



ELSEVIER

Catalysis Today 75 (2002) VII–XV



www.elsevier.com/locate/cattod

Subject index

Acid catalysts

Studies on the catalytic dechlorination and abatement of chlorided VOC: the cases of 2-chloropropane, 1,2-dichloropropane and trichloroethylene 263

Activated carbon

Hydrotreating processes for catalytic abatement of water pollutants 63

Activation mechanism

Why Cu⁺ in ZSM-5 framework is active in DeNO_x reaction—quantum chemical calculations and IR studies 353

Adsorption

Hydrotreating processes for catalytic abatement of water pollutants 63

Catalytic conversion of MTBE to biodegradable chemicals in contaminated water 69

Alkylation of *m*-cresol

Heterogeneous basic catalysts as alternatives to homogeneous catalysts: reactivity of Mg/Al mixed oxides in the alkylation of *m*-cresol with methanol 103

Al₂O₃ catalysts

NO_x removal in excess oxygen by plasma-enhanced selective catalytic reduction 325

Alumina

New insight in the solid state characteristics, in the possible intermediates and on the reactivity of Pd–Cu and Pd–Sn catalysts, used in denitrification of drinking water 49

Alumina-supported platinum

A comparative study of Pt/ γ -Al₂O₃, Au/ α -Fe₂O₃ and CuO–CeO₂ catalysts for the selective oxidation of carbon monoxide in excess hydrogen 157

Ammonia

Catalytic wet air oxidation of ammonia over M/CeO₂ catalysts in the treatment of nitrogen-containing pollutants 29

Ammonium ion

Catalytic wet air oxidation of ammonia over M/CeO₂ catalysts in the treatment of nitrogen-containing pollutants 29

Ammonium sulfate

Sulfuric acid formation over ammonium sulfate loaded V₂O₅–WO₃/TiO₂ catalysts by DeNO_x reaction with NO_x 339

Aniline

Catalytic wet air oxidation of ammonia over M/CeO₂ catalysts in the treatment of nitrogen-containing pollutants 29

Aqueous solution

The effect of reaction conditions on the oxidation of veratryl alcohol catalyzed by cobalt salen-complexes 183

Aromatics hydroconversion

Producing a high-quality synthetic steamcracker feedstock from different aromatic model components of pyrolysis gasoline on bifunctional zeolite catalysts 133

Automotive catalysts

NO_x removal in excess oxygen by plasma-enhanced selective catalytic reduction 325

Butyric acid

Catalytic wet air oxidation of butyric acid solutions using carbon-supported iridium catalysts 23

Carbon monoxide selective oxidation

A comparative study of Pt/ γ -Al₂O₃, Au/ α -Fe₂O₃ and CuO–CeO₂ catalysts for the selective oxidation of carbon monoxide in excess hydrogen 157

Carbon-supported iridium catalysts

Catalytic wet air oxidation of butyric acid solutions using carbon-supported iridium catalysts 23

Catalysis

Environmental catalysis: trends and outlook 3

Catalyst

New insight in the solid state characteristics, in the possible intermediates and on the reactivity of Pd–Cu and Pd–Sn catalysts, used in denitrification of drinking water 49

Detoxication of water containing 1,1-dimethylhydrazine by catalytic oxidation with dioxygen and hydrogen peroxide over Cu- and Fe-containing catalysts 219

Selective catalytic reduction of N₂O and NO_x in a single reactor in the nitric acid industry 227

Catalytic

The effect of reaction conditions on the oxidation of veratryl alcohol catalyzed by cobalt salen-complexes 183

Catalytic activity

Analysis of the structural parameters controlling the temperature window of the process of SCR-NO_x by low paraffins over metal-exchanged zeolites 347

Catalytic adsorbents

Catalytic conversion of MTBE to biodegradable chemicals in contaminated water 69

Catalytic combustion

Microemulsions in the preparation of highly active combustion catalysts 297

Cu/ γ -Al₂O₃ catalyst for the combustion of methane in a fluidized bed reactor 317

