www.elsevier.nl/locate/jorganchem

Journal of Organometallic Chemistry 603 (2000) 259-263



# Subject Index of Volume 603

#### Aldol condensation

Aldol-type condensation reactions of cyclic ketones by the  $W(CO)_6/CCl_4/UV$  system, 252

## Aldol reaction

Asymmetric aldol reaction of 2-cyanopropionates catalyzed by a trans-chelating chiral diphosphine–rhodium(I) complex: highly enantioselective construction of quaternary chiral carbon centers at α-positions of nitriles, 18

### Alkoxy

Studies on the reactivity of alkoxo-niobium(V) compounds towards *O,O*- or *S,S*-enolate ligands. Synthesis and structural characterisation of (alkoxo)(β-diketonato)- and (alkoxo)[dialkyl(aryl)dithiocarbamato] complexes of niobium(V), 194

#### Alkynylborates

Nickel-catalyzed allylation of lithium 1-alkynyl(trialkoxy)borates with 1,3-disubstituted allyl carbonates, 189

#### Alkynylstannane

Stereoselective preparation of (Z)-α-stannyl-1-alkenyl sulfoxides via hydrozirconation of acetylenic stannanes, 249

#### Allyl carbonate

Nickel-catalyzed allylation of lithium 1-alkynyl(trialkoxy)borates with 1,3-disubstituted allyl carbonates, 189

#### Allylic alkylation

Microwave-mediated palladium-catalyzed asymmetric allylic alkylation; an example of highly selective fast chemistry, 2

#### Allylic amination

The application of Pd-complexes of diphenylphosphinoferrocenyloxazoline ligands to catalytic enantioselective allylic amination, 110

#### Allylic substitution

Kinetic resolution in Pd-catalyzed allylic substitution using the helical PHelix ligand, 105

#### Aluminium

Synthesis and properties of unsolvated bis(cyclopentadienyl)-titanium alumohydride. Structure of  $\{[(\eta^5-C_5H_5)_2Ti(\mu-H)]_2[(\eta^5-C_5H_5)Ti(\mu-H_2]Al_3(\mu-H_4)(H)\}_2\cdot C_6H_6$  a 12-nuclear titanium aluminum hydride complex with a short Al–Al bond length, and refined structure of LiAlEt<sub>4</sub>, 167

## Amine elimination

Synthesis and characterization of organozirconium complexes bearing a new trianionic multidentate cyclopentadienyl ligand by use of amine elimination, 213

## Aminotroponiminate

Bridged aminotroponiminate complexes of lutetium, 161

#### Aqueous solution

Aqueous enantioselective hydrogenations involving silica-heterogenised catalysts, 80

#### Aroylsilanes

Synthesis of acylsilanes via oxidative hydrolysis of 2-silyl-1,3-dithianes mediated by N-bromosuccinimide, 220

## A sisyl-Grignard reagent

The first structurally characterised oligosilylmagnesium compound, 185

#### Asymmetric

Oxidation of olefins by palladium(II): Part 17. An asymmetric chlorohydrin synthesis catalyzed by a bimetallic palladium(II) complex, 50

### Asymmetric catalysis

A rigid dirhodium(II) carboxylate as an efficient catalyst for the asymmetric cyclopropanation of olefins, 13

Chiral molybdenum(VI) and tungsten(VI) 2'-pyridinyl alcoholate complexes. Synthesis, structure and catalytic properties in asymmetric olefin epoxidation, 69

Kinetic resolution in Pd-catalyzed allylic substitution using the helical PHelix ligand, 105

Palladium-catalyzed asymmetric intermolecular arylation of cyclic or acyclic alkenes using phosphinite-oxazoline ligands derived from D-glucosamine, 40

Recent progress in asymmetric heterogeneous catalysis: use of polymer-supported catalysts, 30

#### Asymmetric hydrogenation

Aqueous enantioselective hydrogenations involving silica-heterogenised catalysts, 80

