

Subject index

- N*-Acetylneuraminic
Sialyltransferase-catalyzed transfer of KDN onto oligosaccharides 235
- Actinoplanes* sp. ATCC 53771
Bioconversion of ascomycin and its 6-alkoxyderivatives 389
- Acylation
Enzymatic synthesis of alkylglycoside fatty acid esters catalyzed by an immobilized lipase 45
- Acyl-CoA oxidase
Acyl-CoA oxidase, a key step for lactone production by *Yarrowia lipolytica* 165
Yarrowia lipolytica, a yeast model for the genetic studies of hydroxy fatty acids biotransformation into lactones 175
- ADP-glucose
Application of recombinant sucrose synthase-large scale synthesis of ADP-glucose 25
- Aerobiosis
Biological nitrogen removal in a single aerobic reactor by association of a nitrifying ecosystem to an aerobic denitrifier, *Microvirgula aerodentrificans* 435
- Agrobacterium tumefaciens*
Enantioselective nitrile hydratases and amidases from different bacterial isolates 137
- Alcohol dehydrogenase
The influence of water activity on the enantioselectivity in the enzyme-catalyzed reduction of 2-pentanone 273
- Aldehyde reductase
Chiral alcohol synthesis with yeast carbonyl reductases 321
- Aldolase
Modified L-threose and D-erythrose as substrates of transketolase and fructose-1,6-bisphosphate aldolase. Application to the synthesis of new heptulose analogues 459
- Aldol condensation
The synthetic utility of KDPGal aldolase 103
Stereoselectivity of aldolase catalytic antibodies 331
- Algae
Biotransformation of *S*-13 thiaoleic acid to the corresponding sulfoxide by *Chlorella vulgaris* 211/8k 133
- 6-Alkoxy-ascomycins
Bioconversion of ascomycin and its 6-alkoxyderivatives 389
- Alkyl and aryl substituted epoxides
Microbiological transformations 41. Screening for novel fungal epoxide hydrolases 447
- Alkylation
Enzymatic synthesis of alkylglycoside fatty acid esters catalyzed by an immobilized lipase 45
- Allylic tertiary alcohol
Novel *Rhodococcus* esterases by genetic engineering 261
- Almond oxynitrilase
Almond oxynitrilase-catalyzed transformation of substituted aldehydes. Part 2 223
- Amidase
Monohydroxamic acid biosynthesis 207
The hydantoin amidohydrolase from *Arthrobacter aurescens* DSM 3745 is a zinc metalloenzyme 367
- Amino acids
Biocatalysis to amino acid-based chiral pharmaceuticals—examples and perspectives 1
Production of enantiomerically pure amino acids: characterisation of South African hydantoinases and hydantoinase-producing bacteria 301
- Aminolysis
Monohydroxamic acid biosynthesis 207
- Ammoniolysis
Enantioselective synthesis of amino acid amides via enzymatic ammoniolysis of amino acid esters 155
- Amoxicillin
Feasibility of the thermodynamically controlled synthesis of amoxicillin 249
- Arthrobacter aurescens*
The hydantoin amidohydrolase from *Arthrobacter aurescens* DSM 3745 is a zinc metalloenzyme 367
- Arylacetonitrilase
Characterization and partial purification of an enantioselective arylacetonitrilase from *Pseudomonas fluorescens* DSM 7155 467
- Ascomycin
Bioconversion of ascomycin and its 6-alkoxyderivatives 389
- Ascorbyl palmitate
Enzymatic synthesis of fatty acid ascorbyl esters 19
- Aspartic proteases
Cardosins A and B, two new enzymes available for peptide synthesis 327
- Aspergillus niger*
Functionalization of natural drimanic compounds via microbial/chemical tandem reactions 203
- Asymmetric acetylation
Lipase-mediated asymmetric acetylation of prochiral diols directed towards total syntheses of biologically active molecules 183
- Asymmetric epoxidation
Chiral synthons via chloroperoxidase catalysis 95

