

## Subject Index

### Acetic anhydride

- Zeolite catalyzed acylation of heterocyclic compounds. Part II. Acylation of benzofuran over Y zeolites. Effect of reaction conditions on the activity and stability 51

### Activity

- Hydroxocompounds of Fe(III) as colloidal and heterogeneous catalysts for water oxidation to dioxygen. Experimental evidence for a correlation of catalytic activity and the structure of the catalysts 43

### Acylation

- Zeolite catalyzed acylation of heterocyclic compounds. Part II. Acylation of benzofuran over Y zeolites. Effect of reaction conditions on the activity and stability 51

### Alumina

- Surface organometallic chemistry on metals: kinetics of the hydrogenolysis of tetra *n*-butyl tin on silica and alumina supported rhodium catalysts 125

### Aluminum borate

- The thioresistance of platinum/aluminum borate catalysts in aromatic hydrogenation 163

### Amines

- Synthesis of R<sub>2</sub>N–R' dissymmetric amines from nitriles and hexamethylenetetramine over nickel catalysts 117

### Aryl halides

- Coordination chemistry and mechanisms of metal-catalyzed CC-coupling reactions<sup>1</sup>. Part 6. Heck vinylation of aryl halides with *n*-butyl acrylate: relevance of PC bond cleavage to catalyst deactivation 133

### Benzaldehydes

- A new peroxo vanadium catalyst for selective oxidation of aralkenes to benzaldehydes 1

### Benzofuran

- Zeolite catalyzed acylation of heterocyclic compounds. Part II. Acylation of benzofuran over Y zeolites. Effect of reaction conditions on the activity and stability 51

### Binuclear complexes

- Binuclear nickel–ylide complexes as effective ethylene oligomerization/polymerization catalysts 95

### Butyl acrylate

- Coordination chemistry and mechanisms of metal-catalyzed CC-coupling reactions<sup>1</sup>. Part 6. Heck vinylation of aryl halides with *n*-butyl acrylate: relevance of PC bond cleavage to catalyst deactivation 133

### Carbohydrates

- Oxidation of octyl  $\alpha$ -D-glucopyranoside to octyl  $\alpha$ -D-glucuronic acid, catalyzed by several ruthenium complexes, containing a 2-

- (phenyl)azopyridine or a 2-(nitrophenyl)azopyridine ligand 73

### Carbon monoxide

- The effect of iron on the activity and the selectivity of Rh/ZrO<sub>2</sub> catalysts in the CO hydrogenation 105

### Catalysis

- Methylrhenum trioxide as a catalyst for oxidations with molecular oxygen and for oxygen transfer 87

### Catalytic oxidation

- A new peroxo vanadium catalyst for selective oxidation of aralkenes to benzaldehydes 1

### CC coupling reaction

- Coordination chemistry and mechanisms of metal-catalyzed CC-coupling reactions<sup>1</sup>. Part 6. Heck vinylation of aryl halides with *n*-butyl acrylate: relevance of PC bond cleavage to catalyst deactivation 133

### Cetyltrimethylammonium bromide

- Effect of cationic surfactant on photoinduced hydrogen evolution with hydrogenase 69

### Cobalt

- Epoxidation of olefins catalysed by polymer-supported metal  $\beta$ -ketoesterato complexes of iron(III), nickel(II) and cobalt(II) 17

- Catalytic activity of polymerizable metal  $\beta$ -ketoesterato complexes towards Michael addition reactions 23

### Coupling reaction

- Towards catalytic selective dimerisation of olefins or reaction related to hydroformylation? Co<sub>2</sub>(CO)<sub>8</sub> versus RhCl(PPh<sub>3</sub>)<sub>3</sub> 11

### Deactivation

- Zeolite catalyzed acylation of heterocyclic compounds. Part II. Acylation of benzofuran over Y zeolites. Effect of reaction conditions on the activity and stability 51

- Coordination chemistry and mechanisms of metal-catalyzed CC-coupling reactions<sup>1</sup>. Part 6. Heck vinylation of aryl halides with *n*-butyl acrylate: relevance of PC bond cleavage to catalyst deactivation 133

### Decarboxylation

- The formation of ketones and aldehydes from carboxylic acids, structure–activity relationship for two competitive reactions 175

### Dicobaltoctacarbonyl

- Towards catalytic selective dimerisation of olefins or reaction related to hydroformylation? Co<sub>2</sub>(CO)<sub>8</sub> versus RhCl(PPh<sub>3</sub>)<sub>3</sub> 11

