



Subject index

Acetone

Preparation and catalytic property of a copper-lanthanide oxide binary system for hydrogenation reaction (Sakata, Y. (141) 269)

Active sites

Atomic-scale mechanism for the activation of catalyst surfaces (Tanaka, K.-i. (141) 39)

Adsorption

The role of adsorption heats and bond energies in the assignment of surface reaction products: ethyne and ethene on Ni{110} (Brown, W.A. (141) 21)

Drift spectra of adsorbed dihydrogen as a molecular probe for alkaline metal ions in faujasites (Kazansky, V.B. (141) 83) Adsorption of CH-acids on magnesia. An FTIR-spectroscopic study (Huber, S. (141) 117)

Adsorption-assisted desorption

In situ observation of the exchange reaction of formate with molecular formic acid on Ni(110) (Yamakata, A. (141) 73)

Alumina

Alcohol dehydration. Isotope studies of the conversion of 3-pentanol (Shi, B. (141) 257)

Ammonia decomposition

Tamaru's model for ammonia decomposition over titanium oxynitride (Djéga-Mariadassou, G. (141) 263)

Basicity

Adsorption of CH-acids on magnesia. An FTIR-spectroscopic study (Huber, S. (141) 117)

Bond energies

The role of adsorption heats and bond energies in the assignment of surface reaction products: ethyne and ethene on Ni{110} (Brown, W.A. (141) 21)

Butanes

¹³C MAS NMR mechanistic study of propane conversion into butanes over H-MFI catalyst (Ivanova, I.I. (141) 107)

Carbon dioxide

Translational energy of desorbing product and kinetic change at steady state in carbon monoxide oxidation on platinum(557) (Cao, G. (141) 63)

Synthesis of methylamines from ${\rm CO_2},~{\rm H_2}$ and ${\rm NH_3}$ over Cu–Mg–Al mixed oxides (Auer, S.M. (141) 193)

Carbon monoxide

Translational energy of desorbing product and kinetic change at steady state in carbon monoxide oxidation on platinum(557) (Cao, G. (141) 63)

Catalysis

Constrained chiral catalysts (Thomas, J.M. (141) 139) Structure and catalytic activity of double oxide system: Cu-Cr-O supported on MgF2 (Wojciechowska, M. (141) 155)

Catalytic cycles

Adsorption assisted desorption in catalytic cycles (Boudart, M. (141) 1)

CH

Thermal and photo-induced oxidation of CH₂ on Cu(100) (Kovács, I. (141) 31)

CH-acids

Adsorption of CH-acids on magnesia. An FTIR-spectroscopic study (Huber, S. (141) 117)

CH₂ONa

Low-temperature methanol synthesis in liquid-phase with a Raney Nickel-alkoxide system: effect of Raney Nickel pretreatment and reaction conditions (Lee, E.S. (141) 241)

CO adsorption

FTIR studies of dynamic surface structural changes in Cu-based methanol synthesis catalysts (Topsøe, N.-Y. (141) 95)

Cobalt sites

Bimetallic catalysis: CO hydrogenation over palladium-cobalt catalysts prepared by sol/gel method (Guczi, L. (141) 177)

Colloidal metal catalyst

Colloidal silver catalysts for oxidation of ethylene (Shiraishi, Y. (141) 187)

Confinement

Constrained chiral catalysts (Thomas, J.M. (141) 139)

Cooperative palladium

Bimetallic catalysis: CO hydrogenation over palladium-cobalt catalysts prepared by sol/gel method (Guczi, L. (141) 177)

CO oxidation

Surface matrix isolation method for photoinduced oxidation of carbon monoxide on Pt(111) (Yoshinobu, J. (141) 57)

Co-Pd bimetallic particles

Bimetallic catalysis: CO hydrogenation over palladium-cobalt catalysts prepared by sol/gel method (Guczi, L. (141) 177)

Copper-chromium electron transfer

Structure and catalytic activity of double oxide system: Cu-Cr-O supported on MgF2 (Wojciechowska, M. (141) 155)

Copper-lanthanide oxide catalyst

Preparation and catalytic property of a copper–lanthanide oxide binary system for hydrogenation reaction (Sakata, Y. (141) 269)

Cr_2O_3

Structure and catalytic activity of double oxide system: Cu-Cr-O supported on MgF2 (Wojciechowska, M. (141) 155)