- Catalytic combustor**
 Catalytic combustion for power generation 287
- Catalytic cracking**
 Kinetic study of the catalytic cracking of polypropylene in a semibatch stirred reactor 239
- Catalytic decomposition**
 A pilot plant study for catalytic decomposition of PCDDs/PCDFs over supported chromium oxide catalysts 269
- Catalytic degradation**
 Polymer waste recycling over “used” catalysts 247
- Catalytic delignification**
 New catalytic processes for a sustainable chemistry of cellulose production from wood biomass 211
- Catalytic denitrification**
 Catalytic denitrification of water with palladium-based catalysts supported on activated carbons 43
- Catalytic foam**
 Performances of a catalytic foam trap for soot abatement 471
- Catalytic oxidation**
 Oxidation of unsymmetrical dimethylhydrazine over heterogeneous catalysts. Solution of environmental problems of production, storage and disposal of highly toxic rocket fuels 277
- Catalytic soot combustion**
 Performances of a catalytic foam trap for soot abatement 471
- Catalytic wet air oxidation**
 Catalytic wet air oxidation of butyric acid solutions using carbon-supported iridium catalysts 23
 Catalytic wet air oxidation of ammonia over M/CeO₂ catalysts in the treatment of nitrogen-containing pollutants 29
- Cellulose**
 New catalytic processes for a sustainable chemistry of cellulose production from wood biomass 211
- Ceramic monoliths**
 A novel diesel particulate converter 451
- Ceria**
 A comparative study of Pt/γ-Al₂O₃, Au/α-Fe₂O₃ and CuO-CeO₂ catalysts for the selective oxidation of carbon monoxide in excess hydrogen 157
- Ceria-zirconia**
 Investigation of the oxygen storage process on ceria- and ceria-zirconia-supported catalysts 401
- Cerium oxide**
 Catalytic wet air oxidation of ammonia over M/CeO₂ catalysts in the treatment of nitrogen-containing pollutants 29
- Cetane number**
 Mesoporous catalysts for the synthesis of clean diesel fuels by oligomerisation of olefins 125
- Chlorobenzene**
 Catalytic hydrotreatment of water contaminated by chlorinated aromatics 57
- o*-chlorobiphenyl**
 Catalytic hydrotreatment of water contaminated by chlorinated aromatics 57
- Chloropropanes**
 Studies on the catalytic dechlorination and abatement of chlorided VOC: the cases of 2-chloropropane, 1,2-dichloropropane and trichloroethylene 263
- Chromium oxide catalyst**
 A pilot plant study for catalytic decomposition of PCDDs/PCDFs over supported chromium oxide catalysts 269
- Co(II) phthalocyanine**
 Oxidation of mercaptans in light oil sweetening by cobalt(II) phthalocyanine-hydrotalcite catalysts 113
- Cobalt and copper ions**
 Catalytic DeNO_x activity of cobalt and copper ions in micro-porous MeALPO-34 and MeAPSO-34 359
- Cobalt salen-complexes**
 The effect of reaction conditions on the oxidation of veratryl alcohol catalyzed by cobalt salen-complexes 183
- Co-K-Ba catalysts**
 Simultaneous removal of soot and nitrogen oxides from diesel engine exhausts 465
- Contaminated water**
 Catalytic hydrotreatment of water contaminated by chlorinated aromatics 57
- Copper**
 A comparative study of Pt/γ-Al₂O₃, Au/α-Fe₂O₃ and CuO-CeO₂ catalysts for the selective oxidation of carbon monoxide in excess hydrogen 157
- Copper monolayer**
 Copper-platinum catalysts prepared and characterized by electrochemical methods for the reduction of nitrate and nitrite 35
- Copper-nickel oxide**
 Influence of NH₃ and NO oxidation on the SCR reaction mechanism on copper/nickel and vanadium oxide catalysts supported on alumina and titania 331
- Copper-platinum catalyst**
 Copper-platinum catalysts prepared and characterized by electrochemical methods for the reduction of nitrate and nitrite 35
- Co-ZSM-5**
 Selective catalytic reduction of N₂O and NO_x in a single reactor in the nitric acid industry 227
- Cu⁺ZSM-5**
 Why Cu⁺ in ZSM-5 framework is active in DeNO_x reaction—quantum chemical calculations and IR studies 353
- Cu-MCM-41 catalysts**
 Selective hydroxylation of phenol employing Cu-MCM-41 catalysts 189
- CVOCs**
 A pilot plant study for catalytic decomposition of PCDDs/PCDFs over supported chromium oxide catalysts 269
- Cyanide**
 Removal of cyanides in wastewater by supported TiO₂-based photocatalysts 95
- Deactivation**
 Kinetic study of the catalytic cracking of polypropylene in a semibatch stirred reactor 239
 Studies on the deactivation of NO_x storage-reduction catalysts by sulfur dioxide 413
- Dechlorination**
 Studies on the catalytic dechlorination and abatement of chlorided VOC: the cases of 2-chloropropane, 1,2-dichloropropane and trichloroethylene 263

