

Catalysis Today 52 (1999) 499-502



Subject index

Acetate precursors

Synthesis and surface characterization of nanometric $La_{1-x}K_xMnO_{3+\Delta}$ particles 45

Acid catalysis

Unique catalysis of an acidic salt of heteropoly acid, $Cs_{2.5}H_{0.5}PW_{12}O_{40}$, consisting of microcrystallites 23

Aerogels

Fine particle iron oxide based aerogels for the partial oxidation of methanol 83

Characterization of the sites involved in the adsorption of CO on ZrO_2 and ZnO/ZrO_2 methanol synthesis aerogel catalysts 15

Alkylate co-production

MTBE and alkylate co-production: fundamentals and operating experience 307

Batch polymerisation

Batch and semibatch catalytic reactors (from theory to practice) 183

Batch reactor

Batch and semibatch catalytic reactors (from theory to practice) 183

Belouosov-Zhabotinsky

Oscillating reactions 291

Bubble column

Modelling of a bubble column slurry reactor for Fischer-Tropsch synthesis 279

Carbenium ion

Kinetic modeling of acid-catalyzed oil refining processes 153 Catalyst coking

Catalyst deactivation 165

Catalyst deactivation

Catalyst deactivation 165

Kinetics of catalyst deactivation. An example: methylnaphthalene transformation 321

Catalyst optimization

The role of inter- and intra-phase mass transfer in the SCR-DeNO, reaction over catalysts of different shapes 249

Catalyst poisoning

Catalyst deactivation 165

Catalyst sintering

Catalyst deactivation 165

Catalyst

Mass and heat transfer in catalytic reactions 147

Catalytic hydrogenation

Catalytic hydrogenation of fine chemicals: sorbitol production 349

Catalytic kinetics

Experimental methods in catalytic kinetics 133

Catalytic pellet

Fixed bed reactors 197

Catalytic reactions

Fundamental chemical kinetics: the first step to reaction modelling and reaction engineering 113

Catalytic reactors

Fixed bed reactors 197

Three-phase catalytic reactors 223

Ceria-zirconia mixed oxides

Thermal evolution of the adsorbed methoxy species on $\text{Ce}_x \text{Zr}_{1-x} \text{O}_2$ solid solution samples: a FT-IR study 53

Cerium reduction

Thermal evolution of the adsorbed methoxy species on $\text{Ce}_x \text{Zr}_{1-x} \text{O}_2$ solid solution samples: a FT-IR study 53

Chemical kinetics

Fundamental chemical kinetics: the first step to reaction modelling and reaction engineering 113

Citraconic anhydride

Characteristics of iron phosphate as a catalyst for partial oxidation 65

CO oxidation

Oscillating reactions 291

Coke formation

Kinetics of catalyst deactivation. An example: methylnaphthalene transformation 321

Cracking activity

Towards understanding the enhanced cracking activity of steamed Y zeolites 91

Dimerization reaction

MTBE and alkylate co-production: fundamentals and operating experience 307

Dimethyl ether

Fine particle iron oxide based aerogels for the partial oxidation of methanol 83

Effective diffusivity

Experimental methods in catalytic kinetics 133

Emulsion polymerisation

Batch and semibatch catalytic reactors (from theory to practice)

Ethane oxidation

Synthesis and surface characterization of nanometric $La_{1-x}K_xMnO_{3+\Delta}$ particles 45

Etherification reaction

MTBE and alkylate co-production: fundamentals and operating experience 307

2-Ethyltetrahydroanthraquinone

Examples of hydrogenation in semibatch and continuous slurry reactors 363

Experimental reactor

Planning of experiments and kinetic analysis 125

Fermentation

Batch and semibatch catalytic reactors (from theory to practice) 183

Fine chemicals

Catalytic hydrogenation of fine chemicals: sorbitol production 349

Fischer-Tropsch synthesis

Modelling of a bubble column slurry reactor for Fischer-Tropsch synthesis 279

Fixed bed reactors

Fixed bed reactors 197

Three-phase catalytic reactors 223

Fixed-bed reactors

Experimental methods in catalytic kinetics 133

Fluid bed reactor

Light paraffins dehydrogenation in a fluidized bed reactor

Fluidised bed reactors

Modelling of catalytic gas-solid fluidised bed reactors 235 Formaldehyde

Fine particle iron oxide based aerogels for the partial oxidation of methanol 83

Freeze-drying

Synthesis and surface characterization of nanometric $La_{1-x}K_xMnO_{3+\Delta}$ particles 45

FT-IR spectroscopy

Thermal evolution of the adsorbed methoxy species on Ce,Zr_{1-x}O₂ solid solution samples: a FT-IR study 53

