
- Oligosaccharide synthesis
Purification of α -galactosidase from *Aspergillus niger* for application in the synthesis of complex oligosaccharides 175
- Organic solvent
Controlling the hydration of covalently immobilised penicillin G amidase in low-water medium: properties and use of Celite R-640 245
- 2-Oxoacid dehydrogenase complex
Increased catalytic performance of the 2-oxoacid dehydrogenase complexes in the presence of thioredoxin, a thiol–disulfide oxidoreductase 165

- Paracoccus denitrificans*
Coping with formaldehyde during C1 metabolism of *Paracoccus denitrificans* 37
- Paramagnetism
Kinetic and paramagnetic NMR investigations of the inhibition of *Streptomyces antibioticus* tyrosinase 27
- Penicillin amidase
Controlling the hydration of covalently immobilised penicillin G amidase in low-water medium: properties and use of Celite R-640 245
- Penicillin G acylase
Non-isothermal cephalixin hydrolysis by penicillin G acylase immobilized on grafted nylon membranes 221
Characterization of the activity of penicillin G acylase immobilized onto nylon membranes grafted with different acrylic monomers by means of γ -radiation 233
- Peptide synthesis
Effects of chemical modification of lysine residues in trypsin 193
- pH effects
Investigation into the mechanism of λ_{\max} shifts and their dependence on pH for the 2-hydrazinopyridine derivatives of two copper amine oxidases 17
- Post-Translational Modification
Whence topa? Models for the biogenesis of topa quinone in copper amine oxidases 95
- Protease
Effects of chemical modification of lysine residues in trypsin 193
- Proton transfer
Spectroscopic and magnetochemical studies on the active site copper complex in galactose oxidase 3
- Pseudomonas fluorescens*
Bioelectrochemical transformation of nicotinic acid into 6-hydroxynicotinic acid on *Pseudomonas fluorescens* TN5-immobilized column electrolytic flow system 265
- Pyrrroquinoline quinone
The enantioselectivity of quinohaemoprotein alcohol dehydrogenases: mechanistic and structural aspects 121
- Quinohaemoprotein
The enantioselectivity of quinohaemoprotein alcohol dehydrogenases: mechanistic and structural aspects 121
- Quinone
Whence topa? Models for the biogenesis of topa quinone in copper amine oxidases 95
- γ -Radiation
Non-isothermal cephalixin hydrolysis by penicillin G acylase immobilized on grafted nylon membranes 221
Characterization of the activity of penicillin G acylase immobilized onto nylon membranes grafted with different acrylic monomers by means of γ -radiation 233
- Reduction of C–C double bond
Biotransformation of enones with biocatalysts — two enone reductases from *Astasia longa* 255
- Repetitive batch
Enzymatic synthesis of UDP-galactose on a gram scale 281
- Respiration
Coping with formaldehyde during C1 metabolism of *Paracoccus denitrificans* 37
- Retinol
Enzymatic synthesis of derivatives of vitamin A in organic media 275
- Review
The enantioselectivity of quinohaemoprotein alcohol dehydrogenases: mechanistic and structural aspects 121
- Rhodococcus*
Nicotinoprotein methanol dehydrogenase enzymes in Gram-positive methylotrophic bacteria 103
- Salicin
Substrate specificity of lipase B from *Candida antarctica* in the synthesis of arylaliphatic glycolipids 201
- Signal transduction
Coping with formaldehyde during C1 metabolism of *Paracoccus denitrificans* 37
- Solvent choice
Organic solvent functional group effect on enzyme inactivation by the interfacial mechanism 183
- Stereochemistry
Biotransformation of enones with biocatalysts — two enone reductases from *Astasia longa* 255
- Structure
The enantioselectivity of quinohaemoprotein alcohol dehydrogenases: mechanistic and structural aspects 121
- Sulfite
Purification and characterization of a sulfite:cytochrome *c* oxidoreductase from *Thiobacillus acidophilus* 61
- Sulfur metabolism
Purification and characterization of a sulfite:cytochrome *c* oxidoreductase from *Thiobacillus acidophilus* 61
- Thiobacillus acidophilus*
Purification and characterization of a sulfite:cytochrome *c* oxidoreductase from *Thiobacillus acidophilus* 61
- Thioredoxin
Increased catalytic performance of the 2-oxoacid dehydrogenase complexes in the presence of thioredoxin, a thiol–disulfide oxidoreductase 165
- Transesterification
Influence of substituents on enantiomeric ratio in transesterification of racemic C-3 synthons using lipase B from *Candida antarctica* 51
- Tryptophan tryptophylquinone
Reaction products and intermediates of tryptophan tryptophylquinone enzymes 69
- Tyrosinase
Kinetic and paramagnetic NMR investigations of the inhibition of *Streptomyces antibioticus* tyrosinase 27
- UDP-galactose
Enzymatic synthesis of UDP-galactose on a gram scale 281