- DeNO_x reaction**
- Catalytic DeNO_x activity of cobalt and copper ions in micro-porous MeALPO-34 and MeAPSO-34 359
- Diesel**
- Mesoporous catalysts for the synthesis of clean diesel fuels by oligomerisation of olefins 125
- Diesel engine**
- A novel diesel particulate converter 451
- Diesel engine exhaust**
- Performances of a catalytic foam trap for soot abatement 471
- Diesel fuel additives**
- Bench-scale demonstration of an integrated deSoot–deNO_x system 459
- Diesel light-duty engine**
- Novel low temperature NO_x storage-reduction catalysts for diesel light-duty engine emissions based on hydrotalcite compounds 421
- Diesel soot oxidation**
- Bench-scale demonstration of an integrated deSoot–deNO_x system 459
- Diglycerol**
- Catalysis and fine chemistry 177
- 1,1-Dimethylhydrazine**
- Detoxication of water containing 1,1-dimethylhydrazine by catalytic oxidation with dioxygen and hydrogen peroxide over Cu- and Fe-containing catalysts 219
- Dioxin**
- A pilot plant study for catalytic decomposition of PCDDs/PCDFs over supported chromium oxide catalysts 269
- Doped polycrystalline TiO₂**
- Photocatalytic degradation of organic compounds in aqueous systems by transition metal doped polycrystalline TiO₂ 87
- Dyes and 4-nitrophenol**
- Hybrid processes coupling photocatalysis and membranes for degradation of organic pollutants in water 77
- E-Cats**
- Polymer waste recycling over “used” catalysts 247
- Electrochemical characterization**
- Copper–platinum catalysts prepared and characterized by electrochemical methods for the reduction of nitrate and nitrite 35
- Electrochemical reactor**
- A novel diesel particulate converter 451
- Emission control**
- Support effects in Pt/TiO₂–ZrO₂ catalysts for NO reduction with CH₄ 385
- Engelhard**
- An overview about Engelhard approach to non-standard environmental catalysis 17
- Environmentally benign processes**
- New catalytic processes for a sustainable chemistry of cellulose production from wood biomass 211
- Ethanol**
- Oxidative reforming of biomass derived ethanol for hydrogen production in fuel cell applications 141
 - Production of hydrogen for fuel cells by reformation of biomass-derived ethanol 145
- Excess hydrogen**
- A comparative study of Pt/γ-Al₂O₃, Au/α-Fe₂O₃ and CuO–CeO₂ catalysts for the selective oxidation of carbon monoxide in excess hydrogen 157
- FCC**
- Polymer waste recycling over “used” catalysts 247
- FCC equilibrium catalyst**
- Kinetic study of the catalytic cracking of polypropylene in a semibatch stirred reactor 239
- Feedstock recycling**
- Catalytic conversion of low-density polyethylene using a continuous screw kiln reactor 257
- Fe-ZSM-5**
- Selective catalytic reduction of N₂O and NO_x in a single reactor in the nitric acid industry 227
- Fibrous cloth**
- Hydrotreating processes for catalytic abatement of water pollutants 63
- Fluidised bed**
- Polymer waste recycling over “used” catalysts 247
- Fluidized bed**
- Cu/γ-Al₂O₃ catalyst for the combustion of methane in a fluidized bed reactor 317
- Fluidized bed reactor**
- Oxidation of unsymmetrical dimethylhydrazine over heterogeneous catalysts. Solution of environmental problems of production, storage and disposal of highly toxic rocket fuels 277
- FTIR spectroscopy**
- Catalytic DeNO_x activity of cobalt and copper ions in micro-porous MeALPO-34 and MeAPSO-34 359
 - In situ FTIR study on NO reduction by C₃H₆ over Pd-based catalysts 379
- Fuel cell**
- Oxidative reforming of biomass derived ethanol for hydrogen production in fuel cell applications 141
 - Production of hydrogen for fuel cells by reformation of biomass-derived ethanol 145
- Gas turbines**
- Catalytic combustion for power generation 287
- Glass fiber cloth**
- Hydrotreating processes for catalytic abatement of water pollutants 63
- Glycerol esterification**
- Catalysis and fine chemistry 177
- Gold**
- A comparative study of Pt/γ-Al₂O₃, Au/α-Fe₂O₃ and CuO–CeO₂ catalysts for the selective oxidation of carbon monoxide in excess hydrogen 157
- Gold, silver and copper catalysts**
- Gold, silver and copper catalysts supported on TiO₂ for pure hydrogen production 169
- Granular**
- Hydrotreating processes for catalytic abatement of water pollutants 63

