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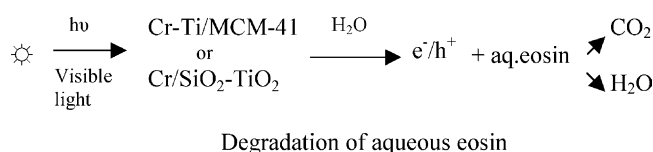
Articles

**S.V. Awate, N.E. Jacob, S.S. Deshpande,
T.R. Gaydhankar, A.A. Belhekar**

*Journal of Molecular Catalysis A: Chemical 226
(2005) 149*

Synthesis, characterization and photo catalytic degradation of aqueous eosin over Cr containing Ti/MCM-41 and SiO₂-TiO₂ catalysts using visible light

Cr/SiO₂-TiO₂ and Cr-Ti/MCM-41 catalysts were found to be photo active in presence of visible light. Both these catalysts degraded eosin dye in aqueous medium in presence of visible light into CO₂ and H₂O, Cr-Ti/MCM-41 being more active than Cr/SiO₂-TiO₂ due to large surface area and better dispersion of TiO₂. The reaction goes as follows.

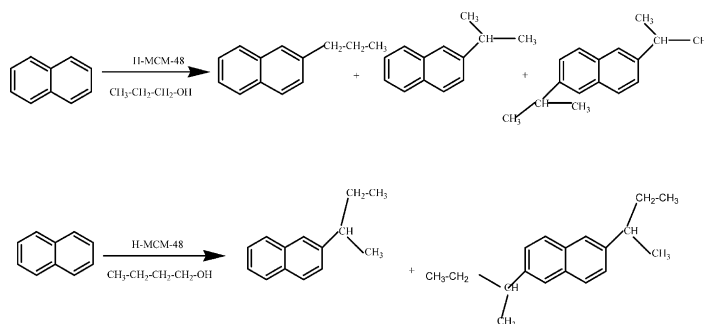


**Ch. Subrahmanyam, B. Viswanathan,
T.K. Varadarajan**

*Journal of Molecular Catalysis A: Chemical 226
(2005) 155*

Alkylation of naphthalene with alcohols over acidic mesoporous solids

Mesoporous MCM-48, a cubic member of M41S family has been synthesized at a lower concentration of the surfactant. Acidic functionalities have been generated by the incorporation of trivalent aluminium and iron and the resulting catalysts have been tested for alkylation of naphthalene with alcohols. These studies reveal that H-Al-MCM-48 exhibits higher activity compared to other catalysts studied.

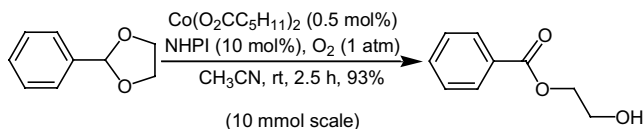


Babak Karimi, Jamshid Rajabi

*Journal of Molecular Catalysis A: Chemical 226
(2005) 165*

An improved protocol for aerobic oxidation of acetals to esters catalyzed by *N*-hydroxy phthalimide (NHPI) and lipophilic Co(II) complexes

A variety of both open-chain and cyclic acetals are efficiently oxidized to their esters and diol mono esters, respectively, using molecular oxygen in the presence of *N*-hydroxy phthalimide (NHPI) combined with Co(OCCO₂C₅H₁₁)₂ at room temperature.

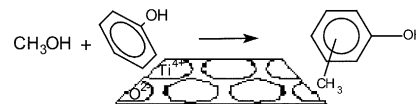


Aditi R. Gandhe, Julio B. Fernandes

Journal of Molecular Catalysis A: Chemical 226 (2005) 171

Methylation of phenol over Degussa P25 TiO₂

Degussa P25 TiO₂ was evaluated as a methylation catalyst. It gave predominant selectivity towards cresols possibly through an edge-on adsorption of the phenol molecule.