Cu(100)

Thermal and photo-induced oxidation of CH₂ on Cu(100) (Koyács I (141) 31)

Cu catalysts

FTIR studies of dynamic surface structural changes in Cu-based methanol synthesis catalysts (Topsøe, N.-Y. (141) 95)

Cu-Mg-Al mixed oxide

Synthesis of methylamines from CO₂, H₂ and NH₃ over Cu-Mg-Al mixed oxides (Auer. S.M. (141) 193)

CuO

Structure and catalytic activity of double oxide system: Cu-Cr-O supported on MgF2 (Wojciechowska, M. (141) 155)

Cu₂O₀Ln(NO₂)

Preparation and catalytic property of a copper–lanthanide oxide binary system for hydrogenation reaction (Sakata, Y. (141) 269)

Cu/Pd(111)

Atomic-scale mechanism for the activation of catalyst surfaces (Tanaka, K.-i. (141) 39)

Dehydration

Alcohol dehydration. Isotope studies of the conversion of 3-pentanol (Shi, B. (141) 257)

Dehydrogenation

1,3- and 1,4-cyclohexadiene reaction intermediates in cyclohexene hydrogenation and dehydrogenation on Pt(111) crystal surface: a combined reaction kinetics and surface vibrational spectroscopy study using sum frequency generation (Su, X. (141) 9)

Desorption

Translational energy of desorbing product and kinetic change at steady state in carbon monoxide oxidation on platinum(557) (Cao, G. (141) 63)

Dihydrogen

Drift spectra of adsorbed dihydrogen as a molecular probe for alkaline metal ions in faujasites (Kazansky, V.B. (141) 83)

Double oxide system

Structure and catalytic activity of double oxide system: Cu-Cr-O supported on MgF2 (Wojciechowska, M. (141) 155)

Dppf

Constrained chiral catalysts (Thomas, J.M. (141) 139)

DRIFT spectra

Drift spectra of adsorbed dihydrogen as a molecular probe for alkaline metal ions in faujasites (Kazansky, V.B. (141) 83)

Effect of pressure

¹³C MAS NMR mechanistic study of propane conversion into butanes over H-MFI catalyst (Iyanova, I.I. (141) 107)

Ethene

Preparation and catalytic property of a copper–lanthanide oxide binary system for hydrogenation reaction (Sakata, Y. (141) 269)

Ethylene oxide

Colloidal silver catalysts for oxidation of ethylene (Shiraishi, Y. (141) 187)

Exchange reaction

In situ observation of the exchange reaction of formate with molecular formic acid on Ni(110) (Yamakata, A. (141) 73)

Formate

In situ observation of the exchange reaction of formate with molecular formic acid on Ni(110) (Yamakata, A. (141) 73)

FTIR/EXAFS/TEM characterization

Templating fabrication of platinum nanoparticles and nanowires using the confined mesoporous channels of FSM-16—their structural characterization and catalytic performances in water gas shift reaction (Sasaki, M. (141) 223)

FTIR-spectroscopy

Adsorption of CH-acids on magnesia. An FTIR-spectroscopic study (Huber, S. (141) 117)

FTIR studies

FTIR studies of dynamic surface structural changes in Cu-based methanol synthesis catalysts (Topsøe, N.-Y. (141) 95)

Heteropolyacid

Skeletal isomerization of *n*-pentane over Pt-promoted cesium hydrogen salts of 12-tungstophosphoric acid (Liu, Y. (141) 145)

High fugacity of surface species

Adsorption assisted desorption in catalytic cycles (Boudart, M. (141) 1)

Hydrocarbon

The role of adsorption heats and bond energies in the assignment of surface reaction products: ethyne and ethene on Ni[110] (Brown, W.A. (141) 21)

Hydrogenation

1,3- and 1,4-cyclohexadiene reaction intermediates in cyclohexene hydrogenation and dehydrogenation on Pt(111) crystal surface: a combined reaction kinetics and surface vibrational spectroscopy study using sum frequency generation (Su, X. (141) 9)

Preparation and catalytic property of a copper–lanthanide oxide binary system for hydrogenation reaction (Sakata, Y. (141) 269)

Hydrogenation and isomerization of olefins

Atomic-scale mechanism for the activation of catalyst surfaces (Tanaka, K.-i. (141) 39)