- Asymmetric hydrolysis
Asymmetric hydrolysis of enol acetates with the cultured cells of *Marchantia polymorpha* 143
- Asymmetric reduction
Highly selective transformation by plant catalysts 187
- Autolysis
Immobilization of trypsin on an enteric polymer Eudragit S-100 for the biocatalysis of macromolecular substrate 289
- Bacillus licheniformis*
Metabolism of ¹⁴C-labelled 5-nitro-1,2,4-triazol-3-one (NTO): comparison between rat liver microsomes and bacterial metabolic pathways 395
- Bacillus megaterium*
Microbial hydroxylation of benzoxazoles containing fluorine atoms in the aromatic ring—tracing of the products by ¹⁹F NMR 191
- Bacterial communities
Polycyclic aromatic hydrocarbons (PAHs) biodegradation in the soil of a former gasworks site: selection and study of PAHs-degrading microorganisms 417
- Baeyer–Villiger oxidation
A new microorganism for highly stereospecific Baeyer–Villiger oxidation of prochiral cyclobutanones 219
- Baker's yeast
Asymmetric biotransformation of phenyl-C4 derivatives in rat liver (S-9) and baker's yeast 245
- Benzoates
Synthesis of benzoates by enzymatic catalysis in heterogeneous medium 277
- Benzoxazoles
Microbial hydroxylation of benzoxazoles containing fluorine atoms in the aromatic ring—tracing of the products by ¹⁹F NMR 191
- Biocompatibility
Solvent selection for the biotransformation of terpenes by *Pseudomonas putida* 295
- Bioconversion
Monohydroxamic acid biosynthesis 207
Influence of some operational parameters on the bioconversion of sitosterol with immobilized whole cells in organic medium 307
Bioconversion of ascomycin and its 6-alkoxyderivatives 389
- Biodegradation
E. coli JM109 pHP461, a recombinant biocatalyst for the regioselective monohydroxylation of *ortho*-substituted phenols to their corresponding 3-substituted catechols 311
Metabolism of ¹⁴C-labelled 5-nitro-1,2,4-triazol-3-one (NTO): comparison between rat liver microsomes and bacterial metabolic pathways 395
Polycyclic aromatic hydrocarbons (PAHs) biodegradation in the soil of a former gasworks site: selection and study of PAHs-degrading microorganisms 417
- Biodestruction
Biotechnological degradation of the radioactive cellulose containing waste 441
- Biogas
Combined biodegradation of carbon, nitrogen and phosphorus from wastewaters 429
- Biotransformation
Biotransformation of S-13 thioleic acid to the corresponding sulfoxide by *Chlorella vulgaris* 211/8k 133
Asymmetric hydrolysis of enol acetates with the cultured cells of *Marchantia polymorpha* 143
Highly selective transformation by plant catalysts 187
Activity of immobilised penicillin amidase in toluene at controlled water activity 241
Solvent selection for the biotransformation of terpenes by *Pseudomonas putida* 295
Production of enantiomerically pure amino acids: characterisation of South African hydantoinases and hydantoinase-producing bacteria 301
- Biotransformation of phenols
Biotransformation of phenols using immobilised polyphenol oxidase 411
- Biphasic system
Improvement of alcoholic fermentations by simultaneous extraction and enzymatic esterification of ethanol 29
- Bitterness
Protease-catalysed condensation–oligomerisation of hydrophobic peptides as a means of flavour modification 39
- Bromoacetyl phosphate
Fructose-1,6-bisphosphate aldolase and transketolase: Complementary tools for the de novo syntheses of monosaccharides and analogues 113
- BSTR reactor
Analysis of a BSTR reactor for triglyceride hydrolysis with an immobilised cutinase 35
- Butanals
Modified L-threose and D-erythrose as substrates of transketolase and fructose-1,6-bisphosphate aldolase. Application to the synthesis of new heptulose analogues 459
- α -Butylglucoside
Enzymatic synthesis of AHA derivatives for cosmetic application 49
- Candida antarctica*
Enantioselective synthesis of amino acid amides via enzymatic ammoniolysis of amino acid esters 155
- Candida antarctica*
Enzymatic synthesis of fatty acid ascorbyl esters 19
- Candida magnoliae*
Chiral alcohol synthesis with yeast carbonyl reductases 321
- Candida rugosa*
Enzymatic resolution of 2-fluoro-2-arylacetic acid derivatives 171
- Candida rugosa* lipase
Synthesis of benzoates by enzymatic catalysis in heterogeneous medium 277
Reversed enantioselectivity of *Candida rugosa* lipase supports different modes of binding enantiomers of a chiral acyl donor 283
- Carbodiimide coupling
Immobilization of trypsin on an enteric polymer Eudragit S-100 for the biocatalysis of macromolecular substrate 289

- Carbon–carbon bond
Fructose-1,6-bisphosphate aldolase and transketolase: Complementary tools for the de novo syntheses of monosaccharides and analogues 113
Stereoselectivity of aldolase catalytic antibodies 331
- Carbonyl reductase
Chiral alcohol synthesis with yeast carbonyl reductases 321
- Carvone
Biotransformation of monoterpenoid ketones by yeasts and yeast-like fungi 149
- Casein hydrolysis
Immobilization of trypsin on an enteric polymer Eudragit S-100 for the biocatalysis of macromolecular substrate 289
- Catechol
Preparative scale production of 3-substituted catechols using a novel monooxygenase from *Pseudomonas azelaica* HBP 1 87
- Cellulolytic activity
Biotechnological degradation of the radioactive cellulose containing waste 441
- Cellulolytic enzymes
Biotechnological degradation of the radioactive cellulose containing waste 441
- Chemo-enzymatic synthesis
Chemo-enzymatic synthesis of a selectin ligand using recombinant yeast cells 229
- Chiral
Determination of the regioselectivity during epoxide hydrolase oxirane ring opening: a new method from racemic epoxides 213
- Chiral carboxylic acid
Characterization and partial purification of an enantioselective arylacetone nitrilase from *Pseudomonas fluorescens* DSM 7155 467
- Chiral derivatizing agent
Enzymatic resolution of 2-fluoro-2-arylacetic acid derivatives 171
- Chiral epoxides
Chiral synthons via chloroperoxidase catalysis 95
- Chiral epoxyalcohol
Asymmetric biotransformation of phenyl-C4 derivatives in rat liver (S-9) and baker's yeast 245
- Chiral recognition
Reversed enantiopreference of *Candida rugosa* lipase supports different modes of binding enantiomers of a chiral acyl donor 283
- Chitosan
Preparation and characterization of immobilized phospholipase A₂ on chitosan beads for lowering serum cholesterol concentration 483
- Chlorella*
Biotransformation of S-13 thiaoleic acid to the corresponding sulfoxide by *Chlorella vulgaris* 211/8k 133
- 4-Chloro-3-hydroxybutanoate esters
Chiral alcohol synthesis with yeast carbonyl reductases 321
- Chloroperoxidase
Chiral synthons via chloroperoxidase catalysis 95
- Cinnamodial
Functionalization of natural drimanic compounds via microbial/chemical tandem reactions 203
- Compaction
Biotechnological degradation of the radioactive cellulose containing waste 441
- Continuous process
Continuous process for large-scale preparation of chiral alcohols with baker's yeast immobilized on chrysotile fibers 69
- Control of water activity
Activity of immobilised penicillin amidase in toluene at controlled water activity 241
- Cosmetics
Enzymatic synthesis of AHA derivatives for cosmetic application 49
- Cunninghamella blakesleeana*
Microbial hydroxylation of benzoxazoles containing fluorine atoms in the aromatic ring—tracing of the products by ¹⁹F NMR 191
- Cunninghamella echinulata*
A new microorganism for highly stereospecific Baeyer–Villiger oxidation of prochiral cyclobutanones 219
- Cutinase
Analysis of a BSTR reactor for triglyceride hydrolysis with an immobilised cutinase 35
Kinetics and modelling of transesterification reactions catalysed by cutinase in AOT reversed micelles 361
- Cyanohydrin
Almond oxynitrilase-catalyzed transformation of substituted aldehydes. Part 2 223
- 1-Cyclobutanol-2-carboxylate
Microbial reduction of varying size cyclic β -ketoesters. Stereoselective synthesis of chiral lactones and epoxides 255
- CYP
Microbial models of mammalian metabolism: uses and misuses (clarification of some misconceptions) 371
- Cytochrome *c*
Dimerization of hydroxylated species of *m*-aminophenol by cytochrome *c* with hydrogen peroxide 475
- Cytochrome P450
Microbial models of mammalian metabolism: uses and misuses (clarification of some misconceptions) 371
Metabolism of ¹⁴C-labelled 5-nitro-1,2,4-triazol-3-one (NTO): comparison between rat liver microsomes and bacterial metabolic pathways 395
Degradation of morpholine and thiomorpholine by an environmental *Mycobacterium* involves a cytochrome P450. Direct evidence of intermediates by in situ ¹H NMR 403
- Dairy product
New vegetal sources for milk clotting enzymes 63
- Degradation
Degradation of morpholine and thiomorpholine by an environmental *Mycobacterium* involves a cytochrome P450. Direct evidence of intermediates by in situ ¹H NMR 403
Involvement of 3,4-dichlorophenol hydroxylase in degradation of 3,4-dichlorophenol by the white rot fungus *Phanerochaete chrysosporium* 423
- Denitrification
Metabolism of ¹⁴C-labelled 5-nitro-1,2,4-triazol-3-one (NTO): comparison between rat liver microsomes and bacterial metabolic pathways 395