## Asymmetric hydrosilylation

A new asymmetric synthesis of optically active allenes via metal catalyzed hydrosilylation, 116

## Asymmetric synthesis

Cooperative attractive interactions in asymmetric hydrogenations with dihydroxydiphosphine Rh(I) catalysts — a competition study, 61

## (1-Azabuta-1,3-diene)tricarbonyliron(0)

Reaction of (1-azabuta-1,3-diene)tricarbonyliron(0) complexes with sodium borohydride under microwave conditions, 240

#### Azido

Synthesis and properties of arylpalladium(II) azido complexes PdAr(N<sub>3</sub>)(PR<sub>3</sub>)<sub>2</sub>. Nucleophilic reactions of the azido ligand with CO and with isocyanides to afford Pd(II) isocyanate, C-tetrazolate and carbodiimide complexes, 152

#### Benzylamines

Competition between sp<sup>3</sup> and sp<sup>2</sup> C–H bonds in cyclopalladation of *N*-methyl-α-*tert*-butylbenzylamine, 138

#### BINOL

Catalytic applications of F<sub>8</sub>BINOL: asymmetric oxidation of sulfides to sulfoxides, 98

## 3,3'-bis(2-oxazolyl)-1,1'-bi-2-naphthols

Lanthanide-catalyzed asymmetric 1,3-dipolar cycloaddition of nitrones to alkenes using 3,3'-bis(2-oxazolyl)-1,1'-bi-2-naphthol (BINOL-Box) ligands, 6

## Bis-pyrazolylmethane

New palladium complexes with rigid scorpion-type ligands. Crystal structure of complexes  $[Pd(\eta^3-2-CH_3-C_3H_4)-(bpz^*mPh)](CF_3SO_3)$  and  $[Pd(bpz^*mpy)_2](BF_4)_2$ .  $bpz^*-mPh = phenyl-bis(3,5-dimethylpyrazol-1-yl)methane; <math>bpz^*-mpy = pyridin-2-yl-bis(3,5-dimethylpyrazol-1-yl)methane, 174$ 

## N-Bromosuccinimide

Synthesis of acylsilanes via oxidative hydrolysis of 2-silyl-1,3dithianes mediated by *N*-bromosuccinimide, 220

### Butadiynes

A new asymmetric synthesis of optically active allenes via metal catalyzed hydrosilylation, 116

#### Carbodiimide

Synthesis and properties of arylpalladium(II) azido complexes PdAr(N<sub>3</sub>)(PR<sub>3</sub>)<sub>2</sub>. Nucleophilic reactions of the azido ligand with CO and with isocyanides to afford Pd(II) isocyanate, *C*-tetrazolate and carbodiimide complexes, 152

### Carbon monoxide copolymers

Enantioface discriminating carbonylations of styrene with cationic palladium(II) catalyst precursors, 122

### Carbonylation

Enantioface discriminating carbonylations of styrene with cationic palladium(II) catalyst precursors, 122

## Carbosilane dendrimers

Coordination of a Ru(II)-complex to a tetrafunctional P-ligand: a model for Ru-P carbosilane dendrimers, 244

## Catalysis

Oxidation of olefins by palladium(II): Part 17. An asymmetric chlorohydrin synthesis catalyzed by a bimetallic palladium(II) complex, 50

#### Catalysts

Synthesis and properties of unsolvated bis(cyclopentadienyl)-titanium alumohydride. Structure of  $\{[(\eta^5-C_5H_5)_2Ti(\mu-H)]_2[(\eta^5-C_5H_5)Ti(\mu-H_2]Al_3(\mu-H_4)(H)\}_2\cdot C_6H_6$  a 12-nuclear titanium aluminum hydride complex with a short Al–Al bond length, and refined structure of LiAlEt\_4, 167

## Catalytic applications

Catalytic applications of F<sub>8</sub>BINOL: asymmetric oxidation of sulfides to sulfoxides, 98

