



Subject Index

- Acetylcholinesterase**
Immobilization of acetylcholinesterase on new modified acrylonitrile copolymer membranes 169
- Acylation**
Chemo-selectivity of the N,O-enzymatic acylation in organic media and in ionic liquids 110
- Adsorption**
Immobilization of D-hydantoinase in polyaniline 185
- α -Azido ketones**
Stereoselective anti-Prelog reduction of ketones by whole cells of *Comamonas testosteroni* in a 'substrate-coupled' approach 126
- Alcohol dehydrogenases**
Enzymatic ketone reductions with co-factor recycling: Improved reactions with ionic liquid co-solvents 19
Stereoselective anti-Prelog reduction of ketones by whole cells of *Comamonas testosteroni* in a 'substrate-coupled' approach 126
- Aldehyde–dextran**
Preparation of an immobilized–stabilized catalase derivative from *Aspergillus niger* having its multimeric structure stabilized: The effect of Zn^{2+} on enzyme stability 142
- Amino acids**
Immobilization of D-hydantoinase in polyaniline 185
- Androsta-1,4-diene-3,17-dione**
Biotransformation of 3-keto-androstanes by *Gongronella butleri* VKM F-1033 61
- Androst-4-ene-3,17-dione**
Biotransformation of 3-keto-androstanes by *Gongronella butleri* VKM F-1033 61
- Anti-Prelog**
Stereoselective anti-Prelog reduction of ketones by whole cells of *Comamonas testosteroni* in a 'substrate-coupled' approach 126
- Arthrobacter simplex***
Effect of phase composition on the bioconversion of methyltestosterone in a biphasic system 1
- Aspergillus oryzae***
Characterization of yeast cell surface displayed *Aspergillus oryzae* β -glucosidase 1 high hydrolytic activity for soybean isoflavone 69
Fusarium roseum and *Aspergillus oryzae*-mediated enantioselective reduction of benzils to benzoin 164
- Bacillus circulans* xylanase**
Mutation of non-conserved amino acids surrounding catalytic site to shift pH optimum of *Bacillus circulans* xylanase 130
- Baeyer–Villiger oxidation**
Biotransformation of N-piperidinylacetophenone with *Beauveria bassiana* ATCC-7159 30
- Beauveria bassiana***
Biotransformation of N-piperidinylacetophenone with *Beauveria bassiana* ATCC-7159 30
- Biocatalysis**
Effects of pore characters of mesoporous resorcinol–formaldehyde carbon gels on enzyme immobilization 137
- Biocatalytic membranes**
Advantages in using non-isothermal bioreactors in bioremediation of water polluted by phenol by means of immobilized laccase from *Rhus vernicifera* 177
- Biodiesel**
Improvement in lipase-catalyzed methanolysis of triacylglycerols for biodiesel production using a solvent engineering method 118
- Biofuel cell**
The direct electrochemistry behavior of Cyt c on the modified glassy carbon electrode by SBA-15 with a high-redox potential 93
- Biooxidations**
Biotransformation of N-piperidinylacetophenone with *Beauveria bassiana* ATCC-7159 30
- Bioreduction**
Fusarium roseum and *Aspergillus oryzae*-mediated enantioselective reduction of benzils to benzoin 164
- Biosensor**
Immobilization of acetylcholinesterase on new modified acrylonitrile copolymer membranes 169
- Biotransformation**
Biotransformation and tumor multidrug resistance reversal potency of polyoxygenated taxadienes 12
Biotransformation of 3-keto-androstanes by *Gongronella butleri* VKM F-1033 61
Stereoselective anti-Prelog reduction of ketones by whole cells of *Comamonas testosteroni* in a 'substrate-coupled' approach 126
- Biphasic system**
Effect of phase composition on the bioconversion of methyltestosterone in a biphasic system 1
- Catalytic residue**
The essential acidic amino acid residues for catalytic activity of an exo- β -D-glucosaminidase from *Trichoderma reesei* 55
