

JOURNAL OF MOLECULAR CATALYSIS A: CHEMICAL

www.elsevier.com/locate/molcata

Subject index

Journal of Molecular Catalysis A: Chemical 219 (2004) 401-407

²⁷Al MAS solid state NMR

²⁷Al MAS solid state NMR study on coordinative nature of alkyl-Al cocatalysts on a novel SiO₂-supported Ziegler–Natta catalyst for controlled multiplicity of molecular weight distribution (Liu, B. (219) 363) Active metal sites

Investigations on the novel niobium incorporated mesoporous catalytic materials (Akolekar, D.B. (219) 301)

Adsorption sites

Energetically preferred locations of hydrocarbons in the structure of a $Pt-Sn/\gamma-Al_2O_3$ catalyst: docking method (Szyja, B. (219) 343)

Adsorption

The control of platinum impregnation by PZC alteration of oxides and carbon (Hao, X. (219) 97)

Direct observation of thermally activated NO adsorbate species on Au-TiO₂: DRIFTS studies (Debeila, M.A. (219) 131)

Alkane oxidation

Oxidation of *n*-heptane with molecular oxygen using heterogeneous catalyst formed by covalently binding [1,2-bis(salicylidene amino)-phenylene] zirconium complex to modified silica gel (Anisia, K.S. (219) 319)

Alkanes

Oxidation of alkanes with *m*-chloroperbenzoic acid catalyzed by iron(III) chloride and a polydentate amine (Shul'pin, G.B. (219) 255) Alkyl-Al cocatalyst

²⁷Al MAS solid state NMR study on coordinative nature of alkyl-Al cocatalysts on a novel SiO₂-supported Ziegler–Natta catalyst for controlled multiplicity of molecular weight distribution (Liu, B. (219) 363) Allyl ethers

Isomerization of allyl aryl ethers to their 1-propenyl derivatives catalysed by ruthenium complexes (Krompiec, S. (219) 29)

Aluminum precursor

Synthesis and characterization of mesoporous alumina for use as a catalyst support in the hydrodechlorination of 1,2-dichloropropane: effect of preparation condition of mesoporous alumina (Kim, P. (219) 87)

Amino-functionalization

Immobilization of rhodium complexes ligated with triphenyphosphine analogs on amino-functionalized MCM-41 and MCM-48 for 1-hexene hydroformylation (Peng, Q. (219) 175)

Ammonia synthesis

New ammonia synthesis catalysts based on supported potassium carbonyl ruthenates as precursors of catalytically active ruthenium particles and potassium promoter (Yunusov, S.M. (219) 149)

Anatase

Characterization of copper oxide supported on ceria-modified anatase (Zhu, H. (219) 155)

Artificial enzymes

Bifunctional catalysis of ester hydrolysis: novel hydrolytic enzyme models based on xanthene framework (Saki, N. (219) 227)

Arylpiperidinols

An efficient and environmental-friendly synthesis of 4-hydroxy-arylpiperidines using hydrotalcite catalyst (Cwik, A. (219) 377)

Asymmetric epoxidation

Catalytic and asymmetric epoxidation by novel D₄-symmetric chiral porphyrin derived from C₂-symmetric diol (Nakagawa, H. (219) 221)

Asymmetric hydrogenation

Ruthenium-catalysed asymmetric hydrogenation with fluoroalkylated BINAP ligands in supercritical CO₂ (Hu, Y. (219) 57)

The asymmetric hydrogenation of 1,1,4,4,7-pentamethyl-2-methylen-1,2,3,4-tetrahydro-naphthalene, a viable catalytic approach to the synthesis of non-racemic Fixolide[®] (Ciappa, A. (219) 217)

Au-TiO₂

Direct observation of thermally activated NO adsorbate species on Au–TiO₂: DRIFTS studies (Debeila, M.A. (219) 131)

Batch

Oxidation of *n*-heptane with molecular oxygen using heterogeneous catalyst formed by covalently binding [1,2-bis(salicylidene amino)-phenylene] zirconium complex to modified silica gel (Anisia, K.S. (219) 319)

Benzaldehyde

Experimental and theoretical investigation of the relationship between the stericstructure of Schiff bases and the diastereoselectivity of pinacol produced from benzaldehyde (Tian, Q. (219) 315)

BET

Investigations on the novel niobium incorporated mesoporous catalytic materials (Akolekar, D.B. (219) 301)

Biaryls

Bis(triphenylphosphine)palladium(II)phthalimide – an easily prepared precatalyst for efficient Suzuki–Miyaura coupling of aryl bromides (Chaignon, N.M. (219) 191)

BINAP

Ruthenium-catalysed asymmetric hydrogenation with fluoroalkylated BINAP ligands in supercritical CO₂ (Hu, Y. (219) 57)

Biomimetic catalysts

Bifunctional catalysis of ester hydrolysis: novel hydrolytic enzyme models based on xanthene framework (Saki, N. (219) 227)

Biomimetics

Oxidation of alkanes with *m*-chloroperbenzoic acid catalyzed by iron(III) chloride and a polydentate amine (Shul'pin, G.B. (219) 255)

2,6-Bis(imino)pyridyl iron complex

Ethylene oligomerization catalyzed by a novel iron complex containing fluoro and methyl substituents (Zhang, Z. (219) 249)

Boron salts

Monotitanocene catalysts: an ESR study of Ti(III) derivatives formed in presence of MAO and other organoaluminium compounds (Bonoldi, L. (219) 47)