- H-BEA**
Catalytic conversion of MTBE to biodegradable chemicals in contaminated water 69
- Heterogeneous basic catalysts**
Heterogeneous basic catalysts as alternatives to homogeneous catalysts: reactivity of Mg/Al mixed oxides in the alkylation of *m*-cresol with methanol 103
- Heterogeneous catalysis**
Hydrotreating processes for catalytic abatement of water pollutants 63
- Heterogeneous photocatalysis**
Photocatalytic degradation of organic compounds in aqueous systems by transition metal doped polycrystalline TiO₂ 87
- High-density polyethylene**
Polymer waste recycling over “used” catalysts 247
- H-MFI**
Catalytic conversion of MTBE to biodegradable chemicals in contaminated water 69
- Honeycomb corundum-supported catalysts**
Honeycomb-supported perovskite catalysts for high-temperature processes 305
- HVOC abatement**
Studies on the catalytic dechlorination and abatement of chlorided VOC: the cases of 2-chloropropane, 1,2-dichloropropane and trichloroethylene 263
- HY zeolite**
Studies on the catalytic dechlorination and abatement of chlorided VOC: the cases of 2-chloropropane, 1,2-dichloropropane and trichloroethylene 263
- Hydrocarbon-SCR**
NO_x removal in excess oxygen by plasma-enhanced selective catalytic reduction 325
- Hydrodechlorination**
Hydrotreating processes for catalytic abatement of water pollutants 63
- Hydrodenitrification**
Hydrotreating processes for catalytic abatement of water pollutants 63
- Hydrogen**
Oxidative reforming of biomass derived ethanol for hydrogen production in fuel cell applications 141
- Hydrogen peroxide**
Detoxication of water containing 1,1-dimethylhydrazine by catalytic oxidation with dioxygen and hydrogen peroxide over Cu- and Fe-containing catalysts 219
- Hydrogen production**
Production of hydrogen for fuel cells by reformation of biomass-derived ethanol 145
- Hydrotalcite**
Heterogeneous basic catalysts as alternatives to homogeneous catalysts: reactivity of Mg/Al mixed oxides in the alkylation of *m*-cresol with methanol 103
Condensation of aldehydes for environmentally friendly synthesis of 2-methyl-3-phenyl-propanal by heterogeneous catalysis 197
- Hydrotalcite compound**
Novel low temperature NO_x storage-reduction catalysts for diesel light-duty engine emissions based on hydrotalcite compounds 421
- Hydrotreatment**
Catalytic hydrotreatment of water contaminated by chlorinated aromatics 57
- Influence of carbon dioxide**
A comparative study of Pt/γ-Al₂O₃, Au/α-Fe₂O₃ and CuO–CeO₂ catalysts for the selective oxidation of carbon monoxide in excess hydrogen 157
- Influence of water**
A comparative study of Pt/γ-Al₂O₃, Au/α-Fe₂O₃ and CuO–CeO₂ catalysts for the selective oxidation of carbon monoxide in excess hydrogen 157
- Ir**
Investigation of the oxygen storage process on ceria- and ceria-zirconia-supported catalysts 401
- Iron oxide**
A comparative study of Pt/γ-Al₂O₃, Au/α-Fe₂O₃ and CuO–CeO₂ catalysts for the selective oxidation of carbon monoxide in excess hydrogen 157
- iso-Butane**
Non-corrosive and chlorine-free isomerisation process under supercritical conditions 119
- Isomerisation**
Non-corrosive and chlorine-free isomerisation process under supercritical conditions 119
- ITQ7**
A new active zeolite structure for the selective catalytic reduction (SCR) of nitrogen oxides: ITQ7 zeolite. The influence of NO₂ on this reaction 367
- Kinetics**
Kinetic study of the catalytic cracking of polypropylene in a semibatch stirred reactor 239
- Lanthanum oxide**
Production of hydrogen for fuel cells by reformation of biomass-derived ethanol 145
- LDPE**
Catalytic conversion of low-density polyethylene using a continuous screw kiln reactor 257
- Lean and rich operations**
A catalytic NO_x reduction system using periodic steps, lean and rich operations 407
- Lean burn engine emissions**
A study of the behaviour of Pt supported on CeO₂–ZrO₂/Al₂O₃–BaO as NO_x storage–reduction catalyst for the treatment of lean burn engine emissions 439
- Lean-burn conditions**
NO_x removal in excess oxygen by plasma-enhanced selective catalytic reduction 325
- Lignosulfonates**
New catalytic processes for a sustainable chemistry of cellulose production from wood biomass 211
- Magnesium/aluminum mixed oxide**
Heterogeneous basic catalysts as alternatives to homogeneous