- Combined biodegradation of carbon, nitrogen and phosphorus from wastewaters 429
- Biological nitrogen removal in a single aerobic reactor by association of a nitrifying ecosystem to an aerobic denitrifier, *Microvirgula aerodenitrificans* 435
- Dephosphatation
- Combined biodegradation of carbon, nitrogen and phosphorus from wastewaters 429
- Deracemisation
- Enantioselective synthesis of amino acid amides via enzymatic ammoniolysis of amino acid esters 155
- 32-*O*-Desmethyl-ascomycin
- Bioconversion of ascomycin and its 6-alkoxyderivatives 389
- 32-*O*-Desmethyl-32-*epi*-ascomycin
- Bioconversion of ascomycin and its 6-alkoxyderivatives 389
- Diastereoselectivity
- Almond oxynitrilase-catalyzed transformation of substituted aldehydes. Part 2 223
- Microbial reduction of varying size cyclic β -ketoesters. Stereoselective synthesis of chiral lactones and epoxides 255
- 3,4-Dichlorophenol
- Involvement of 3,4-dichlorophenol hydroxylase in degradation of 3,4-dichlorophenol by the white rot fungus *Phanerochaete chrysosporium* 423
- Dimerization
- Dimerization of hydroxylated species of *m*-aminophenol by cytochrome *c* with hydrogen peroxide 475
- Diol
- Determination of the regioselectivity during epoxide hydrolase oxirane ring opening: a new method from racemic epoxides 213
- 1,2-Diol
- Fungal epoxide hydrolases: new tools for the synthesis of enantiopure epoxides and diols 79
- Drug metabolism
- Microbial models of mammalian metabolism: uses and misuses (clarification of some misconceptions) 371
- Dynamic kinetic resolution
- Enantioselective synthesis of amino acid amides via enzymatic ammoniolysis of amino acid esters 155
- Microbial reduction of varying size cyclic β -ketoesters. Stereoselective synthesis of chiral lactones and epoxides 255
- E. coli*
- The synthetic utility of KDPGal aldolase 103
- Electrochemistry
- Dimerization of hydroxylated species of *m*-aminophenol by cytochrome *c* with hydrogen peroxide 475
- Enantiofacial protonation
- Asymmetric hydrolysis of enol acetates with the cultured cells of *Marchantia polymorpha* 143
- Enantiomerically pure compounds (EPCs)
- Biocatalysis to amino acid-based chiral pharmaceuticals—examples and perspectives 1
- Enantiomeric ratio
- Solid-to-solid kinetic resolution. Determination of the enantiomeric ratio 55
- Enantiopreference
- Reversed enantiopreference of *Candida rugosa* lipase supports different modes of binding enantiomers of a chiral acyl donor 283
- Enantiopure epoxides
- Microbiological transformations 41. Screening for novel fungal epoxide hydrolases 447
- Enantioselective
- Highly stereoselective reduction of ketones by *Geotrichum candidum* 129
- Enantioselective hydrolysis
- Enzymatic resolution of 2-fluoro-2-arylacetic acid derivatives 171
- Microbiological transformations 41. Screening for novel fungal epoxide hydrolases 447
- Enantioselective inhibition
- Reversed enantiopreference of *Candida rugosa* lipase supports different modes of binding enantiomers of a chiral acyl donor 283
- Enantioselectivity
- Fungal epoxide hydrolases: new tools for the synthesis of enantiopure epoxides and diols 79
- Enantioselective nitrile hydratases and amidases from different bacterial isolates 137
- Enantioselectivity of a recombinant esterase from *Pseudomonas fluorescens* 199
- The influence of water activity on the enantioselectivity in the enzyme-catalyzed reduction of 2-pentanone 273
- Enantiospecificity
- Microbial reduction of varying size cyclic β -ketoesters. Stereoselective synthesis of chiral lactones and epoxides 255
- Enzymatic amidification
- Enzymatic amidification for the synthesis of biodegradable surfactants: Synthesis of *N*-acylated hydroxylated amines 13
- Enzymatic resolution
- Solid-to-solid kinetic resolution. Determination of the enantiomeric ratio 55
- Enzymatic synthesis
- Enzymatic synthesis of AHA derivatives for cosmetic application 49
- Transferase-catalyzed synthesis of non-natural oligosaccharide-libraries (SLe^a- and SLe^x-analogues) 125
- Enzymatic transesterification
- Enzymatic synthesis of alkylglycoside fatty acid esters catalyzed by an immobilized lipase 45
- Enzyme
- Highly stereoselective reduction of ketones by *Geotrichum candidum* 129
- Enzyme purification
- Characterization and partial purification of an enantioselective arylacetone nitrilase from *Pseudomonas fluorescens* DSM 7155 467
- Enzyme stability
- Stability of the enzyme (*S*)-hydroxynitrile lyase from *Hevea brasiliensis* 343
- Enzyme–substrate interaction
- Molecular recognition of *sec*-alcohol enantiomers by *Candida antarctica* lipase B 267