Carbene carbon monoxide coupling

Octacarbonyl dicobalt-catalyzed selective carbonylation of (trimethylsilyl)diazomethane to obtain (trimethylsilyl)ketene (Ungvári, N. (219) 7)

Carbon monoxide

Characterization and catalytic activity of *trans*- $[Pd(COCH_2CH_3)(T-sO)(PPh_3)_2]$, isolated from the hydro-methoxycarbonylation of ethene catalyzed by $[Pd(TsO)_2(PPh_3)_2]$ (Cavinato, G. (219) 233)

Carbon nanofibers

Single-stage liquid-phase synthesis of methyl isobutyl ketone under mild conditions (Winter, F. (219) 273)

Cai	bon	
	The	

The control of platinum impregnation by PZC alteration of oxides and carbon (Hao, X. (219) 97)

Catalase activity

Catalytic activities of oxo–Mn–triazacyclononane complexes: spectral studies and single crystal X-ray structure of [Mn₄O₆(1,4,7-triazacyclononane)₄](ClO₄)₄·H₂O (Bennur, T.H. (219) 209)

Catalysis

Bis(triphenylphosphine)palladium(II)phthalimide – an easily prepared precatalyst for efficient Suzuki–Miyaura coupling of aryl bromides (Chaignon, N.M. (219) 191)

A mechanistic study of the epoxidation of cinnamic acid by hydrogen peroxide catalysed by manganese 1,4,7-trimethyl-1,4,7-triazacyclononane complexes (Gilbert, B.C. (219) 265)

Oxidation of *n*-heptane with molecular oxygen using heterogeneous catalyst formed by covalently binding [1,2-bis(salicylidene amino)-phenylene] zirconium complex to modified silica gel (Anisia, K.S. (219) 319)

Catalyst preparation

The control of platinum impregnation by PZC alteration of oxides and carbon (Hao, X. (219) 97)

Catalyst selectivity

Oxidation of *n*-heptane with molecular oxygen using heterogeneous catalyst formed by covalently binding [1,2-bis(salicylidene amino)-phenylene] zirconium complex to modified silica gel (Anisia, K.S. (219) 319)

Catalyst support

Oxidation of *n*-heptane with molecular oxygen using heterogeneous catalyst formed by covalently binding [1,2-bis(salicylidene amino)-phenylene] zirconium complex to modified silica gel (Anisia, K.S. (219) 319)

Catalyst

Energetically preferred locations of hydrocarbons in the structure of a $Pt-Sn/\gamma-Al_2O_3$ catalyst: docking method (Szyja, B. (219) 343)

Ceria

Characterization of copper oxide supported on ceria-modified anatase (Zhu, H. (219) 155)

Chromate species

High resolution X-ray photoelectron spectroscopic analysis of transformation of surface chromium species on Phillips CrO_x/SiO_2 catalysts isothermally calcined at various temperatures (Liu, B. (219) 165)

Chromia-based catalyst

Investigation into chromia-based catalyst and its application in preparing difluoromethane (Quan, H.-d. (219) 79)

Chromium precursors

Reduction and desorption with carbon monoxide in Cr/SiO_2 catalysts for ethylene polymerization (Gaspar, A.B. (219) 357)

Chromium(III) acetate

High resolution X-ray photoelectron spectroscopic analysis of transformation of surface chromium species on Phillips CrO_x/SiO_2 catalysts isothermally calcined at various temperatures (Liu, B. (219) 165)

Clay catalysts

Supported catalysts for $DeNO_x$ reaction based on iron clays (Belver, C. (219) 309)

Laser induced photocatalytic generation of hydrogen and oxygen over NiO and TiO₂ (Hameed, A. (219) 109)

CNF

Single-stage liquid-phase synthesis of methyl isobutyl ketone under mild conditions (Winter, F. (219) 273)

CO complexes

Investigations on the novel niobium incorporated mesoporous catalytic materials (Akolekar, D.B. (219) 301)

CO

Reduction and desorption with carbon monoxide in Cr/SiO₂ catalysts for ethylene polymerization (Gaspar, A.B. (219) 357)

Cobalt

 β -Selective epoxidation of Δ^5 -steroids by O₂ using surface functionalised silica supported cobalt catalysts (Silvestre, S.M. (219) 143)

Cone angle

Immobilization of rhodium complexes ligated with triphenyphosphine analogs on amino-functionalized MCM-41 and MCM-48 for 1-hexene hydroformylation (Peng, Q. (219) 175)

Copper oxide species

Characterization of copper oxide supported on ceria-modified anatase (Zhu, H. (219) 155)

Copper

Copper (II) Schiff base catalysed aerobic oxidative coupling of 2naphthols: an efficient and simple synthesis of binaphthols (Sharma, V.B. (219) 61)

Coupling

Copper (II) Schiff base catalysed aerobic oxidative coupling of 2naphthols: an efficient and simple synthesis of binaphthols (Sharma, V.B. (219) 61)

Experimental and theoretical investigation of the relationship between the stericstructure of Schiff bases and the diastereoselectivity of pinacol produced from benzaldehyde (Tian, Q. (219) 315)

Cr/SiO₂

Reduction and desorption with carbon monoxide in Cr/SiO₂ catalysts for ethylene polymerization (Gaspar, A.B. (219) 357)