Characterization of the sites involved in the adsorption of CO on ZrO₂ and ZnO/ZrO₂ methanol synthesis aerogel catalysts 15

Gas-liquid interface

Batch and semibatch catalytic reactors (from theory to practice) 183

Gas-solid fluidisation

Modelling of catalytic gas-solid fluidised bed reactors 235 Glyoxylic acid

Characteristics of iron phosphate as a catalyst for partial oxidation 65

Heat and mass dispersion

Fixed bed reactors 197

Heat and mass transfer

Fixed bed reactors 197

Heat transfer

Mass and heat transfer in catalytic reactions 147

Heterogeneous catalysis

Oscillating reactions 291

Heterogeneous regime

Modelling of a bubble column slurry reactor for Fischer-Tropsch synthesis 279

Heteropoly compounds

Unique catalysis of an acidic salt of heteropoly acid, $Cs_{2.5}H_{0.5}PW_{12}O_{40}$, consisting of microcrystallites 23

Higher alcohol synthesis

Reaction and surface characterization study of higher-alcohol synthesis catalysts XII: K- and Pd-promoted Zn/Cr/Mn spinel 99

HREM

Nanostructural evolution of high loading Rh/lanthana catalysts through the preparation and reduction steps 29

Hydration

Unique catalysis of an acidic salt of heteropoly acid, $Cs_{2.5}H_{0.5}PW_{12}O_{40}$, consisting of microcrystallites 23

Hydrocarbon combustion

Some catalytic applications of aerogels for environmental purposes $\boldsymbol{3}$

Iron oxide

Fine particle iron oxide based aerogels for the partial oxidation of methanol 83

Iron phosphate

Characteristics of iron phosphate as a catalyst for partial oxidation 65

Isobutane

Light paraffins dehydrogenation in a fluidized bed reactor 259

Isobutanol

Reaction and surface characterization study of higher-alcohol synthesis catalysts XII: K- and Pd-promoted Zn/Cr/Mn spinel 99 Isobutene

Light paraffins dehydrogenation in a fluidized bed reactor 259

Kinetic experiments

Olefins oligomerization: thermodynamics and kinetics over a mesoporous silica-alumina 271

Kinetic model

Planning of experiments and kinetic analysis 125

Kinetic modeling

Kinetic modeling of acid-catalyzed oil refining processes 153 Kinetics of catalyst deactivation

Catalyst deactivation 165

Kinetics

Kinetics and related engineering aspects of catalytic liquidphase oxidation of *p*-xylene to terephthalic acid 331

 $La_{1-x}K_xMnO_{3+\Delta}$

Synthesis and surface characterization of nanometric $La_{1-x}K_xMnO_{3+\Delta}$ particles 45

Lanthana

Nanostructural evolution of high loading Rh/lanthana catalysts through the preparation and reduction steps $29\,$

Liquid fuels

Modelling of a bubble column slurry reactor for Fischer– Tropsch synthesis 279

Mass transfer

Mass and heat transfer in catalytic reactions 147

Mass transfer

The role of inter- and intra-phase mass transfer in the SCR-DeNO_x reaction over catalysts of different shapes 249

Mathematical modelling

Batch and semibatch catalytic reactors (from theory to practice) 183

Mesoporous silica-alumina

Olefins oligomerization: thermodynamics and kinetics over a mesoporous silica-alumina 271

Metal-support interaction

Nanostructural evolution of high loading Rh/lanthana catalysts through the preparation and reduction steps 29

Methacrylic acid

Characteristics of iron phosphate as a catalyst for partial oxidation 65

Methanol adsorption

Thermal evolution of the adsorbed methoxy species on $\text{Ce}_{z}\text{Zr}_{1-z}\text{O}_{2}$ solid solution samples: a FT-IR study 53

Methanol oxidation

Fine particle iron oxide based aerogels for the partial oxidation of methanol 83

Role of the solid acidity on the MoO_3 loaded on SnO_2 in the methanol oxidation into formaldehyde 71

Methanol synthesis

Characterization of the sites involved in the adsorption of CO on ZrO_2 and ZnO/ZrO_2 methanol synthesis aerogel catalysts 15

Methanol

Reaction and surface characterization study of higher-alcohol synthesis catalysts XII: K- and Pd-promoted Zn/Cr/Mn spinel 99

Methyl glyoxal

Characteristics of iron phosphate as a catalyst for partial oxidation 65

1-Methylnaphthalene transformation

Kinetics of catalyst deactivation. An example: methylnaphthalene transformation 321

Methyl tertiary-butyl ether

Reaction and surface characterization study of higher-alcohol synthesis catalysts XII: K- and Pd-promoted Zn/Cr/Mn spinel 99

Microcrystallites

Unique catalysis of an acidic salt of heteropoly acid, Cs_{2.5}H_{0.5}PW₁₂O₄₀, consisting of microcrystallites 23