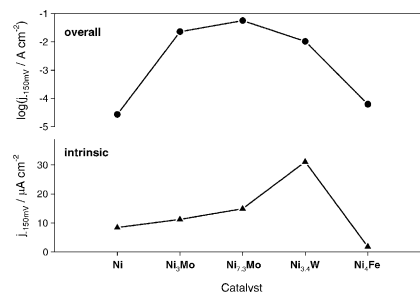


Elisa Navarro-Flores, Zhiwen Chong, Sasha Omanovic

Journal of Molecular Catalysis A: Chemical 226 (2005) 179

Characterization of Ni, NiMo, NiW and NiFe electroactive coatings as electrocatalysts for hydrogen evolution in an acidic medium

The kinetics of electrochemical hydrogen evolution in an acidic medium is enhanced by alloying Ni with a left-hand side transition metal. Two effects were found to be responsible for the observed behavior: (i) an increase in surface roughness and (ii) an increase in intrinsic activity of the material due to the modification of electron density in d-orbitals upon alloying. Electrocatalytic activity of Ni-based catalysts for hydrogen evolution at overpotential -150 mV expressed in terms of the overall activity (normalized to the apparent surface area of the catalyst) and intrinsic activity (normalized to the true surface area of the catalyst).

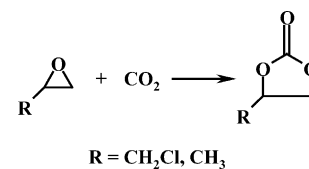


R. Srivastava, T.H. Bennur, D. Srinivas

Journal of Molecular Catalysis A: Chemical 226 (2005) 199

Factors affecting activation and utilization of carbon dioxide in cyclic carbonates synthesis over Cu and Mn peraza macrocyclic complexes

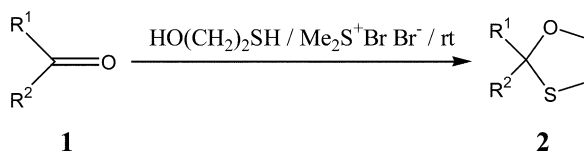
The catalytic activities of several Cu and Mn aza complexes for cyclic carbonate synthesis from CO₂ and epoxides are reported. Nature of ligand and substitution influence the lability of metal-CO₂ bonding. The mode of CO₂ coordination to metal is investigated by in situ spectroscopic studies. The differences in the catalytic activities are correlated with the mode and strength of CO₂ binding.



Abu T. Khan, P.R. Sahu, A. Majee

Journal of Molecular Catalysis A: Chemical 226 (2005) 207

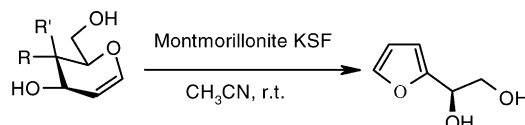
A highly efficient and catalytic synthetic protocol for oxathioacetalization of carbonyl compounds



J.S. Yadav, B.V.S. Reddy, A.V. Madhavi

Journal of Molecular Catalysis A: Chemical 226 (2005) 213

Montmorillonite KSF clay as novel and recyclable heterogeneous solid acid for the conversion of D-glycals into furan diol

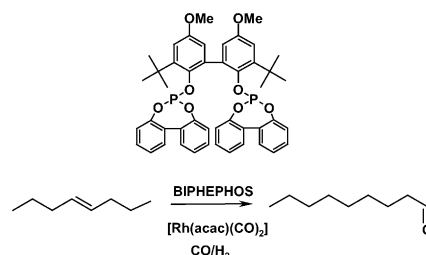


Arno Behr, Dietmar Obst, Barbara Turkowski

Journal of Molecular Catalysis A: Chemical 226 (2005) 215

Isomerizing hydroformylation of *trans*-4-octene to *n*-nonanal in multiphase systems: acceleration effect of propylene carbonate

This contribution deals with the isomerizing hydroformylation of *trans*-4-octene to *n*-nonanal in a two-phase catalytic reaction system. Based on this two-phase system the application of a thermomorphic multi-solvent catalytic reaction system is presented which changes from a two-phase to a single-phase system by simply raising the temperature. This concept provides the possibility to overcome mass transport limitations which are typical problems in conventional two-phase reactions.