Cross-coupling

Bis(triphenylphosphine)palladium(II)phthalimide – an easily prepared precatalyst for efficient Suzuki–Miyaura coupling of aryl bromides (Chaignon, N.M. (219) 191)

Cyclisation

An efficient and environmental-friendly synthesis of 4-hydroxy-arylpiperidines using hydrotalcite catalyst (Cwik, A. (219) 377)

Cyclohexanediol

Zinc phthalocyanine photocatalyzed oxidation of cyclohexene (Sehlotho, N. (219) 201)

Cyclohexene hydroperoxide

Zinc phthalocyanine photocatalyzed oxidation of cyclohexene (Sehlotho, N. (219) 201)

Cyclohexene oxide

Zinc phthalocyanine photocatalyzed oxidation of cyclohexene (Sehlotho, N. (219) 201)

Cyclohexene

Zinc phthalocyanine photocatalyzed oxidation of cyclohexene (Sehlotho, N. (219) 201)

Cyclohexenol

Zinc phthalocyanine photocatalyzed oxidation of cyclohexene (Sehlotho, N. (219) 201)

Cyclohexenone

Zinc phthalocyanine photocatalyzed oxidation of cyclohexene (Sehlotho, N. (219) 201)

```
Cytochrome P450
```

Application of novel metallocomplexes for mimicking of cytochrome P450. Analysis of product distribution for 1-hexene as a substrate (Pulkkinen, J. (219) 21)

D₄-symmetric chiral porphyrin

Catalytic and asymmetric epoxidation by novel D_4 -symmetric chiral porphyrin derived from C_2 -symmetric diol (Nakagawa, H. (219) 221)

Dehalogenation

d-catalyzed Heck arylation of cycloalkenes—studies on selectivity comparing homogeneous and heterogeneous catalysts (Djakovitch, L. (219) 121)

Difluoromethane

Investigation into chromia-based catalyst and its application in preparing difluoromethane (Quan, H.-d. (219) 79)

Clean fuels

Dihydrocinchonidine

Heterogeneous asymmetric reactions. Part 40. New data on repeated use of Pt-alumina catalyst during enantioselective hydrogenation of ethyl pyruvate (Balázsik, K. (219) 383)

Dispersion capacity (DC)

Characterization of copper oxide supported on ceria-modified anatase (Zhu, H. (219) 155)

Docking

Energetically preferred locations of hydrocarbons in the structure of a $Pt-Sn/\gamma-Al_2O_3$ catalyst: docking method (Szyja, B. (219) 343)

Doping

- Doping metal ions only onto the catalyst surface (Xu, J.-C. (219) 351) Double bond migration
 - Isomerization of allyl aryl ethers to their 1-propenyl derivatives catalysed by ruthenium complexes (Krompiec, S. (219) 29)

DRIFTS

Direct observation of thermally activated NO adsorbate species on Au-TiO₂: DRIFTS studies (Debeila, M.A. (219) 131)

DRIFTS

Reduction and desorption with carbon monoxide in Cr/SiO_2 catalysts

for ethylene polymerization (Gaspar, A.B. (219) 357) Dynamics of charge carriers

Electronic and photocatalytic properties of purine(s)-capped CdS nanoparticles in the presence of tryptophol (Kumar, A. (219) 65)

Electrochemical techniques

Direct regeneration of NADH on a ruthenium modified glassy carbon electrode (Azem, A. (219) 283)

Electron spin resonance

Monotitanocene catalysts: an ESR study of Ti(III) derivatives formed in presence of MAO and other organoaluminium compounds (Bonoldi, L. (219) 47)

Electronic properties

Electronic and photocatalytic properties of purine(s)-capped CdS nanoparticles in the presence of tryptophol (Kumar, A. (219) 65)

Enantioselective

Heterogeneous asymmetric reactions. Part 40. New data on repeated use of Pt-alumina catalyst during enantioselective hydrogenation of ethyl pyruvate (Balázsik, K. (219) 383)

Encapsulated complex catalysts

Ethylene selective dimerization on polymer complex catalyst of Ni(4,4'-bipyridine)Cl₂ coactivated with AlCl(C₂H₅)₂ (Angelescu, E. (219) 13)

Enzyme mimick

Application of novel metallocomplexes for mimicking of cytochrome P450. Analysis of product distribution for 1-hexene as a substrate (Pulkkinen, J. (219) 21)

Bifunctional catalysis of ester hydrolysis: novel hydrolytic enzyme models based on xanthene framework (Saki, N. (219) 227)

Enzyme models

Bifunctional catalysis of ester hydrolysis: novel hydrolytic enzyme models based on xanthene framework (Saki, N. (219) 227)

Epoxidation

A mechanistic study of the epoxidation of cinnamic acid by hydrogen peroxide catalysed by manganese 1,4,7-trimethyl-1,4,7-triazacyclononane complexes (Gilbert, B.C. (219) 265)

5β,6β-Epoxides

 β -Selective epoxidation of Δ^5 -steroids by O₂ using surface functionalised silica supported cobalt catalysts (Silvestre, S.M. (219) 143)

Ethene

 $\label{eq:characterization and catalytic activity of trans-[Pd(COCH_2CH_3) (TsO)(PPh_3)_2], isolated from the hydro-methoxycarbonylation of ethene catalyzed by [Pd(TsO)_2(PPh_3)_2] (Cavinato, G. (219) 233)$