- Epoxide
 Fungal epoxide hydrolases: new tools for the synthesis of enantiopure epoxides and diols 79
 Determination of the regioselectivity during epoxide hydrolase oxirane ring opening: a new method from racemic epoxides 213
- Epoxide hydrolase
 Determination of the regioselectivity during epoxide hydrolase oxirane ring opening: a new method from racemic epoxides 213
 Microbiological transformations 41. Screening for novel fungal epoxide hydrolases 447
- ω -Epoxyester
 Microbial reduction of varying size cyclic β -ketoesters. Stereoselective synthesis of chiral lactones and epoxides 255
- Esterase
 Enantioselectivity of a recombinant esterase from *Pseudomonas fluorescens* 199
 Novel *Rhodococcus* esterases by genetic engineering 261
 Synthesis of planar-chiral [2.2]paracyclophanes by biotransformations: screening for hydrolase activity for the kinetic resolution of 4-acetoxy-[2.2]paracyclophane 317
- Esterification
 Improvement of alcoholic fermentations by simultaneous extraction and enzymatic esterification of ethanol 29
 Synthesis of benzoates by enzymatic catalysis in heterogeneous medium 277
- 6-Ethoxy-15-desmethyl-ascomycin
 Bioconversion of ascomycin and its 6-alkoxyderivatives 389
- 17 α -Ethinylestradiol glucuronides
 The synthesis of 17 α -ethinylestradiol glucuronides by mammalian microsomes immobilised in hollow-fibres 379
- Eudragit
 Immobilization of trypsin on an enteric polymer Eudragit S-100 for the biocatalysis of macromolecular substrate 289
- Eudragit-trypsin conjugate
 Immobilization of trypsin on an enteric polymer Eudragit S-100 for the biocatalysis of macromolecular substrate 289
- Forskolin
 Functionalization of natural drimanic compounds via microbial/chemical tandem reactions 203
- α (1-3/4) Fucosyltransferase
 Chemo-enzymatic synthesis of a selectin ligand using recombinant yeast cells 229
- Fungal epoxide hydrolase
 Fungal epoxide hydrolases: new tools for the synthesis of enantiopure epoxides and diols 79
- Fungi
 Microbiological transformations 41. Screening for novel fungal epoxide hydrolases 447
- Fusarium nivale*
 Microbial hydroxylation of 13 β -ethyl-4-gonene-3,17-dione 385
- Fusarium proliferatum*
 Induction and localization of a lipoxygenase from *Fusarium proliferatum* 159
- Gasworks site
 Polycyclic aromatic hydrocarbons (PAHs) biodegradation in the soil of a former gasworks site: selection and study of PAHs-degrading microorganisms 417
- Genetically engineered strains
 Novel *Rhodococcus* esterases by genetic engineering 261
- Glucamide surfactants
 Enzymatic amidification for the synthesis of biodegradable surfactants: Synthesis of *N*-acylated hydroxylated amines 13
- Glucuronidation
 The synthesis of 17 α -ethinylestradiol glucuronides by mammalian microsomes immobilised in hollow-fibres 379
- Glycosidase
 Enzymatic synthesis of alkylglycoside fatty acid esters catalyzed by an immobilized lipase 45
- Glycosyl-transferases
 Transferase-catalyzed synthesis of non-natural oligosaccharide-libraries (SLe^a- and SLe^x-analogues) 125
- Guanosine-diphosphofucose analogues
 Transferase-catalyzed synthesis of non-natural oligosaccharide-libraries (SLe^a- and SLe^x-analogues) 125
- HbpA
 Preparative scale production of 3-substituted catechols using a novel monooxygenase from *Pseudomonas azelaica* HBP 1 87
- Heck reaction
 Lipase-mediated asymmetric acetylation of prochiral diols directed towards total syntheses of biologically active molecules 183
- Hollow-fibres
 The synthesis of 17 α -ethinylestradiol glucuronides by mammalian microsomes immobilised in hollow-fibres 379
- Hydantoinase
 Production of enantiomerically pure amino acids: characterisation of South African hydantoinases and hydantoinase-producing bacteria 301
 The hydantoin amidohydrolase from *Arthrobacter aureescens* DSM 3745 is a zinc metalloenzyme 367
- Hydantoinase/carbamoylase system
 Biocatalysis to amino acid-based chiral pharmaceuticals—examples and perspectives 1
- Hydrogen peroxide
 Dimerization of hydroxylated species of *m*-aminophenol by cytochrome *c* with hydrogen peroxide 475
- Hydroperoxide
 Straightforward development of stereoselective biocatalysts—from detergent to semisynthetic peroxidase selenosubtilisin 339
- Hydrophobic
 Protease-catalysed condensation–oligomerisation of hydrophobic peptides as a means of flavour modification 39
- Hydroxamates
 Enantioselective nitrile hydratases and amidases from different bacterial isolates 137
- Hydroxamic acids
 Monohydroxamic acid biosynthesis 207