- catalysts: reactivity of Mg/Al mixed oxides in the alkylation of *m*-cresol with methanol 103
- MCM-41
Mesoporous catalysts for the synthesis of clean diesel fuels by oligomerisation of olefins 125
Catalytic conversion of low-density polyethylene using a continuous screw kiln reactor 257
- Mercaptan oxidation
Oxidation of mercaptans in light oil sweetening by cobalt(II) phthalocyanine–hydrotalcite catalysts 113
- Mesoporous mesophase materials
A new environmentally friendly method for the production of 2,3,5-trimethyl-*p*-benzoquinone 203
- Metal-exchanged zeolites
Analysis of the structural parameters controlling the temperature window of the process of SCR-NO_x by low paraffins over metal-exchanged zeolites 347
- Methane
Cu/ γ -Al₂O₃ catalyst for the combustion of methane in a fluidized bed reactor 317
Support effects in Pt/TiO₂–ZrO₂ catalysts for NO reduction with CH₄ 385
- Methane oxidation
Honeycomb-supported perovskite catalysts for high-temperature processes 305
- 2-Methyl-3-phenyl-propanal
Condensation of aldehydes for environmentally friendly synthesis of 2-methyl-3-phenyl-propanal by heterogeneous catalysis 197
- Mg-Al hydrotalcite
Oxidation of mercaptans in light oil sweetening by cobalt(II) phthalocyanine–hydrotalcite catalysts 113
- Microemulsions
Microemulsions in the preparation of highly active combustion catalysts 297
- Model-free kinetics
Catalytic degradation of polyethylene over SAPO-37 molecular sieve 233
- Mordenite
Catalytic conversion of MTBE to biodegradable chemicals in contaminated water 69
- MTBE contamination
Catalytic conversion of MTBE to biodegradable chemicals in contaminated water 69
- Nanofiltration membrane photoreactor
Hybrid processes coupling photocatalysis and membranes for degradation of organic pollutants in water 77
- NH₃ oxidation
Influence of NH₃ and NO oxidation on the SCR reaction mechanism on copper/nickel and vanadium oxide catalysts supported on alumina and titania 331
- NH₃-SCR
NO_x removal in excess oxygen by plasma-enhanced selective catalytic reduction 325
- Ni
Mesoporous catalysts for the synthesis of clean diesel fuels by oligomerisation of olefins 125
- Nickel
Production of hydrogen for fuel cells by reformation of biomass-derived ethanol 145
- Nitrate
New insight in the solid state characteristics, in the possible intermediates and on the reactivity of Pd–Cu and Pd–Sn catalysts, used in denitrification of drinking water 49
- Nitrate reduction
Copper-platinum catalysts prepared and characterized by electrochemical methods for the reduction of nitrate and nitrite 35
- Nitric acid industry
Selective catalytic reduction of N₂O and NO_x in a single reactor in the nitric acid industry 227
- Nitric oxide
A pilot plant study for catalytic decomposition of PCDDs/PCDFs over supported chromium oxide catalysts 269
- Nitric oxide removal
Simultaneous removal of soot and nitrogen oxides from diesel engine exhausts 465
- Nitride catalysts
Oxidation of unsymmetrical dimethylhydrazine over heterogeneous catalysts. Solution of environmental problems of production, storage and disposal of highly toxic rocket fuels 277
- Nitrite reduction
Copper-platinum catalysts prepared and characterized by electrochemical methods for the reduction of nitrate and nitrite 35
- Nitrogen oxides
Analysis of the structural parameters controlling the temperature window of the process of SCR-NO_x by low paraffins over metal-exchanged zeolites 347
Why Cu⁺ in ZSM-5 framework is active in DeNO_x reaction—quantum chemical calculations and IR studies 353
Support effects in Pt/TiO₂–ZrO₂ catalysts for NO reduction with CH₄ 385
- Nitrous oxide
Influence of NH₃ and NO oxidation on the SCR reaction mechanism on copper/nickel and vanadium oxide catalysts supported on alumina and titania 331
- NO_x
Environmental catalysis: trends and outlook 3
Selective catalytic reduction of N₂O and NO_x in a single reactor in the nitric acid industry 227
- N₂O
Selective catalytic reduction of N₂O and NO_x in a single reactor in the nitric acid industry 227
- DeNO_x reactions on Cu-zeolites. Decomposition of NO, N₂O and SCR of NO by C₃H₈ and CH₄ on Cu-ZSM-5 and Cu-AlTS-1 catalysts 393
- NO
A new active zeolite structure for the selective catalytic reduction (SCR) of nitrogen oxides: ITQ7 zeolite. The influence of NO₂ on this reaction 367
DeNO_x reactions on Cu-zeolites. Decomposition of NO, N₂O and SCR of NO by C₃H₈ and CH₄ on Cu-ZSM-5 and Cu-AlTS-1 catalysts 393

NO₂

A new active zeolite structure for the selective catalytic reduction (SCR) of nitrogen oxides: ITQ7 zeolite. The influence of NO₂ on this reaction 367

NO abatement

The catalytic activity of FeO_x/ZrO₂ for the abatement of NO with propene in the presence of O₂ 373

NO oxidation

Influence of NH₃ and NO oxidation on the SCR reaction mechanism on copper/nickel and vanadium oxide catalysts supported on alumina and titania 331

NO reduction

In situ FTIR study on NO reduction by C₃H₆ over Pd-based catalysts 379

NO_x reduction

Oxidation of unsymmetrical dimethylhydrazine over heterogeneous catalysts. Solution of environmental problems of production, storage and disposal of highly toxic rocket fuels 277

NO_x removal in excess oxygen by plasma-enhanced selective catalytic reduction 325

Bench-scale demonstration of an integrated deSoot-deNO_x system 459

NO reduction system

A catalytic NO_x reduction system using periodic steps, lean and rich operations 407