Ethyl pyruvate

Heterogeneous asymmetric reactions. Part 40. New data on repeated use of Pt-alumina catalyst during enantioselective hydrogenation of ethyl pyruvate (Balázsik, K. (219) 383)

Ethylene dimerization

Ethylene selective dimerization on polymer complex catalyst of Ni(4,4'bipyridine)Cl₂ coactivated with AlCl(C_2H_5)₂ (Angelescu, E. (219) 13) Ethylene oligomerization

Ethylene oligomerization catalyzed by a novel iron complex containing fluoro and methyl substituents (Zhang, Z. (219) 249)

Ethylene polymerization

High resolution X-ray photoelectron spectroscopic analysis of transformation of surface chromium species on Phillips CrO_x/SiO_2 catalysts isothermally calcined at various temperatures (Liu, B. (219) 165) Reduction and desorption with carbon monoxide in Cr/SiO₂ catalysts

for ethylene polymerization (Gaspar, A.B. (219) 357)

²⁷Al MAS solid state NMR study on coordinative nature of alkyl-Al cocatalysts on a novel SiO₂-supported Ziegler–Natta catalyst for controlled multiplicity of molecular weight distribution (Liu, B. (219) 363)

Fixolide

The asymmetric hydrogenation of 1,1,4,4,7-pentamethyl-2-methylen-1,2,3,4-tetrahydro-naphthalene, a viable catalytic approach to the synthesis of non-racemic Fixolide[®] (Ciappa, A. (219) 217)

Fluorous

Ruthenium-catalysed asymmetric hydrogenation with fluoroalkylated BINAP ligands in supercritical CO₂ (Hu, Y. (219) 57)

Fragrances

The asymmetric hydrogenation of 1,1,4,4,7-pentamethyl-2-methylen-1,2,3,4-tetrahydro-naphthalene, a viable catalytic approach to the synthesis of non-racemic Fixolide[®] (Ciappa, A. (219) 217)

FTIR

Investigations on the novel niobium incorporated mesoporous catalytic materials (Akolekar, D.B. (219) 301)

Fuel cell electrocatalyst

The control of platinum impregnation by PZC alteration of oxides and carbon (Hao, X. (219) 97)

Furan-2-carboxylic acid

On the role of modifier structure in the palladium-catalyzed enantioselective hydrogenation of furan-2-carboxylic acid (Maris, M. (219) 371)

Heck arylation

Pd-catalyzed Heck arylation of cycloalkenes—studies on selectivity comparing homogeneous and heterogeneous catalysts (Djakovitch, L. (219) 121)

Heteroaryls

Bis(triphenylphosphine)palladium(II)phthalimide – an easily prepared precatalyst for efficient Suzuki–Miyaura coupling of aryl bromides (Chaignon, N.M. (219) 191)

Heterogeneous catalysis

Synthesis and characterization of soluble alkali metal, alkaline earth metal and related Keggin-type $[PMo_{12}O_{40}]^{3-}$ salts for heterogeneous catalysis reactions (Silviani, E. (219) 327)

Heterogeneous catalyst

Pd-catalyzed Heck arylation of cycloalkenes—studies on selectivity comparing homogeneous and heterogeneous catalysts (Djakovitch, L. (219) 121)

 β -Selective epoxidation of Δ^5 -steroids by O₂ using surface functionalised silica supported cobalt catalysts (Silvestre, S.M. (219) 143)

1-Hexene

Immobilization of rhodium complexes ligated with triphenyphosphine analogs on amino-functionalized MCM-41 and MCM-48 for 1-hexene hydroformylation (Peng, Q. (219) 175)

High-pressure

High-pressure effects in the homogeneously catalyzed hydroformylation of olefins (Albers, J. (219) 41)

Homogeneous catalysis

High-pressure effects in the homogeneously catalyzed hydroformylation of olefins (Albers, J. (219) 41) Homogeneous catalyst

Pd-catalyzed Heck arylation of cycloalkenes—studies on selectivity comparing homogeneous and heterogeneous catalysts (Djakovitch, L. (219) 121)

Hydrocarbon oxidation

Homogeneous selective peroxidic oxidation of hydrocarbons using an oxovanadium based catalyst (Si, T.K. (219) 241)

Hydrodechlorination

Synthesis and characterization of mesoporous alumina for use as a catalyst support in the hydrodechlorination of 1,2-dichloropropane: effect of preparation condition of mesoporous alumina (Kim, P. (219) 87)

Hydroformylation

High-pressure effects in the homogeneously catalyzed hydroformylation of olefins (Albers, J. (219) 41)

Immobilization of rhodium complexes ligated with triphenyphosphine analogs on amino-functionalized MCM-41 and MCM-48 for 1-hexene hydroformylation (Peng, Q. (219) 175)

Hydrogen peroxide

Homogeneous selective peroxidic oxidation of hydrocarbons using an oxovanadium based catalyst (Si, T.K. (219) 241)

A mechanistic study of the epoxidation of cinnamic acid by hydrogen peroxide catalysed by manganese 1,4,7-trimethyl-1,4,7-triazacyclononane complexes (Gilbert, B.C. (219) 265)

Hydrogen

Laser induced photocatalytic generation of hydrogen and oxygen over NiO and TiO_2 (Hameed, A. (219) 109)

Hydrogenation

On the role of modifier structure in the palladium-catalyzed enantioselective hydrogenation of furan-2-carboxylic acid (Maris, M. (219) 371)