- Catechin**
cDNA cloning of glycosyltransferases from Chinese wolfberry (*Lycium barbarum* L.) fruits and enzymatic synthesis of a catechin glucoside using a recombinant enzyme (UGT73A10) 84
- Cations**
Preparation of an immobilized–stabilized catalase derivative from *Aspergillus niger* having its multimeric structure stabilized: The effect of Zn^{2+} on enzyme stability 142
- Cell surface display**
Characterization of yeast cell surface displayed *Aspergillus oryzae* β -glucosidase 1 high hydrolytic activity for soybean isoflavone 69
- Chemical modification**
Advantages in using non-isothermal bioreactors in bioremediation of water polluted by phenol by means of immobilized laccase from *Rhus vernicifera* 177
- Chemo-selectivity**
Chemo-selectivity of the N,O-enzymatic acylation in organic media and in ionic liquids 110
- Chitosan**
Immobilization of acetylcholinesterase on new modified acrylonitrile copolymer membranes 169
- 4-Chloro-3-hydroxybutyronitrile**
Biochemical characterization of *Rhodococcus erythropolis* N'4 nitrile hydratase acting on 4-chloro-3-hydroxybutyronitrile 157
- Cholesterol esterase**
Optical resolution of hexamethylbiphenol by cholesterol esterase and porcine pancreas lipase 104
- Co-factor recycling**
Enzymatic ketone reductions with co-factor recycling: Improved reactions with ionic liquid co-solvents 19

- Co-solvent mixture
Improvement in lipase-catalyzed methanolysis of triacylglycerols for biodiesel production using a solvent engineering method 118
- Cytochrome *c*
The direct electrochemistry behavior of Cyt *c* on the modified glassy carbon electrode by SBA-15 with a high-redox potential 93
- Dehydrogenation
Effect of phase composition on the bioconversion of methyltestosterone in a biphasic system 1
- D-Hydantoinase
Immobilization of D-hydantoinase in polyaniline 185
- 2,2'-Dihydroxy-4,4',5,5',6,6'-hexamethylbiphenyl
Optical resolution of hexamethylbiphenol by cholesterol esterase and porcine pancreas lipase 104
- Enantioselective
Biochemical characterization of *Rhodococcus erythropolis* N'4 nitrile hydratase acting on 4-chloro-3-hydroxybutyronitrile 157
- Enantioselectivity
Enantioselective enzymatic hydrolysis of racemic glycidyl butyrate by lipase from *Bacillus subtilis* with improved catalytic properties 152
- Enzymatic synthesis
cDNA cloning of glycosyltransferases from Chinese wolfberry (*Lycium barbarum* L.) fruits and enzymatic synthesis of a catechin glucoside using a recombinant enzyme (UGT73A10) 84
- Enzyme
Octadecanoic acid/silica particles synthesis for enzyme immobilization: Characterization and evaluation of biocatalytic activity 43
- Enzyme activity
Octadecanoic acid/silica particles synthesis for enzyme immobilization: Characterization and evaluation of biocatalytic activity 43
Influence of differently modified palygorskites in the immobilization of a lipase 49
- Enzyme electrode
The direct electrochemistry behavior of Cyt *c* on the modified glassy carbon electrode by SBA-15 with a high-redox potential 93
- Enzyme kinetic
Preparation of poly(glycidylmethacrylate–methylmethacrylate) magnetic beads: Application in lipase immobilization 76
- Enzyme stability
Preparation of poly(glycidylmethacrylate–methylmethacrylate) magnetic beads: Application in lipase immobilization 76
Preparation of an immobilized–stabilized catalase derivative from *Aspergillus niger* having its multimeric structure stabilized: The effect of Zn²⁺ on enzyme stability 142
- Exo-β-D-glucosaminidase
The essential acidic amino acid residues for catalytic activity of an exo-β-D-glucosaminidase from *Trichoderma reesei* 55
- Exochitosanase