- α -Hydroxy acid
Enzymatic synthesis of AHA derivatives for cosmetic application 49
- 2-Hydroxybiphenyl
E. coli JM109 pHBP461, a recombinant biocatalyst for the regioselective monohydroxylation of *ortho*-substituted phenols to their corresponding 3-substituted catechols 311
- 2-Hydroxybiphenyl 3-monooxygenase
Preparative scale production of 3-substituted catechols using a novel monooxygenase from *Pseudomonas azelaica* HBP 1 87
- β -Hydroxyester
Microbial reduction of varying size cyclic β -ketoesters. Stereoselective synthesis of chiral lactones and epoxides 255
- Hydroxylamine
Monohydroxamic acid biosynthesis 207
- Hydroxylase
Involvement of 3,4-dichlorophenol hydroxylase in degradation of 3,4-dichlorophenol by the white rot fungus *Phanerochaete chrysosporium* 423
- Hydroxylation
Biotransformation of monoterpenoid ketones by yeasts and yeast-like fungi 149
Highly selective transformation by plant catalysts 187
E. coli JM109 pHBP461, a recombinant biocatalyst for the regioselective monohydroxylation of *ortho*-substituted phenols to their corresponding 3-substituted catechols 311
- 1 α -Hydroxylation
Functionalization of natural drimanic compounds via microbial/chemical tandem reactions 203
- 15 α -Hydroxylation
Microbial hydroxylation of 13 β -ethyl-4-gonene-3,17-dione 385
- 3 β -Hydroxylation
Functionalization of natural drimanic compounds via microbial/chemical tandem reactions 203
- Hydroxylation of aminophenol
Dimerization of hydroxylated species of *m*-aminophenol by cytochrome *c* with hydrogen peroxide 475
- Hydroxynitrile lyase
Stability of the enzyme (*S*)-hydroxynitrile lyase from *Hevea brasiliensis* 343
Hydroxynitrile lyase adsorption at liquid/liquid interfaces 349
- (*S*)-Hydroxynitrile lyase
Biocatalysis in microstructured lyotropic liquid crystals 355
- Immobilization
Analysis of a BSTR reactor for triglyceride hydrolysis with an immobilised cutinase 35
The synthesis of 17 α -ethynylestradiol glucuronides by mammalian microsomes immobilised in hollow-fibres 379
Biotransformation of phenols using immobilised polyphenol oxidase 411
- Immobilized cell
Influence of some operational parameters on the bioconversion of sitosterol with immobilized whole cells in organic medium 307
- In situ ^1H NMR
Degradation of morpholine and thiomorpholine by an environmental *Mycobacterium* involves a cytochrome *P450*. Direct evidence of intermediates by in situ ^1H NMR 403
- In situ recovery
Preparative scale production of 3-substituted catechols using a novel monooxygenase from *Pseudomonas azelaica* HBP 1 87
- Interfacial tension
Hydroxynitrile lyase adsorption at liquid/liquid interfaces 349
- 2-Keto-3-deoxy-6-phosphogalactonate (KDPGal)
The synthetic utility of KDPGal aldolase 103
- Ketoester reduction
Continuous process for large-scale preparation of chiral alcohols with baker's yeast immobilized on chrysotile fibers 69
- Ketone
Highly stereoselective reduction of ketones by *Geotrichum candidum* 129
- Ketose
Modified L-threose and D-erythrose as substrates of transketolase and fructose-1,6-bisphosphate aldolase. Application to the synthesis of new heptulose analogues 459
- Kinetic constants
Kinetics and modelling of transesterification reactions catalysed by cutinase in AOT reversed micelles 361
- Kinetic resolution
Molecular recognition of *sec*-alcohol enantiomers by *Candida antarctica* lipase B 267
Reversed enantiopreference of *Candida rugosa* lipase supports different modes of binding enantiomers of a chiral acyl donor 283
Synthesis of planar-chiral [2.2]paracyclophanes by biotransformations: screening for hydrolase activity for the kinetic resolution of 4-acetoxy-[2.2]paracyclophane 317
- Kinetics
Synthesis of benzoates by enzymatic catalysis in heterogeneous medium 277
- Kinetic studies
Analysis of a BSTR reactor for triglyceride hydrolysis with an immobilised cutinase 35
- Lactone
Acyl-CoA oxidase, a key step for lactone production by *Yarrowia lipolytica* 165
Yarrowia lipolytica, a yeast model for the genetic studies of hydroxy fatty acids biotransformation into lactones 175
- Lactose
Enzymatic synthesis of alkylglycoside fatty acid esters catalyzed by an immobilized lipase 45
- Lignin peroxidase
Involvement of 3,4-dichlorophenol hydroxylase in degradation of 3,4-dichlorophenol by the white rot fungus *Phanerochaete chrysosporium* 423
- Lipase
Enzymatic synthesis of alkylglycoside fatty acid esters catalyzed by an immobilized lipase 45
Enzymatic synthesis of AHA derivatives for cosmetic application 49
Enantioselective synthesis of amino acid amides via enzymatic ammoniolysis of amino acid esters 155
Enzymatic resolution of 2-fluoro-2-arylacetic acid derivatives 171