Heterogeneous asymmetric reactions. Part 40. New data on repeated use of Pt-alumina catalyst during enantioselective hydrogenation of ethyl pyruvate (Balázsik, K. (219) 383)

Hydrotalcite

Single-stage liquid-phase synthesis of methyl isobutyl ketone under mild conditions (Winter, F. (219) 273)

An efficient and environmental-friendly synthesis of 4-hydroxy-arylpiperidines using hydrotalcite catalyst (Cwik, A. (219) 377)

Immobilization

Immobilization of rhodium complexes ligated with triphenyphosphine analogs on amino-functionalized MCM-41 and MCM-48 for 1-hexene hydroformylation (Peng, Q. (219) 175)

Impregnation

The control of platinum impregnation by PZC alteration of oxides and carbon (Hao, X. (219) 97)

Iridium

The asymmetric hydrogenation of 1,1,4,4,7-pentamethyl-2-methylen-1,2,3,4-tetrahydro-naphthalene, a viable catalytic approach to the synthesis of non-racemic Fixolide^(R) (Ciappa, A. (219) 217)

Iron active phase

Supported catalysts for $DeNO_x$ reaction based on iron clays (Belver, C. (219) 309)

Iron complexes

Oxidation of alkanes with *m*-chloroperbenzoic acid catalyzed by iron(III) chloride and a polydentate amine (Shul'pin, G.B. (219) 255) Isomerization

Isomerization of allyl aryl ethers to their 1-propenyl derivatives catalysed by ruthenium complexes (Krompiec, S. (219) 29)

Keggin structure

Synthesis and characterization of soluble alkali metal, alkaline earth metal and related Keggin-type $\left[PMo_{12}O_{40}\right]^{3-}$ salts for heterogeneous catalysis reactions (Silviani, E. (219) 327)

Kinetics

Direct regeneration of NADH on a ruthenium modified glassy carbon electrode (Azem, A. (219) 283)

Laser applications

Laser induced photocatalytic generation of hydrogen and oxygen over NiO and TiO_2 (Hameed, A. (219) 109)

Lasers

Laser induced photocatalytic generation of hydrogen and oxygen over NiO and TiO_2 (Hameed, A. (219) 109)

Lewis acid sites

Investigations on the novel niobium incorporated mesoporous catalytic materials (Akolekar, D.B. (219) 301)

Ligand effects

Oxidation of alkanes with m-chloroperbenzoic acid catalyzed by iron(III) chloride and a polydentate amine (Shul'pin, G.B. (219) 255)

Manganese

A mechanistic study of the epoxidation of cinnamic acid by hydrogen peroxide catalysed by manganese 1,4,7-trimethyl-1,4,7-triazacyclononane complexes (Gilbert, B.C. (219) 265)

Mannich-bases

An efficient and environmental-friendly synthesis of 4-hydroxy-arylpiperidines using hydrotalcite catalyst (Cwik, A. (219) 377)

MCM-41

Immobilization of rhodium complexes ligated with triphenyphosphine analogs on amino-functionalized MCM-41 and MCM-48 for 1-hexene hydroformylation (Peng, Q. (219) 175)

MCM-48

Immobilization of rhodium complexes ligated with triphenyphosphine analogs on amino-functionalized MCM-41 and MCM-48 for 1-hexene hydroformylation (Peng, Q. (219) 175)

Mechanism

Pd-catalyzed Heck arylation of cycloalkenes—studies on selectivity comparing homogeneous and heterogeneous catalysts (Djakovitch, L. (219) 121)

Mesityl oxide

Single-stage liquid-phase synthesis of methyl isobutyl ketone under mild conditions (Winter, F. (219) 273)

Mesoporous alumina

Synthesis and characterization of mesoporous alumina for use as a catalyst support in the hydrodechlorination of 1,2-dichloropropane: effect of preparation condition of mesoporous alumina (Kim, P. (219) 87)

meta-Chloroperbenzoic acid (MCPBA)

Oxidation of alkanes with *m*-chloroperbenzoic acid catalyzed by iron(III) chloride and a polydentate amine (Shul'pin, G.B. (219) 255)

Metallic potassium New ammonia synthesis catalysts based on supported potassium car-

bonyl ruthenates as precursors of catalytically active ruthenium particles and potassium promoter (Yunusov, S.M. (219) 149)

Metallocomplexes

Application of novel metallocomplexes for mimicking of cytochrome P450. Analysis of product distribution for 1-hexene as a substrate (Pulkkinen, J. (219) 21)

Methoxycarbonylation

Characterization and catalytic activity of *trans*- $[Pd(COCH_2CH_3)$ (TsO)(PPh₃)₂], isolated from the hydro-methoxycarbonylation of ethene catalyzed by $[Pd(TsO)_2(PPh_3)_2]$ (Cavinato, G. (219) 233)

Methyl isobutyl ketone

Single-stage liquid-phase synthesis of methyl isobutyl ketone under mild conditions (Winter, F. (219) 273)

Methyl-aluminoxane

Monotitanocene catalysts: an ESR study of Ti(III) derivatives formed in presence of MAO and other organoaluminium compounds (Bonoldi, L. (219) 47)

Methylpropanoate

Characterization and catalytic activity of *trans*-[Pd(COCH₂CH₃) (TsO)(PPh₃)₂], isolated from the hydro-methoxycarbonylation of ethene catalyzed by [Pd(TsO)₂(PPh₃)₂] (Cavinato, G. (219) 233)