**Epoxidation**

Metal catalyzed oxidations. Part 2. Molybdenum catalyzed olefin epoxidation in unpolar solvents 5

Epoxidation of olefins catalysed by polymer-supported metal  $\beta$ -ketoesterato complexes of iron(III), nickel(II) and cobalt(II) 17

Influence of additional ligands on the two-phase epoxidation with sodium hypochlorite catalyzed by (salen)manganese(III) complexes 63

**Ethylene**

Binuclear nickel–ylide complexes as effective ethylene oligomerization/polymerization catalysts 95

**Friedel–Crafts**

Properties of polymeric zirconium phosphates as Friedel–Crafts catalysts 155

**Gas phase**

Properties of polymeric zirconium phosphates as Friedel–Crafts catalysts 155

**Heck vinylation**

Coordination chemistry and mechanisms of metal-catalyzed CC-coupling reactions<sup>1</sup>. Part 6. Heck vinylation of aryl halides with *n*-butyl acrylate: relevance of PC bond cleavage to catalyst deactivation 133

**Hex-1-ene**

Towards catalytic selective dimerisation of olefins or reaction related to hydroformylation?  $\text{Co}_2(\text{CO})_8$  versus  $\text{RhCl}(\text{PPh}_3)_3$  11

**Hexamethylenetetramine**

Synthesis of  $\text{R}_2\text{N-R}'$  dissymmetric amines from nitriles and hexamethylenetetramine over nickel catalysts 117

**Hydroformylation**

Towards catalytic selective dimerisation of olefins or reaction related to hydroformylation?  $\text{Co}_2(\text{CO})_8$  versus  $\text{RhCl}(\text{PPh}_3)_3$  11

**Hydrogenase**

Effect of cationic surfactant on photoinduced hydrogen evolution with hydrogenase 69

**Hydrogenation**

The effect of iron on the activity and the selectivity of  $\text{Rh/ZrO}_2$  catalysts in the CO hydrogenation 105

The thioresistance of platinum/aluminum borate catalysts in aromatic hydrogenation 163

The formation of ketones and aldehydes from carboxylic acids, structure–activity relationship for two competitive reactions 175

**Hydrogenolysis**

Surface organometallic chemistry on metals: kinetics of the hydrogenolysis of tetra *n*-butyl tin on silica and alumina supported rhodium catalysts 125

**Hydroxocompounds**

Hydroxocompounds of Fe(III) as colloidal and heterogeneous catalysts for water oxidation to dioxygen. Experimental evidence for a correlation of catalytic activity and the structure of the catalysts 43

**Hypochlorite**

Influence of additional ligands on the two-phase epoxidation with sodium hypochlorite catalyzed by (salen)manganese(III) complexes 63

**Iron**

Epoxidation of olefins catalysed by polymer-supported metal  $\beta$ -ketoesterato complexes of iron(III), nickel(II) and cobalt(II) 17

Hydroxocompounds of Fe(III) as colloidal and heterogeneous catalysts for water oxidation to dioxygen. Experimental evidence for a correlation of catalytic activity and the structure of the catalysts 43

The effect of iron on the activity and the selectivity of  $\text{Rh/ZrO}_2$  catalysts in the CO hydrogenation 105

**Ketene**

The formation of ketones and aldehydes from carboxylic acids, structure–activity relationship for two competitive reactions 175

**Ketoesterate**

Epoxidation of olefins catalysed by polymer-supported metal  $\beta$ -ketoesterato complexes of iron(III), nickel(II) and cobalt(II) 17

Catalytic activity of polymerizable metal  $\beta$ -ketoesterato complexes towards Michael addition reactions 23

**Ketonisation**

The formation of ketones and aldehydes from carboxylic acids, structure–activity relationship for two competitive reactions 175

**Kinetics**

Surface organometallic chemistry on metals: kinetics of the hydrogenolysis of tetra *n*-butyl tin on silica and alumina supported rhodium catalysts 125

**Lipophilic N-oxides**

Influence of additional ligands on the two-phase epoxidation with sodium hypochlorite catalyzed by (salen)manganese(III) complexes 63

**Mechanism**

Properties of polymeric zirconium phosphates as Friedel–Crafts catalysts 155

The formation of ketones and aldehydes from carboxylic acids, structure–activity relationship for two competitive reactions 175

**Methylation**

Synthesis of  $\text{R}_2\text{N-R}'$  dissymmetric amines from nitriles and hexamethylenetetramine over nickel catalysts 117