NO_x storage-reduction

Novel low temperature NO_x storage-reduction catalysts for diesel light-duty engine emissions based on hydrotalcite compounds 421

On the dynamic behavior of "NO_x-storage/reduction" Pt-Ba/Al₂O₃ catalyst 431

Noble metal catalysts

Catalytic wet air oxidation of ammonia over M/CeO₂ catalysts in the treatment of nitrogen-containing pollutants 29

Oxidation of unsymmetrical dimethylhydrazine over heterogeneous catalysts. Solution of environmental problems of production, storage and disposal of highly toxic rocket fuels 277

Non-standard environmental catalysis

An overview about Engelhard approach to non-standard environmental catalysis 17

Non-thermal plasma

NO_x removal in excess oxygen by plasma-enhanced selective catalytic reduction 325

NSR

Studies on the deactivation of NO_x storage-reduction catalysts by sulfur dioxide 413

Olefins

Mesoporous catalysts for the synthesis of clean diesel fuels by oligomerisation of olefins 125

Oligomerisation

Mesoporous catalysts for the synthesis of clean diesel fuels by oligomerisation of olefins 125

"One-pot" synthesis

Condensation of aldehydes for environmentally friendly synthesis of 2-methyl-3-phenyl-propanal by heterogeneous catalysis 197

Oscillations

DeNO_x reactions on Cu-zeolites. Decomposition of NO, N₂O and SCR of NO by C₃H₈ and CH₄ on Cu-ZSM-5 and Cu-AlTS-1 catalysts 393

Overview

An overview about Engelhard approach to non-standard environmental catalysis 17

Oxidation

New catalytic processes for a sustainable chemistry of cellulose production from wood biomass 211

Detoxication of water containing 1,1-dimethylhydrazine by catalytic oxidation with dioxygen and hydrogen peroxide over Cu- and Fe-containing catalysts 219

Oxidation of nitrogen compounds

Catalytic wet air oxidation of ammonia over M/CeO₂ catalysts in the treatment of nitrogen-containing pollutants 29

Oxide catalysts

Oxidation of unsymmetrical dimethylhydrazine over heterogeneous catalysts. Solution of environmental problems of production, storage and disposal of highly toxic rocket fuels 277

Oxygen diffusion

Investigation of the oxygen storage process on ceria- and ceria-zirconia-supported catalysts 401

Oxygen storage capacity

Investigation of the oxygen storage process on ceria- and ceria-zirconia-supported catalysts 401

Palladium

New insight in the solid state characteristics, in the possible intermediates and on the reactivity of Pd-Cu and Pd-Sn catalysts, used in denitrification of drinking water 49

Condensation of aldehydes for environmentally friendly synthesis of 2-methyl-3-phenyl-propanal by heterogeneous catalysis 197

Catalytic combustion for power generation 287

In situ FTIR study on NO reduction by C₃H₆ over Pd-based catalysts 379

Palladium-based catalysts

Catalytic denitrification of water with palladium-based catalysts supported on activated carbons 43

PCDDs/PCDFs

A pilot plant study for catalytic decomposition of PCDDs/PCDFs over supported chromium oxide catalysts 269

Pd

Investigation of the oxygen storage process on ceria- and ceria-zirconia-supported catalysts 401

Perovskites

Honeycomb-supported perovskite catalysts for high-temperature processes 305

Phenol

Selective hydroxylation of phenol employing Cu-MCM-41 catalysts 189

Photocatalysts

Removal of cyanides in wastewater by supported TiO₂-based photocatalysts 95

Photodegradation of humic acids

Hybrid processes coupling photocatalysis and membranes for degradation of organic pollutants in water 77