Hydrogen effect

Tamaru's model for ammonia decomposition over titanium oxynitride (Djéga-Mariadassou, G. (141) 263)

Hydrogen peroxide

Propylene epoxidation with hydrogen peroxide over palladium containing titanium silicalite (Laufer, W. (141) 215)

Hydrophobicity

Two-dimensional composite zirconium phosphonates: preparation and catalytic activities (Segawa, K. (141) 249)

Hydrotalcite

Synthesis of methylamines from ${\rm CO_2},~{\rm H_2}$ and ${\rm NH_3}$ over ${\rm Cu-Mg-Al}$ mixed oxides (Auer, S.M. (141) 193)

IRAS

Surface matrix isolation method for photoinduced oxidation of carbon monoxide on Pt(111) (Yoshinobu, J. (141) 57)

Isomerization

Skeletal isomerization of n-pentane over Pt-promoted cesium hydrogen salts of 12-tungstophosphoric acid (Liu, Y. (141) 145)

Isotopic tracer studies

Alcohol dehydration. Isotope studies of the conversion of 3-pentanol (Shi, B. (141) 257)

Kinetic coupling

Adsorption assisted desorption in catalytic cycles (Boudart, M. (141) 1)

Kinetic isotope effect (KIE

Alcohol dehydration. Isotope studies of the conversion of 3-pentanol (Shi, B. (141) 257)

$k_{\rm H}/k_{\rm D}$

Alcohol dehydration. Isotope studies of the conversion of 3-pentanol (Shi, B. (141) 257)

Lavered double hydroxide

Synthesis of methylamines from CO₂, H₂ and NH₃ over Cu–Mg–Al mixed oxides (Auer. S.M. (141) 193)

Layered materials

Two-dimensional composite zirconium phosphonates: preparation and catalytic activities (Segawa, K. (141) 249)

LDH

Synthesis of methylamines from CO₂, H₂ and NH₃ over Cu-Mg-Al mixed oxides (Auer, S.M. (141) 193)

Low-temperature methanol synthesis

Low-temperature methanol synthesis in liquid-phase with a Raney Nickel-alkoxide system: effect of Raney Nickel pretreatment and reaction conditions (Lee, E.S. (141) 241)

Magnesia

Adsorption of CH-acids on magnesia. An FTIR-spectroscopic study (Huber, S. (141) 117)

Magnesium oxide

A study of the structure sensitivity of the exchange of oxygen with the surface of magnesium oxide (Hargreaves, J.S.J. (141) 171)

MAS NMR

¹³C MAS NMR mechanistic study of propane conversion into butanes over H-MFI catalyst (Ivanova, I.I. (141) 107)

Matrix isolation

Surface matrix isolation method for photoinduced oxidation of carbon monoxide on Pt(111) (Yoshinobu, J. (141) 57)

MCM41

Constrained chiral catalysts (Thomas, J.M. (141) 139)

Mechanism

¹³C MAS NMR mechanistic study of propane conversion into butanes over H-MFI catalyst (Ivanova, I.I. (141) 107)

Mechanistic study of the hydrogen exchange and hydrogenation of propene over alumina supported rhodium and ruthenium carbonyl cluster complexes (Naito, S. (141) 205)

Mesoporous FSM-16

Templating fabrication of platinum nanoparticles and nanowires using the confined mesoporous channels of FSM-16—their structural characterization and catalytic performances in water gas shift reaction (Sasaki, M. (141) 223)

Metal cluster

Colloidal silver catalysts for oxidation of ethylene (Shiraishi, Y. (141) 187)

Methanol synthesis

FTIR studies of dynamic surface structural changes in Cu-based methanol synthesis catalysts (Topsøe, N.-Y. (141) 95)

Methanol synthesis in liquid-phase

Low-temperature methanol synthesis in liquid-phase with a Raney Nickel-alkoxide system: effect of Raney Nickel pretreatment and reaction conditions (Lee, E.S. (141) 241)

Methylamine synthesis

Synthesis of methylamines from CO₂, H₂ and NH₃ over Cu–Mg–Al mixed oxides (Auer, S.M. (141) 193)

MoO,

Atomic-scale mechanism for the activation of catalyst surfaces (Tanaka, K.-i. (141) 39)