**Michael addition**

Catalytic activity of polymerizable metal  $\beta$ -ketoesterato complexes towards Michael addition reactions 23

**Molybdenum**

Metal catalyzed oxidations. Part 2. Molybdenum catalyzed olefin epoxidation in unpolar solvents 5

**Naphthalene**

The thioresistance of platinum/aluminum borate catalysts in aromatic hydrogenation 163

**Nickel**

Epoxidation of olefins catalysed by polymer-supported metal  $\beta$ -ketoesterato complexes of iron(III), nickel(II) and cobalt(II) 17

Catalytic activity of polymerizable metal  $\beta$ -ketoesterato complexes towards Michael addition reactions 23

Binuclear nickel–ylide complexes as effective ethylene oligomerization/polymerization catalysts 95

**Nickel catalyst**

Synthesis of  $R_2N-R'$  dissymmetric amines from nitriles and hexamethylenetetramine over nickel catalysts 117

**Olefin**

Metal catalyzed oxidations. Part 2. Molybdenum catalyzed olefin epoxidation in unpolar solvents 5

**Olefins**

Towards catalytic selective dimerisation of olefins or reaction related to hydroformylation?  $Co_2(CO)_8$  versus  $RhCl(PPh_3)_3$  11

Influence of additional ligands on the two-phase epoxidation with sodium hypochlorite catalyzed by (salen)manganese(III) complexes 63

**Oligomerization**

Binuclear nickel–ylide complexes as effective ethylene oligomerization/polymerization catalysts 95

**Oxidation**

Hydroxocompounds of Fe(III) as colloidal and heterogeneous catalysts for water oxidation to dioxygen. Experimental evidence for a correlation of catalytic activity and the structure of the catalysts 43

Oxidation of octyl  $\alpha$ -D-glucopyranoside to octyl  $\alpha$ -D-glucuronic acid, catalyzed by several ruthenium complexes, containing a 2-(phenyl)azopyridine or a 2-(nitrophenyl)azopyridine ligand 73

Methylrhodium trioxide as a catalyst for oxidations with molecular oxygen and for oxygen transfer 87

Oxidation and photooxidation of sulfur-containing compounds in the presence of water soluble phthalocyanine complexes 147

**Oxygen**

Methylrhodium trioxide as a catalyst for oxidations with molecular oxygen and for oxygen transfer 87

**Palladium**

Coordination chemistry and mechanisms of metal-catalyzed CC-coupling reactions <sup>1</sup>. Part 6. Heck vinylation of aryl halides with *n*-butyl acrylate: relevance of PC bond cleavage to catalyst deactivation 133

**PC bond cleavage**

Coordination chemistry and mechanisms of metal-catalyzed CC-coupling reactions <sup>1</sup>. Part 6. Heck vinylation of aryl halides with *n*-butyl acrylate: relevance of PC bond cleavage to catalyst deactivation 133

**Peroxo complexes**

Metal catalyzed oxidations. Part 2. Molybdenum catalyzed olefin epoxidation in unpolar solvents 5

**Phosphines**

Methylrhodium trioxide as a catalyst for oxidations with molecular oxygen and for oxygen transfer 87

**Photocatalysis**

Oxidation and photooxidation of sulfur-containing compounds in the presence of water soluble phthalocyanine complexes 147

**Photoinduced hydrogen evolution**

Effect of cationic surfactant on photoinduced hydrogen evolution with hydrogenase 69

**Phthalocyanine complexes**

Oxidation and photooxidation of sulfur-containing compounds

in the presence of water soluble phthalocyanine complexes 147

**Platinum**

The thioresistance of platinum/aluminum borate catalysts in aromatic hydrogenation 163

**Polymerization**

Binuclear nickel–ylide complexes as effective ethylene oligomerization/polymerization catalysts 95

**Polymer support**

Catalytic activity of polymerizable metal  $\beta$ -ketoesterato complexes towards Michael addition reactions 23

**Polymer-supported catalysis**

Epoxidation of olefins catalysed by polymer-supported metal  $\beta$ -ketoesterato complexes of iron(III), nickel(II) and cobalt(II) 17

**Pyridine**

Towards catalytic selective dimerisation of olefins or reaction related to hydroformylation?  $Co_2(CO)_8$  versus  $RhCl(PPh_3)_3$  11

**Pyridine derivatives**

Influence of additional ligands on the two-phase epoxidation with sodium hypochlorite catalyzed by (salen)manganese(III) complexes 63