404

MIBK Single-stage liquid-phase synthesis of methyl isobutyl ketone under mild conditions (Winter, F. (219) 273) Microporous and mesoporous matrix Ethylene selective dimerization on polymer complex catalyst of Ni(4,4'bipyridine)Cl₂ coactivated with $AlCl(C_2H_5)_2$ (Angelescu, E. (219) 13) Molecular modeling Energetically preferred locations of hydrocarbons in the structure of a Pt-Sn/\gamma-Al₂O₃ catalyst: docking method (Szyja, B. (219) 343) Molecular weight distribution (MWD) ²⁷Al MAS solid state NMR study on coordinative nature of alkyl-Al cocatalysts on a novel SiO2-supported Ziegler-Natta catalyst for controlled multiplicity of molecular weight distribution (Liu, B. (219) 363) NAD⁺ electroreduction Direct regeneration of NADH on a ruthenium modified glassy carbon electrode (Azem, A. (219) 283) NADH regeneration Direct regeneration of NADH on a ruthenium modified glassy carbon electrode (Azem, A. (219) 283) Nb-Al-MCM-41 Investigations on the novel niobium incorporated mesoporous catalytic materials (Akolekar, D.B. (219) 301) Neutron diffraction Synthesis and characterization of soluble alkali metal, alkaline earth metal and related Keggin-type $[PMo_{12}O_{40}]^{3-}$ salts for heterogeneous catalysis reactions (Silviani, E. (219) 327) Ni(4,4'-bipyridine)Cl₂-AlCl(C₂H₅)₂ Ethylene selective dimerization on polymer complex catalyst of Ni(4,4'bipyridine)Cl₂ coactivated with AlCl(C₂H₅)₂ (Angelescu, E. (219) 13) NiO Laser induced photocatalytic generation of hydrogen and oxygen over NiO and TiO₂ (Hameed, A. (219) 109) Nitrogen oxides removal Supported catalysts for DeNO_x reaction based on iron clays (Belver, C. (219) 309)NO+CO Characterization of copper oxide supported on ceria-modified anatase (Zhu, H. (219) 155) NO complexes Investigations on the novel niobium incorporated mesoporous catalytic materials (Akolekar, D.B. (219) 301) NO Direct observation of thermally activated NO adsorbate species on Au-TiO2: DRIFTS studies (Debeila, M.A. (219) 131) Octacarbonyl dicobalt Octacarbonyl dicobalt-catalyzed selective carbonylation of (trimethylsilyl)diazomethane to obtain (trimethylsilyl)ketene (Ungvári, N. (219) 7) α -Olefin Ethylene oligomerization catalyzed by a novel iron complex containing fluoro and methyl substituents (Zhang, Z. (219) 249) Oligomers distribution Ethylene oligomerization catalyzed by a novel iron complex containing fluoro and methyl substituents (Zhang, Z. (219) 249) Oxidation of ethylbenzene Catalytic activities of oxo-Mn-triazacyclononane complexes: spectral studies and single crystal X-ray structure of [Mn₄O₆(1,4,7-triazacyclononane)₄](ClO₄)₄·H₂O (Bennur, T.H. (219) 209) Oxidation

Copper (II) Schiff base catalysed aerobic oxidative coupling of 2-naphthols: an efficient and simple synthesis of binaphthols (Sharma, V.B. (219) 61)

Oxo-Mn complexes

Catalytic activities of oxo–Mn–triazacyclononane complexes: spectral studies and single crystal X-ray structure of $[Mn_4O_6(1,4,7\text{-triazacyclononane})_4](ClO_4)_4\text{-}H_2O$ (Bennur, T.H. (219) 209)

Oxometalate

Synthesis and characterization of soluble alkali metal, alkaline earth metal and related Keggin-type $\left[PMo_{12}O_{40}\right]^{3-}$ salts for heterogeneous catalysis reactions (Silviani, E. (219) 327)

Oxovanadium(V) catalyst

Homogeneous selective peroxidic oxidation of hydrocarbons using an oxovanadium based catalyst (Si, T.K. (219) 241)

Oxovanadium(V) hydroxamate

Homogeneous selective peroxidic oxidation of hydrocarbons using an oxovanadium based catalyst (Si, T.K. (219) 241)

Oxygen

Copper (II) Schiff base catalysed aerobic oxidative coupling of 2naphthols: an efficient and simple synthesis of binaphthols (Sharma, V.B. (219) 61)

Laser induced photocatalytic generation of hydrogen and oxygen over NiO and TiO_2 (Hameed, A. (219) 109)

 β -Selective epoxidation of Δ^5 -steroids by O₂ using surface functionalised silica supported cobalt catalysts (Silvestre, S.M. (219) 143)

Oxygenation

Application of novel metallocomplexes for mimicking of cytochrome P450. Analysis of product distribution for 1-hexene as a substrate (Pulkkinen, J. (219) 21)

Palladium catalyst

Characterization and catalytic activity of *trans*-[Pd(COCH₂CH₃) (TsO)(PPh₃)₂], isolated from the hydro-methoxycarbonylation of ethene catalyzed by [Pd(TsO)₂(PPh₃)₂] (Cavinato, G. (219) 233)

Single-stage liquid-phase synthesis of methyl isobutyl ketone under mild conditions (Winter, F. (219) 273)