- Lipase-mediated asymmetric acetylation of prochiral diols directed towards total syntheses of biologically active molecules 183
- Monohydroxamic acid biosynthesis 207
- Synthesis of planar-chiral [2.2]paracyclophanes by biotransformations: screening for hydrolase activity for the kinetic resolution of 4-acetoxy-[2.2]paracyclophane 317
- Lipase B
- Enzymatic synthesis of fatty acid ascorbyl esters 19
- Lipid-coated enzyme
- Transglycosylation catalyzed by a lipid-coated β -D-galactosidase in a two-phase aqueous–organic system 119
- Lipoxygenase
- Induction and localization of a lipoxygenase from *Fusarium proliferatum* 159
- Lipozyme
- Enzymatic amidification for the synthesis of biodegradable surfactants: Synthesis of *N*-acylated hydroxylated amines 13
- Liquid crystal
- Biocatalysis in microstructured lyotropic liquid crystals 355
- Liquid/liquid interface
- Hydroxynitrile lyase adsorption at liquid/liquid interfaces 349
- Log *P* value
- Solvent selection for the biotransformation of terpenes by *Pseudomonas putida* 295
- Low-density lipoprotein
- Preparation and characterization of immobilized phospholipase A₂ on chitosan beads for lowering serum cholesterol concentration 483
- Low-water media
- Enzymatic synthesis of fatty acid ascorbyl esters 19
 - Activity of immobilised penicillin amidase in toluene at controlled water activity 241
- Marchantia polymorpha*
- Asymmetric hydrolysis of enol acetates with the cultured cells of *Marchantia polymorpha* 143
- Marker enzyme
- Induction and localization of a lipoxygenase from *Fusarium proliferatum* 159
- Mass transfer
- Solid-to-solid kinetic resolution. Determination of the enantiomeric ratio 55
- Membrane bioreactor
- Biotransformation of phenols using immobilised polyphenol oxidase 411
- Menthol
- Biotransformation of monoterpenoid ketones by yeasts and yeast-like fungi 149
- Menthone
- Biotransformation of monoterpenoid ketones by yeasts and yeast-like fungi 149
- Metabolite synthesis
- Microbial models of mammalian metabolism: uses and misuses (clarification of some misconceptions) 371
- 2-Methylalkanoic acid
- Reversed enantiopreference of *Candida rugosa* lipase supports different modes of binding enantiomers of a chiral acyl donor 283
- Metyrapone
- Degradation of morpholine and thiomorpholine by an environmental *Mycobacterium* involves a cytochrome *P450*. Direct evidence of intermediates by in situ ¹H NMR 403
- Microbial
- Highly stereoselective reduction of ketones by *Geotrichum candidum* 129
- Microbial hydroxylation
- Microbial hydroxylation of benzoxazoles containing fluorine atoms in the aromatic ring—tracing of the products by ¹⁹F NMR 191
- Microbial models
- Microbial models of mammalian metabolism: uses and misuses (clarification of some misconceptions) 371
- Microbial uses of *Saccharomyces cerevisiae*
- Continuous process for large-scale preparation of chiral alcohols with baker's yeast immobilized on chrysotile fibers 69
- Modelling
- Kinetics and modelling of transesterification reactions catalysed by cutinase in AOT reversed micelles 361
- Molecular modeling
- Molecular recognition of *sec*-alcohol enantiomers by *Candida antarctica* lipase B 267
- Monoterpenoid
- Biotransformation of monoterpenoid ketones by yeasts and yeast-like fungi 149
- Morpholine
- Degradation of morpholine and thiomorpholine by an environmental *Mycobacterium* involves a cytochrome *P450*. Direct evidence of intermediates by in situ ¹H NMR 403
- Mycobacterium* sp.
- Influence of some operational parameters on the bioconversion of sitosterol with immobilized whole cells in organic medium 307
- NaY zeolite
- Analysis of a BSTR reactor for triglyceride hydrolysis with an immobilised cutinase 35
- Nitrification
- Biological nitrogen removal in a single aerobic reactor by association of a nitrifying ecosystem to an aerobic denitrifier, *Microvirgula aerodenitrificans* 435
- Nitrilase
- Characterization and partial purification of an enantioselective arylacetone nitrilase from *Pseudomonas fluorescens* DSM 7155 467
- Nitroreductase
- Metabolism of ¹⁴C-labelled 5-nitro-1,2,4-triazol-3-one (NTO): comparison between rat liver microsomes and bacterial metabolic pathways 395
- NMR spectroscopy
- Microbial hydroxylation of benzoxazoles containing fluorine atoms in the aromatic ring—tracing of the products by ¹⁹F NMR 191
- Novozym
- Enzymatic amidification for the synthesis of biodegradable surfactants: Synthesis of *N*-acylated hydroxylated amines 13
- NTO
- Metabolism of ¹⁴C-labelled 5-nitro-1,2,4-triazol-3-one (NTO): comparison between rat liver microsomes and bacterial metabolic pathways 395

- Nucleotide sugar
Application of recombinant sucrose synthase-large scale synthesis of ADP-glucose 25
- 1-Octen-3-ol
Induction and localization of a lipoxygenase from *Fusarium proliferatum* 159
- Oligosaccharide libraries
Transferase-catalyzed synthesis of non-natural oligosaccharide-libraries (SLe^a- and SLe^x-analogues) 125
- Oligosaccharide synthesis
Sialyltransferase-catalyzed transfer of KDN onto oligosaccharides 235
- Optically active ketone
Asymmetric hydrolysis of enol acetates with the cultured cells of *Marchantia polymorpha* 143
- Optical resolution
Fungal epoxide hydrolases: new tools for the synthesis of enantiopure epoxides and diols 79
- Optimisation
Lipase production by solid state fermentation of olive cake and sugar cane bagasse 75
- Organic media
Enzymatic amidification for the synthesis of biodegradable surfactants: Synthesis of *N*-acylated hydroxylated amines 13
Synthesis of benzoates by enzymatic catalysis in heterogeneous medium 277
- Organic medium
The influence of water activity on the enantioselectivity in the enzyme-catalyzed reduction of 2-pentanone 273
- Organic solvent
Influence of some operational parameters on the bioconversion of sitosterol with immobilized whole cells in organic medium 307
Biocatalysis in microstructured lyotropic liquid crystals 355
- Organic solvents
Transglycosylation catalyzed by a lipid-coated β -D-galactosidase in a two-phase aqueous–organic system 119
Cardosins A and B, two new enzymes available for peptide synthesis 327
- Oxygenase
Biotransformation of S-13 thioaleic acid to the corresponding sulfoxide by *Chlorella vulgaris* 211/8k 133
- log *P*
Enzymatic synthesis of fatty acid ascorbyl esters 19
- Papilionoideae
New vegetal sources for milk clotting enzymes 63
- P. cepacia*
The synthetic utility of KDPGal aldolase 103
- Penicillin amidase
Activity of immobilised penicillin amidase in toluene at controlled water activity 241
- Peptide
Protease-catalysed condensation–oligomerisation of hydrophobic peptides as a means of flavour modification 39
- Peroxisomal β -oxidation
Acyl-CoA oxidase, a key step for lactone production by *Yarrowia lipolytica* 165
- Phanerochaete chrysosporium*
Involvement of 3,4-dichlorophenol hydroxylase in degradation of 3,4-dichlorophenol by the white rot fungus *Phanerochaete chrysosporium* 423
- Phenols
E. coli JM109 pHBP461, a recombinant biocatalyst for the regioselective monohydroxylation of *ortho*-substituted phenols to their corresponding 3-substituted catechols 311
- D-Phenylglycine amide
Enantioselective synthesis of amino acid amides via enzymatic ammoniolysis of amino acid esters 155
- Phospholipase A₂
Preparation and characterization of immobilized phospholipase A₂ on chitosan beads for lowering serum cholesterol concentration 483
- Phospholipids
Preparation and characterization of immobilized phospholipase A₂ on chitosan beads for lowering serum cholesterol concentration 483
- Pichia pastoris*
Chemo-enzymatic synthesis of a selectin ligand using recombinant yeast cells 229
- Piperitone
Biotransformation of monoterpenoid ketones by yeasts and yeast-like fungi 149
- Planar chiral [2.2]paracyclophane
Synthesis of planar-chiral [2.2]paracyclophanes by biotransformations: screening for hydrolase activity for the kinetic resolution of 4-acetoxy-[2.2]paracyclophane 317
- Plant catalyst
Highly selective transformation by plant catalysts 187
- Plant enzyme
New vegetal sources for milk clotting enzymes 63
- Polycyclic aromatic hydrocarbons
Polycyclic aromatic hydrocarbons (PAHs) biodegradation in the soil of a former gasworks site: selection and study of PAHs-degrading microorganisms 417
- Polygodial
Functionalization of natural drimanic compounds via microbial/chemical tandem reactions 203
- Polyphenol oxidase
Biotransformation of phenols using immobilised polyphenol oxidase 411
- Polyunsaturated fatty acid ascorbyl esters
Enzymatic synthesis of fatty acid ascorbyl esters 19
- Pre-treatment
Biotechnological degradation of the radioactive cellulose containing waste 441
- Prochiral cyclobutanone
A new microorganism for highly stereospecific Baeyer–Villiger oxidation of prochiral cyclobutanones 219
- Prochiral diol
Lipase-mediated asymmetric acetylation of prochiral diols directed towards total syntheses of biologically active molecules 183
- Protease
Protease-catalysed condensation–oligomerisation of hydrophobic peptides as a means of flavour modification 39
New vegetal sources for milk clotting enzymes 63