### Catalytic asymmetric synthesis

Asymmetric aldol reaction of 2-cyanopropionates catalyzed by a trans-chelating chiral diphosphine–rhodium(I) complex: highly enantioselective construction of quaternary chiral carbon centers at  $\alpha$ -positions of nitriles, 18

## Chiral allenes

A new asymmetric synthesis of optically active allenes via metal catalyzed hydrosilylation, 116

## Chiral hydrogenation

Asymmetric synthesis of fluorinated β-hydroxy esters via ruthenium-mediated hydrogenation, 128

## Chiral phosphines

A new asymmetric synthesis of optically active allenes via metal catalyzed hydrosilylation, 116

#### Chlorohydrins

Oxidation of olefins by palladium(II): Part 17. An asymmetric chlorohydrin synthesis catalyzed by a bimetallic palladium(II) complex, 50

## Cooperative effect

Cooperative attractive interactions in asymmetric hydrogenations with dihydroxydiphosphine Rh(I) catalysts — a competition study, 61

## Coordination chemistry

Bridged aminotroponiminate complexes of lutetium, 161

## Cross-coupling

Nickel-catalyzed allylation of lithium 1-alkynyl(trialkoxy)borates with 1,3-disubstituted allyl carbonates, 189

## Crystal structure

Competition between sp $^3$  and sp $^2$  C–H bonds in cyclopalladation of N-methyl- $\alpha$ -tert-butylbenzylamine, 138

Synthesis and properties of unsolvated bis(cyclopentadienyl)titanium alumohydride. Structure of  $\{[(\eta^5-C_5H_5)_2Ti(\mu-H)]_2[(\eta^5-C_5H_5)Ti(\mu-H_2]Al_3(\mu-H_4)(H)\}_2\cdot C_6H_6$  a 12-nuclear titanium aluminum hydride complex with a short Al–Al bond length, and refined structure of LiAlEt\_4, 167

### Crystal structure determination

Preparation, crystal structure determination and properties of adducts of indium methylene compounds with Group 15 donors, 203

#### Cyclic ketones

Aldol-type condensation reactions of cyclic ketones by the  $W(CO)_6/CCl_4/UV$  system, 252

## Cyclopalladated complexes

Direct *ortho*-palladation of 2-phenyl-2-oxazoline: Crystal structure of Cl<sub>2</sub>Pd(OCH<sub>2</sub>CH<sub>2</sub>N=C-Ph)<sub>2</sub> and Cl(PPh<sub>3</sub>)Pd-(OCH<sub>3</sub>CH<sub>3</sub>N=C-C<sub>6</sub>H<sub>4</sub>), 86

## Cyclopalladation

Competition between sp $^3$  and sp $^2$  C–H bonds in cyclopalladation of *N*-methyl- $\alpha$ -tert-butylbenzylamine, 138

#### Cyclopentadienyldiamide

Synthesis and characterization of organozirconium complexes bearing a new trianionic multidentate cyclopentadienyl ligand by use of amine elimination, 213

#### [2n] cyclophane

Manganese (I) complexes of p-xylene and [2n] cyclophanes from a theoretical sight, 225

## Cyclopropanation

A rigid dirhodium(II) carboxylate as an efficient catalyst for the asymmetric cyclopropanation of olefins, 13

## Diphenylphosphinoferrocenyloxazoline ligands

The application of Pd-complexes of diphenylphosphinoferrocenyloxazoline ligands to catalytic enantioselective allylic amination, 110

## 1,3-Dipolar

Lanthanide-catalyzed asymmetric 1,3-dipolar cycloaddition of nitrones to alkenes using 3,3'-bis(2-oxazolyl)-1,1'-bi-2-naphthol (BINOL-Box) ligands, 6

### 1,3-Dithianes

Synthesis of acylsilanes via oxidative hydrolysis of 2-silyl-1,3dithianes mediated by N-bromosuccinimide, 220