Palladium

Bis(triphenylphosphine)palladium(II)phthalimide – an easily prepared precatalyst for efficient Suzuki–Miyaura coupling of aryl bromides (Chaignon, N.M. (219) 191)

Palladium-catalyzed

On the role of modifier structure in the palladium-catalyzed enantioselective hydrogenation of furan-2-carboxylic acid (Maris, M. (219) 371)

Peroxidases

Catalytic activities of oxo–Mn–triazacyclononane complexes: spectral studies and single crystal X-ray structure of [Mn₄O₆(1,4,7-triazacyclononane)₄](ClO₄)₄·H₂O (Bennur, T.H. (219) 209)

Phillips CrO_x/SiO₂ catalyst

High resolution X-ray photoelectron spectroscopic analysis of transformation of surface chromium species on Phillips CrO_x/SiO_2 catalysts isothermally calcined at various temperatures (Liu, B. (219) 165)

Phosphopolyoxomolybdate

Synthesis and characterization of soluble alkali metal, alkaline earth metal and related Keggin-type $[PMo_{12}O_{40}]^{3-}$ salts for heterogeneous catalysis reactions (Silviani, E. (219) 327)

Photocatalysis

Laser induced photocatalytic generation of hydrogen and oxygen over NiO and TiO₂ (Hameed, A. (219) 109)

Zinc phthalocyanine photocatalyzed oxidation of cyclohexene (Sehlotho, N. (219) 201)

Photophysics

Electronic and photocatalytic properties of purine(s)-capped CdS nanoparticles in the presence of tryptophol (Kumar, A. (219) 65)

Pinacol

Experimental and theoretical investigation of the relationship between the stericstructure of Schiff bases and the diastereoselectivity of pinacol produced from benzaldehyde (Tian, Q. (219) 315)

Platinum catalyst

Single-stage liquid-phase synthesis of methyl isobutyl ketone under mild conditions (Winter, F. (219) 273)

Platinum

The control of platinum impregnation by PZC alteration of oxides and carbon (Hao, X. (219) 97)

Platinum-alumina

Heterogeneous asymmetric reactions. Part 40. New data on repeated use of Pt-alumina catalyst during enantioselective hydrogenation of ethyl pyruvate (Balázsik, K. (219) 383)

Point of zero charge

The control of platinum impregnation by PZC alteration of oxides and carbon (Hao, X. (219) 97)

Potassium carbonyl metallates

New ammonia synthesis catalysts based on supported potassium carbonyl ruthenates as precursors of catalytically active ruthenium particles and potassium promoter (Yunusov, S.M. (219) 149)

1-propenyl ethers

Isomerization of allyl aryl ethers to their 1-propenyl derivatives catalysed by ruthenium complexes (Krompiec, S. (219) 29)

Product distribution

Application of novel metallocomplexes for mimicking of cytochrome P450. Analysis of product distribution for 1-hexene as a substrate (Pulkkinen, J. (219) 21)

Pt-Sn/Al₂O₃

Energetically preferred locations of hydrocarbons in the structure of a $Pt-Sn/\gamma-Al_2O_3$ catalyst: docking method (Szyja, B. (219) 343)

Purine(s)-capped Q-CdS

Electronic and photocatalytic properties of purine(s)-capped CdS nanoparticles in the presence of tryptophol (Kumar, A. (219) 65)

QSAR

Experimental and theoretical investigation of the relationship between the stericstructure of Schiff bases and the diastereoselectivity of pinacol produced from benzaldehyde (Tian, Q. (219) 315)

Re-use

Heterogeneous asymmetric reactions. Part 40. New data on repeated use of Pt-alumina catalyst during enantioselective hydrogenation of ethyl pyruvate (Balázsik, K. (219) 383)

Rhodium

High-pressure effects in the homogeneously catalyzed hydroformylation of olefins (Albers, J. (219) 41)

The asymmetric hydrogenation of 1,1,4,4,7-pentamethyl-2-methylen-1,2,3,4-tetrahydro-naphthalene, a viable catalytic approach to the synthesis of non-racemic Fixolide[®] (Ciappa, A. (219) 217)

Rhodium-phosphine complexes

Immobilization of rhodium complexes ligated with triphenyphosphine analogs on amino-functionalized MCM-41 and MCM-48 for 1-hexene hydroformylation (Peng, Q. (219) 175)

Ruthenium catalysts

Ruthenium-catalysed asymmetric hydrogenation with fluoroalkylated BINAP ligands in supercritical CO₂ (Hu, Y. (219) 57)

Ruthenium complexes

Isomerization of allyl aryl ethers to their 1-propenyl derivatives catalysed by ruthenium complexes (Krompiec, S. (219) 29)

Ruthenium modified glassy carbon

Direct regeneration of NADH on a ruthenium modified glassy carbon electrode (Azem, A. (219) 283)

Ruthenium

New ammonia synthesis catalysts based on supported potassium carbonyl ruthenates as precursors of catalytically active ruthenium particles and potassium promoter (Yunusov, S.M. (219) 149)

Salen complex

Oxidation of *n*-heptane with molecular oxygen using heterogeneous catalyst formed by covalently binding [1,2-bis(salicylidene amino)-phenylene] zirconium complex to modified silica gel (Anisia, K.S. (219) 319)