- Protein adsorption
Hydroxynitrile lyase adsorption at liquid/liquid interfaces 349
- Protein hydrolysate
Protease-catalysed condensation–oligomerisation of hydrophobic peptides as a means of flavour modification 39
- P. saccharophila*
The synthetic utility of KDPGal aldolase 103
- Pseudomonas azelaica*
Preparative scale production of 3-substituted catechols using a novel monooxygenase from *Pseudomonas azelaica* HBP 1 87
- Pseudomonas azelaica* HBP1
E. coli JM109 pHBP461, a recombinant biocatalyst for the regioselective monohydroxylation of *ortho*-substituted phenols to their corresponding 3-substituted catechols 311
- Pseudomonas fluorescens*
Enantioselectivity of a recombinant esterase from *Pseudomonas fluorescens* 199
Characterization and partial purification of an enantioselective arylacetone nitrilase from *Pseudomonas fluorescens* DSM 7155 467
- Pulegone
Biotransformation of monoterpenoid ketones by yeasts and yeast-like fungi 149
- Purification
Enantioselectivity of a recombinant esterase from *Pseudomonas fluorescens* 199
- Pyruvate aldolases
The synthetic utility of KDPGal aldolase 103
- Radioactive cellulose containing waste
Biotechnological degradation of the radioactive cellulose containing waste 441
- Radionuclide adsorption
Biotechnological degradation of the radioactive cellulose containing waste 441
- Rate-limiting
Stereoselectivity of aldolase catalytic antibodies 331
- Rat liver (S-9)
Asymmetric biotransformation of phenyl-C4 derivatives in rat liver (S-9) and baker's yeast 245
- Recombinant biocatalyst
E. coli JM109 pHBP461, a recombinant biocatalyst for the regioselective monohydroxylation of *ortho*-substituted phenols to their corresponding 3-substituted catechols 311
- Reduction
Highly stereoselective reduction of ketones by *Geotrichum candidum* 129
Biotransformation of monoterpenoid ketones by yeasts and yeast-like fungi 149
- Reduction of triple bond
Asymmetric biotransformation of phenyl-C4 derivatives in rat liver (S-9) and baker's yeast 245
- Reductive amination
Biocatalysis to amino acid-based chiral pharmaceuticals—examples and perspectives 1
- Regioselective oxidation
Asymmetric biotransformation of phenyl-C4 derivatives in rat liver (S-9) and baker's yeast 245
- Regioselectivity
Determination of the regioselectivity during epoxide hydrolase oxirane ring opening: a new method from racemic epoxides 213
- Reversed enantioselectivity
Reversed enantiopreference of *Candida rugosa* lipase supports different modes of binding enantiomers of a chiral acyl donor 283
- Reversed micelles
Kinetics and modelling of transesterification reactions catalysed by cutinase in AOT reversed micelles 361
- Rhizomucor miehei* lipase
Improvement of alcoholic fermentations by simultaneous extraction and enzymatic esterification of ethanol 29
- Rhizomucor pusillus*
Lipase production by solid state fermentation of olive cake and sugar cane bagasse 75
- Rhizopus rhizopodiformis*
Lipase production by solid state fermentation of olive cake and sugar cane bagasse 75
- Rhodococcus erythropolis*
Enantioselective nitrile hydratases and amidases from different bacterial isolates 137
- Rhodococcus* sp. NCIMB 11216
Novel *Rhodococcus* esterases by genetic engineering 261
- Scalaradial
Functionalization of natural drimanic compounds via microbial/chemical tandem reactions 203
- Screening
Synthesis of planar-chiral [2.2]paracyclophanes by biotransformations: screening for hydrolase activity for the kinetic resolution of 4-acetoxy-[2.2]paracyclophane 317
- Seleno-subtilisin
Straightforward development of stereoselective biocatalysts—from detergent to semisynthetic peroxidase seleno-subtilisin 339
- Semisynthetic peroxidase
Straightforward development of stereoselective biocatalysts—from detergent to semisynthetic peroxidase seleno-subtilisin 339
- Sequencing batch reactor (SBR)
Combined biodegradation of carbon, nitrogen and phosphorus from wastewaters 429
- Sialyl-Lewis^a
Transferase-catalyzed synthesis of non-natural oligosaccharide-libraries (SLe^a- and SLe^x-analogues) 125
- Sialyl-Lewis^x
Transferase-catalyzed synthesis of non-natural oligosaccharide-libraries (SLe^a- and SLe^x-analogues) 125
- Solid-to-solid conversion
Feasibility of the thermodynamically controlled synthesis of amoxicillin 249
- Specificity
Cardosins A and B, two new enzymes available for peptide synthesis 327
- Spectrophotometry
Dimerization of hydroxylated species of *m*-aminophenol by cytochrome *c* with hydrogen peroxide 475