#### Dithiocarbamate

Studies on the reactivity of alkoxo-niobium(V) compounds towards *O,O*- or *S,S*-enolate ligands. Synthesis and structural characterisation of (alkoxo)(β-diketonato)- and (alkoxo)[dialkyl(aryl)dithiocarbamato] complexes of niobium(V), 194

## Enantioselective catalysis

Enantioface discriminating carbonylations of styrene with cationic palladium(II) catalyst precursors, 122

## Enantioselectivity

Microwave-mediated palladium-catalyzed asymmetric allylic alkylation; an example of highly selective fast chemistry, 2

## Enolate ligands

Studies on the reactivity of alkoxo-niobium(V) compounds towards *O,O*- or *S,S*-enolate ligands. Synthesis and structural characterisation of (alkoxo)(β-diketonato)- and (alkoxo)[dialkyl(aryl)dithiocarbamato] complexes of niobium(V), 194

## Epoxidation

Chiral molybdenum(VI) and tungsten(VI) 2'-pyridinyl alcoholate complexes. Synthesis, structure and catalytic properties in asymmetric olefin epoxidation, 69

#### Fast chemistry

Microwave-mediated palladium-catalyzed asymmetric allylic alkylation; an example of highly selective fast chemistry, 2

## Fluoroorganic compounds

Asymmetric synthesis of fluorinated β-hydroxy esters via ruthenium-mediated hydrogenation, 128

### Fluxional behaviour

New palladium complexes with rigid scorpion-type ligands. Crystal structure of complexes  $[Pd(\eta^3-2-CH_3-C_3H_4)-(bpz^*mPh)](CF_3SO_3)$  and  $[Pd(bpz^*mpy)_2](BF_4)_2$ .  $bpz^*-mPh = phenyl-bis(3,5-dimethylpyrazol-1-yl)methane; <math>bpz^*-mpy = pyridin-2-yl-bis(3,5-dimethylpyrazol-1-yl)methane, 174$ 

#### D-Glucosamine

Palladium-catalyzed asymmetric intermolecular arylation of cyclic or acyclic alkenes using phosphinite-oxazoline ligands derived from D-glucosamine, 40

#### Group 15 donors

Preparation, crystal structure determination and properties of adducts of indium methylene compounds with Group 15 donors, 203

### Helicity

Kinetic resolution in Pd-catalyzed allylic substitution using the helical PHelix ligand, 105

## Heterogeneous catalysis

Recent progress in asymmetric heterogeneous catalysis: use of polymer-supported catalysts, 30

#### Heterogenised catalyst

Aqueous enantioselective hydrogenations involving silica-heterogenised catalysts, 80

## Hydride

Synthesis and properties of unsolvated bis(cyclopentadienyl)-titanium alumohydride. Structure of  $\{[(\eta^5-C_5H_5)_2Ti(\mu-H)]_2[(\eta^5-C_5H_5)Ti(\mu-H_2]Al_3(\mu-H_4)(H)\}_2\cdot C_6H_6$  a 12-nuclear titanium aluminum hydride complex with a short Al–Al bond length, and refined structure of LiAlEt\_4, 167

#### Hydrogenation

Cooperative attractive interactions in asymmetric hydrogenations with dihydroxydiphosphine Rh(I) catalysts — a competition study, 61

Synthesis and properties of unsolvated bis(cyclopentadienyl)-titanium alumohydride. Structure of  $\{[(\eta^5\text{-}C_5H_5)_2\text{Ti}(\mu\text{-}H)]_2[(\eta^5\text{-}C_5H_5)\text{Ti}(\mu\text{-}H_2]Al_3(\mu\text{-}H_4)(H)\}_2\cdot C_6H_6$  a 12-nuclear titanium aluminum hydride complex with a short Al–Al bond length, and refined structure of LiAlEt\_4, 167