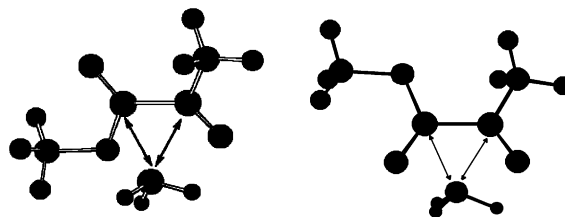


José Walkimar de M. Carneiro,
Ceciliana da S.B. de Oliveira, Fabio B. Passos,
Donato A.G. Aranda,
Paulo Rogério N. de Souza, O.A.C. Antunes

Journal of Molecular Catalysis A: Chemical 226 (2005) 221

Donor–acceptor interactions in the enantioselective hydrogenation of α -ketoesters

Ab initio methods are employed to study the interactions between amines and the methyl pyruvate molecule. Calculations indicate that amines interact with MP via a donor–acceptor complex with the nitrogen lone pair of the amines acting as the donor and the antibonding (C=O)* orbital of the keto carbonyl bond acting as acceptor.

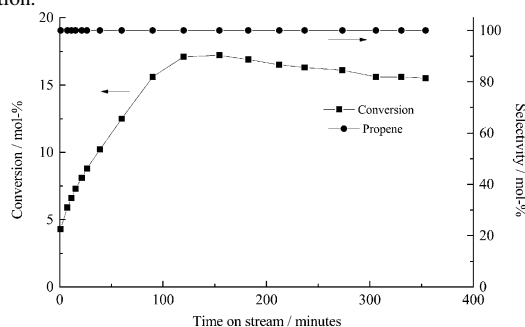


R. Marshall, G. Webb, S.D. Jackson, D. Lennon

Journal of Molecular Catalysis A: Chemical 226 (2005) 227

Propyne hydrogenation: characteristics of a carbon-supported palladium catalyst that exhibits a kinetic discontinuity effect

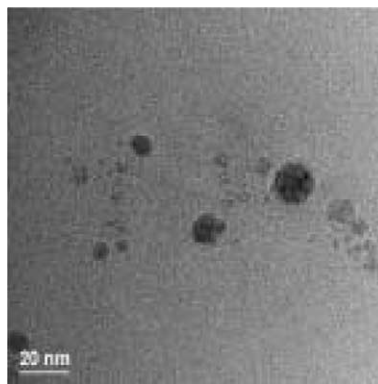
The hydrogenation of propyne over a 1wt.% Pd/C catalyst that has previously been shown to exhibit a kinetic discontinuity effect for this reaction has been studied under conditions below the transition point to evaluate the characteristics that permit dramatic changes in conversion and selectivity as a function of hydrogen concentration.



Sungil Kim, Bum Keun Yoo, Keunho Chun,
Weekyung Kang, Jaebum Choo,
Myoung-Seon Gong, Sang-Woo Joo

Journal of Molecular Catalysis A: Chemical 226
(2005) 231

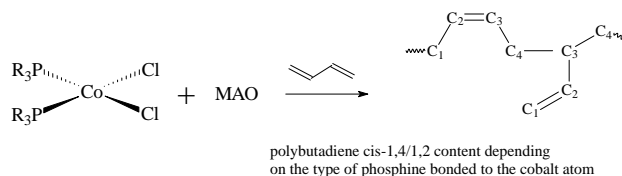
Catalytic effect of laser ablated Ni nanoparticles in the oxidative addition reaction for a coupling reagent of benzylchloride and bromoacetonitrile



Giovanni Ricci, Alessandra Forni, Aldo Boglia,
Tiziano Motta

Journal of Molecular Catalysis A: Chemical 226
(2005) 235

Synthesis, structure, and butadiene polymerization behavior of alkylphosphine cobalt(II) complexes