- Photodegradation of organic compounds**
 Photocatalytic degradation of organic compounds in aqueous systems by transition metal doped polycrystalline TiO_2 87
- Plastic wastes**
 Catalytic conversion of low-density polyethylene using a continuous screw kiln reactor 257
- Platinum catalysts**
 Microemulsions in the preparation of highly active combustion catalysts 297
- Polyethylene degradation**
 Catalytic degradation of polyethylene over SAPO-37 molecular sieve 233
- Polypropylene**
 Kinetic study of the catalytic cracking of polypropylene in a semibatch stirred reactor 239
- Propane**
 A new active zeolite structure for the selective catalytic reduction (SCR) of nitrogen oxides: ITQ7 zeolite. The influence of NO_2 on this reaction 367
- Propene**
 In situ FTIR study on NO reduction by C_3H_6 over Pd-based catalysts 379
- Pt**
 Mesoporous catalysts for the synthesis of clean diesel fuels by oligomerisation of olefins 125
 Investigation of the oxygen storage process on ceria- and ceria-zirconia-supported catalysts 401
- Pt supported catalyst**
 A study of the behaviour of Pt supported on $\text{CeO}_2\text{--ZrO}_2\text{--Al}_2\text{O}_3\text{--BaO}$ as NO_x storage-reduction catalyst for the treatment of lean burn engine emissions 439
- Pt/ZrO₂–TiO₂ catalysts**
 Support effects in Pt/TiO₂–ZrO₂ catalysts for NO reduction with CH_4 385
- Pt–Ba/Al₂O₃ catalyst**
 On the dynamic behavior of “ NO_x -storage/reduction” Pt–Ba/Al₂O₃ catalyst 431
- Pure hydrogen production**
 Gold, silver and copper catalysts supported on TiO₂ for pure hydrogen production 169
- Pyrolysis gasoline**
 Producing a high-quality synthetic steamcracker feedstock from different aromatic model components of pyrolysis gasoline on bifunctional zeolite catalysts 133
- Quantum chemical calculations**
 Why Cu⁺ in ZSM-5 framework is active in DeNO_x reaction—quantum chemical calculations and IR studies 353
- Reaction mechanism**
 In situ FTIR study on NO reduction by C_3H_6 over Pd-based catalysts 379
- Recycling**
 Polymer waste recycling over “used” catalysts 247
- Reformation**
 Production of hydrogen for fuel cells by reformation of biomass-derived ethanol 145
- Rh**
 Mesoporous catalysts for the synthesis of clean diesel fuels by oligomerisation of olefins 125
 Investigation of the oxygen storage process on ceria- and ceria-zirconia-supported catalysts 401
- Rh/β-zeolite**
 A catalytic NO_x reduction system using periodic steps, lean and rich operations 407
- Ring opening**
 Producing a high-quality synthetic steamcracker feedstock from different aromatic model components of pyrolysis gasoline on bifunctional zeolite catalysts 133
- Rocket fuels**
 Oxidation of unsymmetrical dimethylhydrazine over heterogeneous catalysts. Solution of environmental problems of production, storage and disposal of highly toxic rocket fuels 277
- Ru**
 Investigation of the oxygen storage process on ceria- and ceria-zirconia-supported catalysts 401
- SAPO-37**
 Catalytic degradation of polyethylene over SAPO-37 molecular sieve 233
- SCR**
 Influence of NH₃ and NO oxidation on the SCR reaction mechanism on copper/nickel and vanadium oxide catalysts supported on alumina and titania 331
 DeNO_x reactions on Cu-zeolites. Decomposition of NO, N₂O and SCR of NO by C₃H₈ and CH₄ on Cu-ZSM-5 and Cu-AlTS-1 catalysts 393
- SCR DeNO_x**
 Sulfuric acid formation over ammonium sulfate loaded V₂O₅–WO₃/TiO₂ catalysts by DeNO_x reaction with NO_x 339
- Screw kiln reactor**
 Catalytic conversion of low-density polyethylene using a continuous screw kiln reactor 257
- SCR-NO_x**
 Analysis of the structural parameters controlling the temperature window of the process of SCR-NO_x by low paraffins over metal-exchanged zeolites 347
- Selective catalytic reduction**
 Selective catalytic reduction of N₂O and NO_x in a single reactor in the nitric acid industry 227
 A new active zeolite structure for the selective catalytic reduction (SCR) of nitrogen oxides: ITQ7 zeolite. The influence of NO_2 on this reaction 367
 Support effects in Pt/TiO₂–ZrO₂ catalysts for NO reduction with CH_4 385
- Selective hydroxylation**
 Selective hydroxylation of phenol employing Cu–MCM-41 catalysts 189
- Silica-alumina**
 Studies on the catalytic dechlorination and abatement of chlorided VOC: the cases of 2-chloropropane, 1,2-dichloropropane and trichloroethylene 263

SINO_x

NO_x removal in excess oxygen by plasma-enhanced selective catalytic reduction 325

Soot combustion

Simultaneous removal of soot and nitrogen oxides from diesel engine exhausts 465

Stability

A comparative study of Pt/ γ -Al₂O₃, Au/ α -Fe₂O₃ and CuO–CeO₂ catalysts for the selective oxidation of carbon monoxide in excess hydrogen 157

Steamcracker feed (synthetic)

Producing a high-quality synthetic steamcracker feedstock from different aromatic model components of pyrolysis gasoline on bifunctional zeolite catalysts 133

Storage-reduction catalyst

A study of the behaviour of Pt supported on CeO₂–ZrO₂/Al₂O₃–BaO as NO_x storage-reduction catalyst for the treatment of lean burn engine emissions 439

Sulfur dioxide

Studies on the deactivation of NO_x storage-reduction catalysts by sulfur dioxide 413

Sulfuric acid

Sulfuric acid formation over ammonium sulfate loaded V₂O₅–WO₃/TiO₂ catalysts by DeNO_x reaction with NO_x 339