MoS₂

Atomic-scale mechanism for the activation of catalyst surfaces (Tanaka K -i (141) 39)

NaX

Drift spectra of adsorbed dihydrogen as a molecular probe for alkaline metal ions in faujasites (Kazansky, V.B. (141) 83)

NaY

Drift spectra of adsorbed dihydrogen as a molecular probe for alkaline metal ions in faujasites (Kazansky, V.B. (141) 83)

Ni(110)

In situ observation of the exchange reaction of formate with molecular formic acid on Ni(110) (Yamakata, A. (141) 73)

NO reduction

Atomic-scale mechanism for the activation of catalyst surfaces (Tanaka, K.-i. (141) 39)

Olefin metathesis reaction

Atomic-scale mechanism for the activation of catalyst surfaces (Tanaka, K.-i. (141) 39)

Ortho- and para-hydrogen

Drift spectra of adsorbed dihydrogen as a molecular probe for alkaline metal ions in faujasites (Kazansky, V.B. (141) 83)

Oxidation

Translational energy of desorbing product and kinetic change at steady state in carbon monoxide oxidation on platinum(557) (Cao, G. (141) 63)

Oxide monolayer catalysts

Structure and catalytic activity of double oxide system: Cu-Cr-O supported on MgF2 (Wojciechowska, M. (141) 155)

Oxygen exchange

A study of the structure sensitivity of the exchange of oxygen with the surface of magnesium oxide (Hargreaves, J.S.J. (141) 171)

Palladium

Propylene epoxidation with hydrogen peroxide over palladium containing titanium silicalite (Laufer, W. (141) 215)

n-Pentane

Skeletal isomerization of *n*-pentane over Pt-promoted cesium hydrogen salts of 12-tungstophosphoric acid (Liu, Y. (141) 145)

3-Pentanol

Alcohol dehydration. Isotope studies of the conversion of 3-pentanol (Shi, B. (141) 257)

Photochemistry

Surface matrix isolation method for photoinduced oxidation of carbon monoxide on Pt(111) (Yoshinobu, J. (141) 57)

Platinun

Translational energy of desorbing product and kinetic change at steady state in carbon monoxide oxidation on platinum(557) (Cao. G. (141) 63)

Skeletal isomerization of *n*-pentane over Pt-promoted cesium hydrogen salts of 12-tungstophosphoric acid (Liu, Y. (141) 145)

Preparation condition

Preparation and catalytic property of a copper-lanthanide oxide binary system for hydrogenation reaction (Sakata, Y. (141) 269)

Propane

¹³C MAS NMR mechanistic study of propane conversion into butanes over H-MFI catalyst (Ivanova, I.I. (141) 107)

Propene-deuterium reaction

Mechanistic study of the hydrogen exchange and hydrogenation of propene over alumina supported rhodium and ruthenium carbonyl cluster complexes (Naito, S. (141) 205)

Propylene epoxidation

Propylene epoxidation with hydrogen peroxide over palladium containing titanium silicalite (Laufer, W. (141) 215)

Pt(111)

Surface matrix isolation method for photoinduced oxidation of carbon monoxide on Pt(111) (Yoshinobu, J. (141) 57)

Pt cluster anions

Templating fabrication of platinum nanoparticles and nanowires using the confined mesoporous channels of FSM-16—their structural characterization and catalytic performances in water gas shift reaction (Sasaki, M. (141) 223)

Pt nanoparticle

Templating fabrication of platinum nanoparticles and nanowires using the confined mesoporous channels of FSM-16—their structural characterization and catalytic performances in water gas shift reaction (Sasaki, M. (141) 223)

Pt nanowires

Templating fabrication of platinum nanoparticles and nanowires using the confined mesoporous channels of FSM-16—their structural characterization and catalytic performances in water gas shift reaction (Sasaki, M. (141) 223)

Pt on Rh and Rh on Pt single crystal bimetallic catalysts

Atomic-scale mechanism for the activation of catalyst surfaces (Tanaka, K.-i. (141) 39)

Ranev-Ni

Low-temperature methanol synthesis in liquid-phase with a Raney Nickel-alkoxide system: effect of Raney Nickel pretreatment and reaction conditions (Lee, E.S. (141) 241)

Rate of desorption

Adsorption assisted desorption in catalytic cycles (Boudart, M. (141) 1)