The essential acidic amino acid residues for catalytic activity of an exo-β-D-glucosaminidase from *Trichoderma reesei* 55
- Fungus oxidations
Biotransformation of *N*-piperidinylacetophenone with *Beauveria bassiana* ATCC-7159 30
- Fusarium roseum*
Fusarium roseum and *Aspergillus oryzae*-mediated enantioselective reduction of benzils to benzoin 164
- Ginkgo biloba*
Biotransformation and tumor multidrug resistance reversal potency of polyoxygenated taxadienes 12
- Glucose dehydrogenase
Enzymatic ketone reductions with co-factor recycling: Improved reactions with ionic liquid co-solvents 19
- β-Glucosidase
Characterization of yeast cell surface displayed *Aspergillus oryzae* β-glucosidase 1 high hydrolytic activity for soybean isoflavone 69
- Glutathione peroxidase
Studies on telluric hyaluronic acid (TeHA): A novel antioxidant 99
- Glyceride
The weakened 1,3-specificity in the consecutive microwave assisted enzymatic synthesis of glycerides 6
- Glycidyl butyrate
Enantioselective enzymatic hydrolysis of racemic glycidyl butyrate by lipase from *Bacillus subtilis* with improved catalytic properties 152
- Gongronella butleri*
Biotransformation of 3-keto-androstanes by *Gongronella butleri* VKM F-1033 61
- GPX mimic
Studies on telluric hyaluronic acid (TeHA): A novel antioxidant 99
- High enantioselectivity
Optical resolution of hexamethylbiphenol by cholesterol esterase and porcine pancreas lipase 104
- Hyaluronic acid
Studies on telluric hyaluronic acid (TeHA): A novel antioxidant 99
- Hydrolytic activity
Enantioselective enzymatic hydrolysis of racemic glycidyl butyrate by lipase from *Bacillus subtilis* with improved catalytic properties 152
- α-Hydroxy ketones
Fusarium roseum and *Aspergillus oryzae*-mediated enantioselective reduction of benzils to benzoin 164
- 9α-Hydroxy-androst-4-ene-3,17-dione
Biotransformation of 3-keto-androstanes by *Gongronella butleri* VKM F-1033 61
- Hydroxyalkylphosphine oxides
Evaluation of enantioselectivity in lipase-catalyzed acylation of hydroxyalkylphosphine oxides 146
- Hydroxylation
Transformation of 3β-hydroxy-5-en-steroids by *Mucor racemosus* 37
Biotransformation of 3-keto-androstanes by *Gongronella butleri* VKM F-1033 61
- Immobilization
Octadecanoic acid/silica particles synthesis for enzyme immobilization: Characterization and evaluation of biocatalytic activity 43
Effects of pore characters of mesoporous resorcinol–formaldehyde carbon gels on enzyme immobilization 137
Immobilization of acetylcholinesterase on new modified acrylonitrile copolymer membranes 169
- Immobilization process
Immobilization of D-hydantoinase in polyaniline 185
- Immobilized enzyme
Influence of differently modified palygorskites in the immobilization of a lipase 49
Preparation of poly(glycidylmethacrylate–methylmethacrylate) magnetic beads: Application in lipase immobilization 76
- Ionic liquid
Enzymatic ketone reductions with co-factor recycling: Improved reactions with ionic liquid co-solvents 19
Chemo-selectivity of the N,O-enzymatic acylation in organic media and in ionic liquids 110
- Ion-pair complex
Chemo-selectivity of the N,O-enzymatic acylation in organic media and in ionic liquids 110
- Isoflavone
Characterization of yeast cell surface displayed *Aspergillus oryzae* β-glucosidase 1 high hydrolytic activity for soybean isoflavone 69
- Jatropha curcas* L. seed oil
Improvement in lipase-catalyzed methanolysis of triacylglycerols for biodiesel production using a solvent engineering method 118
- Ketone reduction
Enzymatic ketone reductions with co-factor recycling: Improved reactions with ionic liquid co-solvents 19
- 3-Keto-steroid