- Sporobolomyces salmonicolor*
Chiral alcohol synthesis with yeast carbonyl reductases 321
- Stereoselective redox reaction
Asymmetric biotransformation of phenyl-C4 derivatives in rat liver (S-9) and baker's yeast 245
- Steroid hydroxylation
Microbial hydroxylation of 13 β -ethyl-4-gonene-3,17-dione 385
- Sterol
Influence of some operational parameters on the bioconversion of sitosterol with immobilized whole cells in organic medium 307
- Subcellular localization
Induction and localization of a lipoxigenase from *Fusarium proliferatum* 159
- Substituted aldehydes
Almond oxynitrilase-catalyzed transformation of substituted aldehydes. Part 2 223
- 3-Substituted catechols
E. coli JM109 pHBP461, a recombinant biocatalyst for the regioselective monohydroxylation of *ortho*-substituted phenols to their corresponding 3-substituted catechols 311
- Subtilisin
Straightforward development of stereoselective biocatalysts—from detergent to semisynthetic peroxidase seleno-subtilisin 339
- Sucrose synthase
Application of recombinant sucrose synthase-large scale synthesis of ADP-glucose 25
- Sugar esters
Enzymatic synthesis of alkylglycoside fatty acid esters catalyzed by an immobilized lipase 45
- Sugar-nucleotide synthesis
Sialyltransferase-catalyzed transfer of KDN onto oligosaccharides 235
- Sulfoxide
Biotransformation of S-13 thiaoleic acid to the corresponding sulfoxide by *Chlorella vulgaris* 211/8k 133
- Temperature
The influence of water activity on the enantioselectivity in the enzyme-catalyzed reduction of 2-pentanone 273
- Terpenes
Functionalization of natural drimanic compounds via microbial/chemical tandem reactions 203
Solvent selection for the biotransformation of terpenes by *Pseudomonas putida* 295
- Thermoanaerobium brockii*
The influence of water activity on the enantioselectivity in the enzyme-catalyzed reduction of 2-pentanone 273
- Thermodynamically controlled synthesis
Feasibility of the thermodynamically controlled synthesis of amoxicillin 249
- Thiafatty acid
Biotransformation of S-13 thiaoleic acid to the corresponding sulfoxide by *Chlorella vulgaris* 211/8k 133
- Thiomorpholine
Degradation of morpholine and thiomorpholine by an environmental *Mycobacterium* involves a cytochrome P450. Direct evidence of intermediates by in situ ¹H NMR 403
- Total synthesis
Lipase-mediated asymmetric acetylation of prochiral diols directed towards total syntheses of biologically active molecules 183
- Transesterification
Enzymatic synthesis of fatty acid ascorbyl esters 19
Molecular recognition of *sec*-alcohol enantiomers by *Candida antarctica* lipase B 267
Kinetics and modelling of transesterification reactions catalysed by cutinase in AOT reversed micelles 361
- Transgalactosylation
Transglycosylation catalyzed by a lipid-coated β -D-galactosidase in a two-phase aqueous–organic system 119
- Transketolase
Modified L-threose and D-erythrose as substrates of transketolase and fructose-1,6-bisphosphate aldolase. Application to the synthesis of new heptulose analogues 459
- Transpeptidation
Protease-catalysed condensation–oligomerisation of hydrophobic peptides as a means of flavour modification 39
- Triazolones
Metabolism of ¹⁴C-labelled 5-nitro-1,2,4-triazol-3-one (NTO): comparison between rat liver microsomes and bacterial metabolic pathways 395
- Trifluoromethyl
Highly stereoselective reduction of ketones by *Geotrichum candidum* 129
- Triglyceride hydrolysis
Analysis of a BSTR reactor for triglyceride hydrolysis with an immobilised cutinase 35
- Trypsin
Immobilization of trypsin on an enteric polymer Eudragit S-100 for the biocatalysis of macromolecular substrate 289
- Two-phase reaction system
Solvent selection for the biotransformation of terpenes by *Pseudomonas putida* 295
- Two-phase system
Transglycosylation catalyzed by a lipid-coated β -D-galactosidase in a two-phase aqueous–organic system 119
- Unnatural sugars
Fructose-1,6-bisphosphate aldolase and transketolase: Complementary tools for the de novo syntheses of monosaccharides and analogues 113
- Uridine 5'-diphosphate glucuronosyl transferases (UGTs)
The synthesis of 17 α -ethynylestradiol glucuronides by mammalian microsomes immobilised in hollow-fibres 379
- Verbenone
Biotransformation of monoterpenoid ketones by yeasts and yeast-like fungi 149
- Volatile fatty acids
Combined biodegradation of carbon, nitrogen and phosphorus from wastewaters 429
- Warburganal
Functionalization of natural drimanic compounds via microbial/chemical tandem reactions 203

Water activity

Enzymatic synthesis of fatty acid ascorbyl esters 19

The influence of water activity on the enantioselectivity in the enzyme-catalyzed reduction of 2-pentanone 273

Water-soluble polymer

Immobilization of trypsin on an enteric polymer Eudragit S-100 for the biocatalysis of macromolecular substrate 289

Yarrowia lipolytica

Acyl-CoA oxidase, a key step for lactone production by *Yarrowia lipolytica* 165

Yarrowia lipolytica, a yeast model for the genetic studies of hydroxy fatty acids biotransformation into lactones 175

Yeast

Biotransformation of monoterpenoid ketones by yeasts and yeast-like fungi 149

Yarrowia lipolytica, a yeast model for the genetic studies of hydroxy fatty acids biotransformation into lactones 175

Zinc metalloenzyme

The hydantoin amidohydrolase from *Arthrobacter aurescens* DSM 3745 is a zinc metalloenzyme 367