## Hydrometallation

Synthesis and properties of unsolvated bis(cyclopentadienyl)-titanium alumohydride. Structure of  $\{[(\eta^5-C_5H_5)_2Ti(\mu-H)]_2[(\eta^5-C_5H_5)Ti(\mu-H_2]Al_3(\mu-H_4)(H)\}_2\cdot C_6H_6$  a 12-nuclear titanium aluminum hydride complex with a short Al–Al bond length, and refined structure of LiAlEt\_4, 167

#### Hydroxyphosphines

Synthesis and resolution of a new P-chiral hydroxy phosphine, 235

## Hydrozirconation

Stereoselective preparation of (Z)-α-stannyl-1-alkenyl sulfoxides via hydrozirconation of acetylenic stannanes, 249

#### Indium methylene compounds

Preparation, crystal structure determination and properties of adducts of indium methylene compounds with Group 15 donors, 203

## Intermolecular arylation

Palladium-catalyzed asymmetric intermolecular arylation of cyclic or acyclic alkenes using phosphinite-oxazoline ligands derived from D-glucosamine, 40

## Iron

Synthesis and molecular structure of  $[Fe_3(\mu_2-H)(\mu_3-Te)(CO)_9][Cp_2^\# Nb(CO)_2]$   $(Cp^\# = C_5Me_5, C_5Me_4Et)$ , 135

#### Isocyanate

Synthesis and properties of arylpalladium(II) azido complexes

PdAr(N<sub>3</sub>)(PR<sub>3</sub>)<sub>2</sub>. Nucleophilic reactions of the azido ligand with CO and with isocyanides to afford Pd(II) isocyanate, *C*-tetrazolate and carbodiimide complexes, 152

#### Isoxazolidine

Lanthanide-catalyzed asymmetric 1,3-dipolar cycloaddition of nitrones to alkenes using 3,3'-bis(2-oxazolyl)-1,1'-bi-2-naphthol (BINOL-Box) ligands, 6

### Kinetic resolution

Kinetic resolution in Pd-catalyzed allylic substitution using the helical PHelix ligand, 105

## Lanthanide catalysis

Lanthanide-catalyzed asymmetric 1,3-dipolar cycloaddition of nitrones to alkenes using 3,3'-bis(2-oxazolyl)-1,1'-bi-2-naphthol (BINOL-Box) ligands, 6

#### Lanthanides

Bridged aminotroponiminate complexes of lutetium, 161

### N-Ligands

Bridged aminotroponiminate complexes of lutetium, 161 Lutetium

Bridged aminotroponiminate complexes of lutetium, 161

#### Magnesium

The first structurally characterised oligosilylmagnesium compound, 185

#### Manganese (I)

Manganese (I) complexes of p-xylene and [2n] cyclophanes from a theoretical sight, 225

### Metalations

Coordination of a Ru(II)-complex to a tetrafunctional P-ligand: a model for Ru–P carbosilane dendrimers, 244

#### Metal carbenes

Aldol-type condensation reactions of cyclic ketones by the  $W(CO)_6/CCl_4/UV$  system, 252

## Metal carbonyls

Aldol-type condensation reactions of cyclic ketones by the  $W(CO)_6/CCl_4/UV$  system, 252

## Metallacycles

Synthesis and resolution of a new P-chiral hydroxy phosphine, 235

#### Metallocene

Synthesis and properties of unsolvated bis(cyclopentadienyl)-titanium alumohydride. Structure of  $\{[(\eta^5-C_5H_5)_2Ti(\mu-H)]_2[(\eta^5-C_5H_5)Ti(\mu-H_2]Al_3(\mu-H_4)(H)\}_2\cdot C_6H_6$  a 12-nuclear titanium aluminum hydride complex with a short Al–Al bond length, and refined structure of LiAlEt\_4, 167

## ansa-Metallocene

Synthesis and characterization of organozirconium complexes bearing a new trianionic multidentate cyclopentadienyl ligand by use of amine elimination, 213

## Microwave

Reaction of (1-azabuta-1,3-diene)tricarbonyliron(0) complexes with sodium borohydride under microwave conditions, 240 Microwave chemistry