Biotransformation of 3-keto-androstanes by *Gongronella butleri* VKM F-1033 61
- Kinetic resolution
Enantioselective enzymatic hydrolysis of racemic glycidyl butyrate by lipase from *Bacillus subtilis* with improved catalytic properties 152
- Laccase
Advantages in using non-isothermal bioreactors in bioremediation of water polluted by phenol by means of immobilized laccase from *Rhus vernicifera* 177
- Lipase
The weakened 1,3-specificity in the consecutive microwave assisted enzymatic synthesis of glycerides 6
Influence of differently modified palygorskites in the immobilization of a lipase 49

- Preparation of poly(glycidylmethacrylate–methylmethacrylate) magnetic beads: Application in lipase immobilization 76
- Chemo-selectivity of the N,O-enzymatic acylation in organic media and in ionic liquids 110
- Evaluation of enantioselectivity in lipase-catalyzed acylation of hydroxyalkylphosphine oxides 146
- Enantioselective enzymatic hydrolysis of racemic glycidyl butyrate by lipase from *Bacillus subtilis* with improved catalytic properties 152
- Lycium barbarum* L.
cDNA cloning of glycosyltransferases from Chinese wolfberry (*Lycium barbarum* L.) fruits and enzymatic synthesis of a catechin glucoside using a recombinant enzyme (UGT73A10) 84
- Magnetic beads
Preparation of poly(glycidylmethacrylate–methylmethacrylate) magnetic beads: Application in lipase immobilization 76
- Membrane
Immobilization of acetylcholinesterase on new modified acrylonitrile copolymer membranes 169
- Mesoporous material
Effects of pore characters of mesoporous resorcinol–formaldehyde carbon gels on enzyme immobilization 137
- Methyltestosterone
Effect of phase composition on the bioconversion of methyltestosterone in a biphasic system 1
- Microbial transformation
Transformation of 3 β -hydroxy-5-en-steroids by *Mucor racemosus* 37
- Microwave
The weakened 1,3-specificity in the consecutive microwave assisted enzymatic synthesis of glycerides 6
- β -4-O-methylglucosidation
Biotransformation of *N*-piperidinylacetophenone with *Beauveria bassiana* ATCC-7159 30
- Mitochondria
Studies on telluric hyaluronic acid (TeHA): A novel antioxidant 99
- Modification
Immobilization of acetylcholinesterase on new modified acrylonitrile copolymer membranes 169
- Mucor racemosus*
Transformation of 3 β -hydroxy-5-en-steroids by *Mucor racemosus* 37
- Multimeric enzymes
Preparation of an immobilized–stabilized catalase derivative from *Aspergillus niger* having its multimeric structure stabilized: The effect of Zn²⁺ on enzyme stability 142
- Mutation
Mutation of non-conserved amino acids surrounding catalytic site to shift pH optimum of *Bacillus circulans* xylanase 130
- Nitrile hydratase
Biochemical characterization of *Rhodococcus erythropolis* N'4 nitrile hydratase acting on 4-chloro-3-hydroxybutyronitrile 157
- Non-conserved residues
Mutation of non-conserved amino acids surrounding catalytic site to shift pH optimum of *Bacillus circulans* xylanase 130
- Non-isothermal bioreactors
Advantages in using non-isothermal bioreactors in bioremediation of water polluted by phenol by means of immobilized laccase from *Rhus vernicifera* 177
- Nonthermal effect
The weakened 1,3-specificity in the consecutive microwave assisted enzymatic synthesis of glycerides 6
- α -Nitro ketones
Stereoselective anti-Prelog reduction of ketones by whole cells of *Comamonas testosteroni* in a 'substrate-coupled' approach 126
- Novozym435
Improvement in lipase-catalyzed methanolysis of triacylglycerols for biodiesel production using a solvent engineering method 118
- Optical resolution
Optical resolution of hexamethylbiphenol by cholesterol esterase and porcine pancreas lipase 104