**Rhenium**

Methylrhodium trioxide as a catalyst for oxidations with molecular oxygen and for oxygen transfer 87

**Rhodium**

Towards catalytic selective dimerisation of olefins or reaction related to hydroformylation?  $Co_2(CO)_8$  versus  $RhCl(PPh_3)_3$  11

The effect of iron on the activity and the selectivity of Rh/ZrO<sub>2</sub> catalysts in the CO hydrogenation 105

Surface organometallic chemistry on metals: kinetics of the hydrogenolysis of tetra *n*-butyl tin on silica and alumina supported rhodium catalysts 125

**Ruthenium-polypyridyl catalysts**

Oxidation of octyl  $\alpha$ -D-glucopyranoside to octyl  $\alpha$ -D-glucuronic acid, catalyzed by several ruthenium complexes, containing a 2-(phenyl)azopyridine or a 2-(nitrophenyl)azopyridine ligand 73

**Salen derivatives**

Influence of additional ligands on the two-phase epoxidation with sodium hypochlorite catalyzed by (salen)manganese(III) complexes 63

**Selective reduction**

The formation of ketones and aldehydes from carboxylic acids, structure–activity relationship for two competitive reactions 175

**Selectivity**

The effect of iron on the activity and the selectivity of Rh/ZrO<sub>2</sub> catalysts in the CO hydrogenation 105

**Silica**

Surface organometallic chemistry on metals: kinetics of the hydrogenolysis of tetra *n*-butyl tin on silica and alumina supported rhodium catalysts 125

**Stilbenes**

A new peroxo vanadium catalyst for selective oxidation of alkenes to benzaldehydes 1

**Structure**

Hydroxocompounds of Fe(III) as colloidal and heterogeneous catalysts for water oxidation to dioxygen. Experimental evidence for a correlation of catalytic activity and the structure of the catalysts 43

**Styrene**

Towards catalytic selective dimerisation of olefins or reaction related to hydroformylation?  $\text{Co}_2(\text{CO})_8$  versus  $\text{RhCl}(\text{PPh}_3)_3$  11

**Styrenes**

A new peroxy vanadium catalyst for selective oxidation of aralkenes to benzaldehydes 1

**Sulphides**

Oxidation and photooxidation of sulfur-containing compounds in the presence of water soluble phthalocyanine complexes 147

**Sulphites**

Oxidation and photooxidation of sulfur-containing compounds in the presence of water soluble phthalocyanine complexes 147

**Supported catalysts**

Catalytic activity of polymerizable metal  $\beta$ -ketoesterato complexes towards Michael addition reactions 23

Surface organometallic chemistry on metals: kinetics of the hydrogenolysis of tetra n-butyl tin on silica and alumina supported rhodium catalysts 125

**Surface organometallic chemistry**

Surface organometallic chemistry on metals: kinetics of the hydrogenolysis of tetra n-butyl tin on silica and alumina supported rhodium catalysts 125

**Syngas**

Towards catalytic selective dimerisation of olefins or reaction related to hydroformylation?  $\text{Co}_2(\text{CO})_8$  versus  $\text{RhCl}(\text{PPh}_3)_3$  11

**Tetra n-butyl tin**

Surface organometallic chemistry on metals: kinetics of the hydrogenolysis of tetra n-butyl tin on silica and alumina supported rhodium catalysts 125

**Thioresistance**

The thioresistance of platinum/aluminum borate catalysts in aromatic hydrogenation 163

**Thiosulphates**

Oxidation and photooxidation of sulfur-containing compounds in the presence of water soluble phthalocyanine complexes 147

**Vanadium peroxy complex**

A new peroxy vanadium catalyst for selective oxidation of aralkenes to benzaldehydes 1

**Water**

Hydroxocompounds of Fe(III) as colloidal and heterogeneous catalysts for water oxidation to dioxygen. Experimental evidence for a correlation of catalytic activity and the structure of the catalysts 43

**Ylide complexes**

Binuclear nickel–ylide complexes as effective ethylene oligomerization/polymerization catalysts 95

**Zeolite**

Zeolite catalyzed acylation of heterocyclic compounds. Part II. Acylation of benzofuran over Y zeolites. Effect of reaction conditions on the activity and stability 51

**Zirconium**

The effect of iron on the activity and the selectivity of Rh/ZrO<sub>2</sub> catalysts in the CO hydrogenation 105

**Zirconium phosphate**

Properties of polymeric zirconium phosphates as Friedel–Crafts catalysts 155