Microwave-mediated palladium-catalyzed asymmetric allylic alkylation; an example of highly selective fast chemistry, 2

#### Molecular orbital

Manganese (I) complexes of p-xylene and [2n] cyclophanes from a theoretical sight, 225

## Molybdenum

Chiral molybdenum(VI) and tungsten(VI) 2'-pyridinyl alcoholate complexes. Synthesis, structure and catalytic properties in asymmetric olefin epoxidation, 69

## Nickel catalysts

Nickel-catalyzed allylation of lithium 1-alkynyl(trialkoxy)borates with 1,3-disubstituted allyl carbonates, 189

#### Nickel complexes

A new asymmetric synthesis of optically active allenes via metal catalyzed hydrosilylation, 116

## Niobium

Studies on the reactivity of alkoxo-niobium(V) compounds towards *O,O*- or *S,S*-enolate ligands. Synthesis and structural characterisation of (alkoxo)(β-diketonato)- and (alkoxo)[dialkyl(aryl)dithiocarbamato] complexes of niobium(V), 194

#### Niobocene carbonyl

Synthesis and molecular structure of  $[Fe_3(\mu_2\text{-H})(\mu_3\text{-Te})-(CO)_9][Cp_2^\# Nb(CO)_2]$   $(Cp^\# = C_5Me_5, C_5Me_4Et), 135$ 

#### Nuclear Overhauser effect

Competition between sp<sup>3</sup> and sp<sup>2</sup> C–H bonds in cyclopalladation of *N*-methyl-α-tert-butylbenzylamine, 138

#### Olefins

Enantioface discriminating carbonylations of styrene with cationic palladium(II) catalyst precursors, 122

Oxidation of olefins by palladium(II): Part 17. An asymmetric chlorohydrin synthesis catalyzed by a bimetallic palladium(II) complex, 50

## Organozirconocene compound

Stereoselective preparation of (Z)- $\alpha$ -stannyl-1-alkenyl sulfoxides via hydrozirconation of acetylenic stannanes, 249

#### Oxidation

Synthesis of acylsilanes via oxidative hydrolysis of 2-silyl-1,3dithianes mediated by *N*-bromosuccinimide, 220

### Palladacycle conformation

Competition between sp<sup>3</sup> and sp<sup>2</sup> C–H bonds in cyclopalladation of *N*-methyl-α-*tert*-butylbenzylamine, 138

#### Palladium

New palladium complexes with rigid scorpion-type ligands. Crystal structure of complexes  $[Pd(\eta^3-2-CH_3-C_3H_4)-(bpz^*mPh)](CF_3SO_3)$  and  $[Pd(bpz^*mpy)_2](BF_4)_2$ .  $bpz^*-mPh = phenyl-bis(3,5-dimethylpyrazol-1-yl)methane; <math>bpz^*-mpy = pyridin-2-yl-bis(3,5-dimethylpyrazol-1-yl)methane, 174$ 

Synthesis and properties of arylpalladium(II) azido complexes  $PdAr(N_3)(PR_3)_2$ . Nucleophilic reactions of the azido ligand with CO and with isocyanides to afford Pd(II) isocyanate, C-tetrazolate and carbodiimide complexes, 152

Synthesis and resolution of a new P-chiral hydroxy phosphine, 235

#### Palladium-catalysis

Microwave-mediated palladium-catalyzed asymmetric allylic alkylation; an example of highly selective fast chemistry, 2

#### Palladium catalysi

The application of Pd-complexes of diphenylphosphinoferrocenyloxazoline ligands to catalytic enantioselective allylic amination, 110

## Palladium complexes

Enantioface discriminating carbonylations of styrene with cationic palladium(II) catalyst precursors, 122

#### Palladium(II)

Oxidation of olefins by palladium(II): Part 17. An asymmetric chlorohydrin synthesis catalyzed by a bimetallic palladium(II) complex, 50