Microstructure

Nanostructural evolution of high loading Rh/lanthana catalysts through the preparation and reduction steps 29

Mixed oxides

Fine particle iron oxide based aerogels for the partial oxidation of methanol 83

Mixing

Batch and semibatch catalytic reactors (from theory to practice) 183

Models

Fixed bed reactors 197

MoO₃ loaded

Role of the solid acidity on the ${\rm MoO_3}$ loaded on ${\rm SnO_2}$ in the methanol oxidation into formaldehyde 71

MTBE

MTBE and alkylate co-production: fundamentals and operating experience 307

Nanoparticles

Some catalytic applications of aerogels for environmental purposes 3

Synthesis and surface characterization of nanometric $La_{1-x}K_xMnO_{3+\Delta}$ particles 45

Natural gas conversion

Modelling of a bubble column slurry reactor for Fischer-Tropsch synthesis 279

Nickel

Catalytic hydrogenation of fine chemicals: sorbitol production 349

Olefins oligomerization

Olefins oligomerization: thermodynamics and kinetics over a mesoporous silica-alumina 271

Oscillating reactions

Oscillating reactions 291

Oxidation

Kinetics and related engineering aspects of catalytic liquidphase oxidation of *p*-xylene to terephthalic acid 331

Oxidative dehydrogenation

Characteristics of iron phosphate as a catalyst for partial oxidation 65

Oxides precipitation

Batch and semibatch catalytic reactors (from theory to practice) 183

Oxygen transfer

Batch and semibatch catalytic reactors (from theory to practice) 183

Parameter estimation

Planning of experiments and kinetic analysis 125

Perovskites

Synthesis and surface characterization of nanometric $La_{1-x}K_xMnO_{3+\Delta}$ particles 45

Pollutants

Some catalytic applications of aerogels for environmental purposes 3

Preparation

Nanostructural evolution of high loading Rh/lanthana catalysts through the preparation and reduction steps 29

Pt catalysts

Oscillating reactions 291

Pyruvic acid

Characteristics of iron phosphate as a catalyst for partial oxidation 65

Rapeseed oil

Examples of hydrogenation in semibatch and continuous slurry reactors 363

Reaction modelling

Fundamental chemical kinetics: the first step to reaction modelling and reaction engineering 113 Rh

Nanostructural evolution of high loading Rh/lanthana catalysts through the preparation and reduction steps 29

Ruthenium

Catalytic hydrogenation of fine chemicals: sorbitol production 349

SCR-DeNOx monolith

The role of inter- and intra-phase mass transfer in the SCR-DeNO $_x$ reaction over catalysts of different shapes 249

Slurry reactor

Modelling of a bubble column slurry reactor for Fischer-Tropsch synthesis 279

Slurry reactors

Examples of hydrogenation in semibatch and continuous slurry reactors 363

Three-phase catalytic reactors 223

Solid acidity

Role of the solid acidity on the MoO_3 loaded on SnO_2 in the methanol oxidation into formaldehyde 71

Solid-solid catalysis

Unique catalysis of an acidic salt of heteropoly acid, $Cs_{2.5}P_{0.5}PW_{12}O_{40}$, consisting of microcrystallites 23

Sorbitol

Catalytic hydrogenation of fine chemicals: sorbitol production 349

Statistical analysis

Planning of experiments and kinetic analysis 125

Steam treatment

Towards understanding the enhanced cracking activity of steamed Y zeolites 91

Supported metals

Nanostructural evolution of high loading Rh/lanthana catalysts through the preparation and reduction steps 29

Syngas

Reaction and surface characterization study of higher-alcohol synthesis catalysts XII: K- and Pd-promoted Zn/Cr/Mn spinel 99

Terephthalic acid

Kinetics and related engineering aspects of catalytic liquidphase oxidation of *p*-xylene to terephthalic acid 331

Transport resistance

Experimental methods in catalytic kinetics 133

Two-phase models

Modelling of catalytic gas-solid fluidised bed reactors 235

Ultrastable Y

Towards understanding the enhanced cracking activity of steamed Y zeolites 91

X-ray diffraction

Synthesis and surface characterization of nanometric $La_{1-x}K_xMnO_{3+\Delta}$ particles 45

p-Xylene

Kinetics and related engineering aspects of catalytic liquidphase oxidation of *p*-xylene to terephthalic acid 331

Zeolites

Kinetic modeling of acid-catalyzed oil refining processes 153 Towards understanding the enhanced cracking activity of steamed Y zeolites 91

ZnO₂

Characterization of the sites involved in the adsorption of CO on ZrO₂ and ZnO/ZrO₂ methanol synthesis aerogel catalysts 15