Schiff base

Copper (II) Schiff base catalysed aerobic oxidative coupling of 2naphthols: an efficient and simple synthesis of binaphthols (Sharma, V.B. (219) 61) Experimental and theoretical investigation of the relationship between the stericstructure of Schiff bases and the diastereoselectivity of pinacol produced from benzaldehyde (Tian, Q. (219) 315)

Semiconductor nanoclusters

Electronic and photocatalytic properties of purine(s)-capped CdS nanoparticles in the presence of tryptophol (Kumar, A. (219) 65)

Siliceous mesoporous cellular foams

Isomerization of allyl aryl ethers to their 1-propenyl derivatives catalysed by ruthenium complexes (Krompiec, S. (219) 29)

Spectroscopic characterization

Catalytic activities of oxo–Mn–triazacyclononane complexes: spectral studies and single crystal X-ray structure of [Mn₄O₆(1,4,7-triazacyclo-nonane)₄](ClO₄)₄·H₂O (Bennur, T.H. (219) 209)

Δ^5 -Steroids

β-Selective epoxidation of Δ^5 -steroids by O₂ using surface functionalised silica supported cobalt catalysts (Silvestre, S.M. (219) 143)

Supercritical CO₂

Ruthenium-catalysed asymmetric hydrogenation with fluoroalkylated BINAP ligands in supercritical CO₂ (Hu, Y. (219) 57)

Supported catalysts

New ammonia synthesis catalysts based on supported potassium carbonyl ruthenates as precursors of catalytically active ruthenium particles and potassium promoter (Yunusov, S.M. (219) 149)

Supported Ni catalyst

Synthesis and characterization of mesoporous alumina for use as a catalyst support in the hydrodechlorination of 1,2-dichloropropane: effect of preparation condition of mesoporous alumina (Kim, P. (219) 87)

Supramolecular chemistry

Bifunctional catalysis of ester hydrolysis: novel hydrolytic enzyme models based on xanthene framework (Saki, N. (219) 227)

Surface

Doping metal ions only onto the catalyst surface (Xu, J.-C. (219) 351) Surfactant

Synthesis and characterization of mesoporous alumina for use as a catalyst support in the hydrodechlorination of 1,2-dichloropropane: effect of preparation condition of mesoporous alumina (Kim, P. (219) 87)

Thermally stable

Direct observation of thermally activated NO adsorbate species on Au–TiO₂: DRIFTS studies (Debeila, M.A. (219) 131)

TiO₂

Laser induced photocatalytic generation of hydrogen and oxygen over NiO and TiO₂ (Hameed, A. (219) 109)

Titanium dioxide

Doping metal ions only onto the catalyst surface (Xu, J.-C. (219) 351) Titanocene

Monotitanocene catalysts: an ESR study of Ti(III) derivatives formed in presence of MAO and other organoaluminium compounds (Bonoldi, L. (219) 47)

TPD

Reduction and desorption with carbon monoxide in Cr/SiO_2 catalysts for ethylene polymerization (Gaspar, A.B. (219) 357)

TPR

Reduction and desorption with carbon monoxide in Cr/SiO_2 catalysts for ethylene polymerization (Gaspar, A.B. (219) 357)

Triazacyclononane complexes of Mn

Catalytic activities of oxo–Mn–triazacyclononane complexes: spectral studies and single crystal X-ray structure of $[Mn_4O_6(1,4,7-triazacyclononane)_4](ClO_4)_4;H_2O$ (Bennur, T.H. (219) 209)

(Trimethylsilyl)ketene

Octacarbonyl dicobalt-catalyzed selective carbonylation of (trimethylsilyl)diazomethane to obtain (trimethylsilyl)ketene (Ungvári, N. (219) 7) 1,4,7-Trimethyl-1,4,7-triazacyclononane

A mechanistic study of the epoxidation of cinnamic acid by hydrogen peroxide catalysed by manganese 1,4,7-trimethyl-1,4,7-triazacyclono-

nane complexes (Gilbert, B.C. (219) 265)

Vapor-phase fluorination

Investigation into chromia-based catalyst and its application in preparing difluoromethane (Quan, H.-d. (219) 79)

Water splitting

Laser induced photocatalytic generation of hydrogen and oxygen over NiO and TiO_2 (Hameed, A. (219) 109)

X-ray photoelectron spectroscopy (XPS)

High resolution X-ray photoelectron spectroscopic analysis of transformation of surface chromium species on Phillips CrO_x/SiO_2 catalysts isothermally calcined at various temperatures (Liu, B. (219) 165)

X-ray structure

Catalytic activities of oxo–Mn–triazacyclononane complexes: spectral studies and single crystal X-ray structure of [Mn₄O₆(1,4,7-triazacyclo-nonane)₄](ClO₄)₄·H₂O (Bennur, T.H. (219) 209)

XPS

Investigations on the novel niobium incorporated mesoporous catalytic materials (Akolekar, D.B. (219) 301)

Ziegler-Natta catalyst

²⁷Al MAS solid state NMR study on coordinative nature of alkyl-Al cocatalysts on a novel SiO₂-supported Ziegler–Natta catalyst for controlled multiplicity of molecular weight distribution (Liu, B. (219) 363)

Zinc ions

Doping metal ions only onto the catalyst surface (Xu, J.-C. (219) 351)

Zinc phthalocyanine

Zinc phthalocyanine photocatalyzed oxidation of cyclohexene (Sehlotho, N. (219) 201)