Sulphated zirconia

Non-corrosive and chlorine-free isomerisation process under supercritical conditions 119

Supercritical catalysis

Non-corrosive and chlorine-free isomerisation process under supercritical conditions 119

Supported iron oxides

The catalytic activity of FeO_x/ZrO₂ for the abatement of NO with propene in the presence of O₂ 373

Surface characterisation

New insight in the solid state characteristics, in the possible intermediates and on the reactivity of Pd–Cu and Pd–Sn catalysts, used in denitrification of drinking water 49

Temperature Programmed Surface Reaction

On the dynamic behavior of “NO_x-storage/reduction” Pt–Ba/Al₂O₃ catalyst 431

Temperature windows

Analysis of the structural parameters controlling the temperature window of the process of SCR-NO_x by low paraffins over metal-exchanged zeolites 347

Thermal cracking

Kinetic study of the catalytic cracking of polypropylene in a semibatch stirred reactor 239

TiO₂ photocatalysis

Hybrid processes coupling photocatalysis and membranes for degradation of organic pollutants in water 77

Titanium

A new environmentally friendly method for the production of 2,3,5-trimethyl-*p*-benzoquinone 203

Transients

DeNO_x reactions on Cu-zeolites. Decomposition of NO, N₂O

and SCR of NO by C₃H₈ and CH₄ on Cu-ZSM-5 and Cu-AlTS-1 catalysts 393

Trichloroethylene

Studies on the catalytic dechlorination and abatement of chlorided VOC: the cases of 2-chloropropane, 1,2-dichloropropane and trichloroethylene 263

Triglycerol

Catalysis and fine chemistry 177

2,3,5-Trimethyl-*p*-benzoquinone

A new environmentally friendly method for the production of 2,3,5-trimethyl-*p*-benzoquinone 203

Underpotential deposition

Copper-platinum catalysts prepared and characterized by electrochemical methods for the reduction of nitrate and nitrite 35

Unsymmetrical dimethylhydrazine

Oxidation of unsymmetrical dimethylhydrazine over heterogeneous catalysts. Solution of environmental problems of production, storage and disposal of highly toxic rocket fuels 277

USY zeolite

Kinetic study of the catalytic cracking of polypropylene in a semibatch stirred reactor 239

Vanadium oxide

Influence of NH₃ and NO oxidation on the SCR reaction mechanism on copper/nickel and vanadium oxide catalysts supported on alumina and titania 331

Veratryl alcohol

The effect of reaction conditions on the oxidation of veratryl alcohol catalyzed by cobalt salen-complexes 183

VOC

Microemulsions in the preparation of highly active combustion catalysts 297

Volatile organic compound

Environmental catalysis: trends and outlook 3

V₂O₅–WO₃/TiO₂ catalyst

Sulfuric acid formation over ammonium sulfate loaded V₂O₅–WO₃/TiO₂ catalysts by DeNO_x reaction with NO_x 339

Wastewater

Removal of cyanides in wastewater by supported TiO₂-based photocatalysts 95

Wastewater treatment

Detoxication of water containing 1,1-dimethylhydrazine by catalytic oxidation with dioxygen and hydrogen peroxide over Cu- and Fe-containing catalysts 219

Water

Catalytic denitrification of water with palladium-based catalysts supported on activated carbons 43

Water gas shift reaction

Gold, silver and copper catalysts supported on TiO₂ for pure hydrogen production 169

Water purification

Hybrid processes coupling photocatalysis and membranes for degradation of organic pollutants in water 77

Water treatment	
Hydrotreating processes for catalytic abatement of water pollutants	
63	
Wood	
New catalytic processes for a sustainable chemistry of cellulose production from wood biomass	211
Zeolite	
NO _x removal in excess oxygen by plasma-enhanced selective catalytic reduction	325
A new active zeolite structure for the selective catalytic reduction (SCR) of nitrogen oxides: ITQ7 zeolite. The influence of NO ₂ on this reaction	367
DeNO _x reactions on Cu-zeolites. Decomposition of NO, N ₂ O and SCR of NO by C ₃ H ₈ and CH ₄ on Cu-ZSM-5 and Cu-AlTS-1 catalysts	393
Zeolites (bifunctional)	
Producing a high-quality synthetic steamcracker feedstock from different aromatic model components of pyrolysis gasoline on bifunctional zeolite catalysts	133
Zirconia	
New insight in the solid state characteristics, in the possible intermediates and on the reactivity of Pd–Cu and Pd–Sn catalysts, used in denitrification of drinking water	
49	
ZrO ₂ catalysts	
NO _x removal in excess oxygen by plasma-enhanced selective catalytic reduction	325
ZrO ₂ support	
The catalytic activity of FeO _x /ZrO ₂ for the abatement of NO with propene in the presence of O ₂	373