Real time

X-ray photoemission electron microscopy (XPEEM) as a new promising tool for the real-time chemical imaging of active surfaces (Yamaguchi, Y. (141) 129)

Reconstructive activation

Atomic-scale mechanism for the activation of catalyst surfaces (Tanaka, K.-i. (141) 39)

Regio- and enantioselectivity

Constrained chiral catalysts (Thomas, J.M. (141) 139)

Rh and Ru carbonyl cluster complexes

Mechanistic study of the hydrogen exchange and hydrogenation of propene over alumina supported rhodium and ruthenium carbonyl cluster complexes (Naito, S. (141) 205)

Silver nanoparticle

Colloidal silver catalysts for oxidation of ethylene (Shiraishi, Y. (141) 187)

Sol/gel method in sample preparation

Bimetallic catalysis: CO hydrogenation over palladium-cobalt catalysts prepared by sol/gel method (Guczi, L. (141) 177)
Solid acids

Two-dimensional composite zirconium phosphonates: preparation and catalytic activities (Segawa, K. (141) 249)

Solid-state NMR

Constrained chiral catalysts (Thomas, J.M. (141) 139)

Spreading

FTIR studies of dynamic surface structural changes in Cu-based methanol synthesis catalysts (Topsøe, N.-Y. (141) 95)

Stepped single crystal surfaces

Translational energy of desorbing product and kinetic change at steady state in carbon monoxide oxidation on platinum(557) (Cao. G. (141) 63)

STM

Atomic-scale mechanism for the activation of catalyst surfaces (Tanaka, K.-i. (141) 39)

Strain

FTIR studies of dynamic surface structural changes in Cu-based methanol synthesis catalysts (Topsøe, N.-Y. (141) 95)

Sum frequency generation

1,3- and 1,4-cyclohexadiene reaction intermediates in cyclohexene hydrogenation and dehydrogenation on Pt(111) crystal surface: a combined reaction kinetics and surface vibrational spectroscopy study using sum frequency generation (Su, X. (141) 9)

Surface alloys

FTIR studies of dynamic surface structural changes in Cu-based methanol synthesis catalysts (Topsøe, N.-Y. (141) 95)

Surface hydroxyl groups

A study of the structure sensitivity of the exchange of oxygen with the surface of magnesium oxide (Hargreaves, J.S.J. (141) 171)

Surface imaging

X-ray photoemission electron microscopy (XPEEM) as a new promising tool for the real-time chemical imaging of active surfaces (Yamaguchi, Y. (141) 129)

Surface structure

FTIR studies of dynamic surface structural changes in Cu-based methanol synthesis catalysts (Topsøe, N.-Y. (141) 95)

Tamaru's model

Tamaru's model for ammonia decomposition over titanium oxynitride (Djéga-Mariadassou, G. (141) 263)

Templating synthesis

Templating fabrication of platinum nanoparticles and nanowires using the confined mesoporous channels of FSM-16—their structural characterization and catalytic performances in water gas shift reaction (Sasaki, M. (141) 223)

Thermal oxidation

Thermal and photo-induced oxidation of ${\rm CH}_2$ on ${\rm Cu}(100)$ (Kovács, I. (141) 31)

Titanium nitride

Tamaru's model for ammonia decomposition over titanium oxynitride (Djéga-Mariadassou, G. (141) 263)

Titanium silicalite

Propylene epoxidation with hydrogen peroxide over palladium containing titanium silicalite (Laufer, W. (141) 215)

Velocity distribution

Translational energy of desorbing product and kinetic change at steady state in carbon monoxide oxidation on platinum(557) (Cao, G. (141) 63)

WGSR

Templating fabrication of platinum nanoparticles and nanowires using the confined mesoporous channels of FSM-16—their structural characterization and catalytic performances in water gas shift reaction (Sasaki, M. (141) 223)

XPEEM

X-ray photoemission electron microscopy (XPEEM) as a new promising tool for the real-time chemical imaging of active surfaces (Yamaguchi, Y. (141) 129)

Zeolite H-MFI

¹³C MAS NMR mechanistic study of propane conversion into butanes over H-MFI catalyst (Ivanova, I.I. (141) 107)

Zirconium phosphonate

Two-dimensional composite zirconium phosphonates: preparation and catalytic activities (Segawa, K. (141) 249)