## P-chiral

Synthesis and resolution of a new P-chiral hydroxy phosphine, 235

## Pd-catalysis

Kinetic resolution in Pd-catalyzed allylic substitution using the helical PHelix ligand, 105

### 2-Phenyl-2-oxazoline

Direct *ortho*-palladation of 2-phenyl-2-oxazoline: Crystal structure of  $Cl_2Pd(\overline{OCH_2CH_2N}=\overline{C}-Ph)_2$  and  $Cl(PPh_3)Pd-(\overline{OCH_2CH_3N}=\overline{C}-C_6H_4)$ , 86

## Phosphines

Cooperative attractive interactions in asymmetric hydrogenations with dihydroxydiphosphine Rh(I) catalysts — a competition study, 61

Coordination of a Ru(II)-complex to a tetrafunctional P-ligand: a model for Ru–P carbosilane dendrimers, 244

## Phosphinite-oxazoline ligand

Palladium-catalyzed asymmetric intermolecular arylation of cyclic or acyclic alkenes using phosphinite-oxazoline ligands derived from p-glucosamine, 40

## Photochemistry

Aldol-type condensation reactions of cyclic ketones by the  $W(CO)_6/CCl_4/UV$  system, 252

#### Polymers

Recent progress in asymmetric heterogeneous catalysis: use of polymer-supported catalysts, 30

## 2'-Pyridinyl alcoholate

Chiral molybdenum(VI) and tungsten(VI) 2'-pyridinyl alcoholate complexes. Synthesis, structure and catalytic properties in asymmetric olefin epoxidation, 69

### Reduction

Reaction of (1-azabuta-1,3-diene)tricarbonyliron(0) complexes with sodium borohydride under microwave conditions, 240 Regioselectivity

Competition between sp<sup>3</sup> and sp<sup>2</sup> C–H bonds in cyclopalladation of *N*-methyl-α-*tert*-butylbenzylamine, 138

#### Resolution

Synthesis and resolution of a new P-chiral hydroxy phosphine, 235

## Rhodium

Aqueous enantioselective hydrogenations involving silica-heterogenised catalysts, 80

A rigid dirhodium(II) carboxylate as an efficient catalyst for the asymmetric cyclopropanation of olefins, 13

Cooperative attractive interactions in asymmetric hydrogenations with dihydroxydiphosphine Rh(I) catalysts — a competition study, 61

## Rhodium complex

Asymmetric aldol reaction of 2-cyanopropionates catalyzed by a trans-chelating chiral diphosphine-rhodium(I) complex: highly enantioselective construction of quaternary chiral carbon centers at α-positions of nitriles, 18

## Rhodium complexes

A new asymmetric synthesis of optically active allenes via metal catalyzed hydrosilylation, 116

## Rigidity

New palladium complexes with rigid scorpion-type ligands. Crystal structure of complexes  $[Pd(\eta^3-2-CH_3-C_3H_4)-(bpz^*mPh)](CF_3SO_3)$  and  $[Pd(bpz^*mpy)_2](BF_4)_2$ .  $bpz^*-mPh = phenyl-bis(3,5-dimethylpyrazol-1-yl)methane; <math>bpz^*-mpy = pyridin-2-yl-bis(3,5-dimethylpyrazol-1-yl)methane,$  174

### Ruthenium

Aqueous enantioselective hydrogenations involving silica-heterogenised catalysts, 80

## Ruthenium catalysts

Asymmetric synthesis of fluorinated β-hydroxy esters via ruthenium-mediated hydrogenation, 128

#### Ruthenium(II)-complexes

Coordination of a Ru(II)-complex to a tetrafunctional P-ligand: a model for Ru-P carbosilane dendrimers, 244

#### Scorpion

New palladium complexes with rigid scorpion-type ligands. Crystal structure of complexes  $[Pd(\eta^3-2-CH_3-C_3H_4)-(bpz^*mPh)](CF_3SO_3)$  and  $[Pd(bpz^*mpy)_2](BF_4)_2$ .  $bpz^*-mPh = phenyl-bis(3,5-dimethylpyrazol-1-yl)methane; <math>bpz^*-mpy = pyridin-2-yl-bis(3,5-dimethylpyrazol-1-yl)methane,$  174