Evaluation of enantioselectivity in lipase-catalyzed acylation of hydroxyalkylphosphine oxides 146
- Optimum pH prediction
Mutation of non-conserved amino acids surrounding catalytic site to shift pH optimum of *Bacillus circulans* xylanase 130
- Palygorskite derivatization
Influence of differently modified palygorskites in the immobilization of a lipase 49
- Phenol
Advantages in using non-isothermal bioreactors in bioremediation of water polluted by phenol by means of immobilized laccase from *Rhus vernicifera* 177
- Plant secondary product glucosyltransferase (PSPG)
cDNA cloning of glycosyltransferases from Chinese wolfberry (*Lycium barbarum* L.) fruits and enzymatic synthesis of a catechin glucoside using a recombinant enzyme (UGT73A10) 84
- Polyaniline
Immobilization of D-hydantoinase in polyaniline 185
- Porcine pancreas lipase
Optical resolution of hexamethylbiphenol by cholesterol esterase and porcine pancreas lipase 104
- Properties
Immobilization of acetylcholinesterase on new modified acrylonitrile copolymer membranes 169
- Resorcinol–formaldehyde carbon gels
Effects of pore characters of mesoporous resorcinol–formaldehyde carbon gels on enzyme immobilization 137
- Rhodococcus erythropolis*
Biochemical characterization of *Rhodococcus erythropolis* N'4 nitrile hydratase acting on 4-chloro-3-hydroxybutyronitrile 157
- Saccharomyces cerevisiae*
Characterization of yeast cell surface displayed *Aspergillus oryzae* β -glucosidase 1 high hydrolytic activity for soybean isoflavone 69
- SBA-15
The direct electrochemistry behavior of Cyt c on the modified glassy carbon electrode by SBA-15 with a high-redox potential 93
- Serine protease
Effects of pore characters of mesoporous resorcinol–formaldehyde carbon gels on enzyme immobilization 137
- Silica
Octadecanoic acid/silica particles synthesis for enzyme immobilization: Characterization and evaluation of biocatalytic activity 43
- Site-directed mutagenesis
The essential acidic amino acid residues for catalytic activity of an exo- β -D-glucosaminidase from *Trichoderma reesei* 55
- Solvent engineering
Improvement in lipase-catalyzed methanolysis of triacylglycerols for biodiesel production using a solvent engineering method 118
- 1,3-Specificity
The weakened 1,3-specificity in the consecutive microwave assisted enzymatic synthesis of glycerides 6
- Stabilization of multimeric enzymes
Preparation of an immobilized–stabilized catalase derivative from *Aspergillus niger* having its multimeric structure stabilized: The effect of Zn²⁺ on enzyme stability 142
- Stereoselective reduction
Stereoselective anti-Prelog reduction of ketones by whole cells of *Comamonas testosteroni* in a 'substrate-coupled' approach 126
- Steroids
Transformation of 3 β -hydroxy-5-en-steroids by *Mucor racemosus* 37
- Taxadienes
Biotransformation and tumor multidrug resistance reversal potency of polyoxygenated taxadienes 12
- Tellurium
Studies on telluric hyaluronic acid (TeHA): A novel antioxidant 99
- Trichoderma reesei* (*Hypocrea jecorina*)
The essential acidic amino acid residues for catalytic activity of an exo- β -D-glucosaminidase from *Trichoderma reesei* 55
- Tumor MDR reversal agents
Biotransformation and tumor multidrug resistance reversal potency of polyoxygenated taxadienes 12
- UGT73A10
cDNA cloning of glycosyltransferases from Chinese wolfberry (*Lycium barbarum* L.) fruits and enzymatic synthesis of a catechin glucoside using a recombinant enzyme (UGT73A10) 84
- Whole-cell reaction
Fusarium roseum and *Aspergillus oryzae*-mediated enantioselective reduction of benzils to benzoin 164