#### Silica

Aqueous enantioselective hydrogenations involving silica-heterogenised catalysts, 80

#### Sodium borohydride

Reaction of (1-azabuta-1,3-diene)tricarbonyliron(0) complexes with sodium borohydride under microwave conditions, 240 (Z)- $\alpha$ -Stannyl-1-alkenyl sulfoxide

Stereoselective preparation of (Z)- $\alpha$ -stannyl-1-alkenyl sulfoxides via hydrozirconation of acetylenic stannanes, 249

#### Sulfides

Catalytic applications of  $F_8BINOL$ : asymmetric oxidation of sulfides to sulfoxides, 98

#### Sulfinyl chloride

Stereoselective preparation of (*Z*)-α-stannyl-1-alkenyl sulfoxides via hydrozirconation of acetylenic stannanes, 249

### Sulfoxidation

Stereoselective preparation of (*Z*)-α-stannyl-1-alkenyl sulfoxides via hydrozirconation of acetylenic stannanes, 249

### Sulfoxides

Catalytic applications of  $F_8BINOL$ : asymmetric oxidation of sulfides to sulfoxides, 98

#### Telluride cluster

Synthesis and molecular structure of  $[Fe_3(\mu_2-H)(\mu_3-Te)(CO)_9]$ - $[Cp_2^\# Nb(CO)_2] (Cp^\# = C_5Me_5, C_5Me_4Et), 135$ 

### Tetrazolato

Synthesis and properties of arylpalladium(II) azido complexes

PdAr(N<sub>3</sub>)(PR<sub>3</sub>)<sub>2</sub>. Nucleophilic reactions of the azido ligand with CO and with isocyanides to afford Pd(II) isocyanate, *C*-tetrazolate and carbodiimide complexes, 152

#### Titanium

Synthesis and properties of unsolvated bis(cyclopentadienyl)-titanium alumohydride. Structure of  $\{[(\eta^5-C_5H_5)_2Ti(\mu-H)]_2[(\eta^5-C_5H_5)Ti(\mu-H_2]Al_3(\mu-H_4)(H)\}_2\cdot C_6H_6$  a 12-nuclear titanium aluminum hydride complex with a short Al–Al bond length, and refined structure of LiAlEt\_4, 167

#### Trans-chelating chiral ligand

Asymmetric aldol reaction of 2-cyanopropionates catalyzed by a trans-chelating chiral diphosphine–rhodium(I) complex: highly enantioselective construction of quaternary chiral carbon centers at  $\alpha$ -positions of nitriles, 18

#### Tris(trimethylsilyl)silyl (≡ sisyl)

The first structurally characterised oligosilylmagnesium compound, 185

## Tungsten

Chiral molybdenum(VI) and tungsten(VI) 2'-pyridinyl alcoholate complexes. Synthesis, structure and catalytic properties in asymmetric olefin epoxidation, 69

#### Tungsten hexacarbonyl

Aldol-type condensation reactions of cyclic ketones by the  $W(CO)_6/CCl_4/UV$  system, 252

#### p-Xylene

Manganese (I) complexes of p-xylene and [2n] cyclophanes from a theoretical sight, 225

### X-ray study

Direct *ortho*-palladation of 2-phenyl-2-oxazoline: Crystal structure of Cl<sub>2</sub>Pd(OCH<sub>2</sub>CH<sub>2</sub>N=C-Ph)<sub>2</sub> and Cl(PPh<sub>3</sub>)Pd-(OCH<sub>2</sub>CH<sub>3</sub>N=C-C<sub>6</sub>H<sub>4</sub>), 86

#### Zirconium

Synthesis and characterization of organozirconium complexes bearing a new trianionic multidentate cyclopentadienyl ligand by use of amine elimination, 213