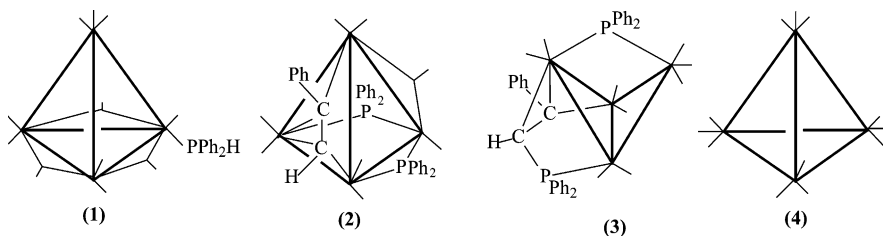


Flávia C.C. Moura, Eduardo N. dos Santos,
Rochel M. Lago, Maria D. Vargas,
Maria Helena Araujo

Journal of Molecular Catalysis A: Chemical 226
(2005) 243

Ir_4 cluster-based selective catalytic hydrogenation of 1,5-cyclooctadiene

$[\text{Ir}_4(\text{CO})_{11}\text{PPh}_2\text{H}]$ **1**, $[\text{Ir}_4(\text{CO})_8(\mu_3\text{-}\eta^2\text{-HCCPh})(\mu\text{-PPh}_2)_2]$ **2**, $[\text{Ir}_4(\text{CO})_9(\mu_3\text{-}\eta^3\text{-Ph}_2\text{PC(H)CPh})(\mu\text{-PPh}_2)]$ **3** and $[\text{Ir}_4(\text{CO})_{12}]$ **4**, were used as catalysts precursors for the hydrogenation of 1,5-cyclooctadiene (1,5-COD). Evidence for the participation of Ir_4 cluster catalyst to produce a high selective hydrogenation of 1,5-COD to cyclooctene (COE) is presented.

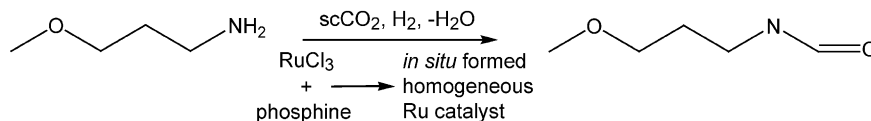


Markus Rohr, Jan-Dierk Grunwaldt,
Alfons Baiker

Journal of Molecular Catalysis A: Chemical 226
(2005) 253

A simple route to highly active ruthenium catalysts for formylation reactions with hydrogen and carbon dioxide

The formation of highly active ruthenium based catalysts from solid RuCl_3 in the presence of phosphines affords a simple route to formamide production from amines, hydrogen and carbon dioxide; the structure of the in situ formed active complex was elucidated by X-ray absorption near edge structure (XANES) and extended X-ray absorption fine structure (EXAFS) spectroscopy.

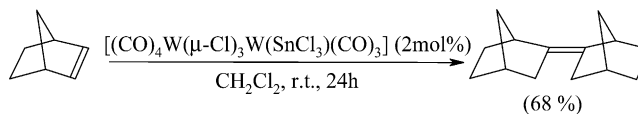


**Anna Malinowska, Izabela Czeluśniak,
Marcin Górski, Teresa Szymańska-Buzar**

Journal of Molecular Catalysis A: Chemical 226
(2005) 259

A novel catalytic route to 2-bicyclo[2.2.1]hept-2-ylidenebicyclo[2.2.1]heptane involving C–H bond activation of bicyclo[2.2.1]hept-2-ene

The tungsten(II) carbonyl compound has been found to be a very effective catalyst for dimerization reaction of bicyclo[2.2.1]hept-2-ene to 2-bicyclo[2.2.1]hept-2-ylidenebicyclo[2.2.1]heptane conducted in dichloromethane solution at room temperature.

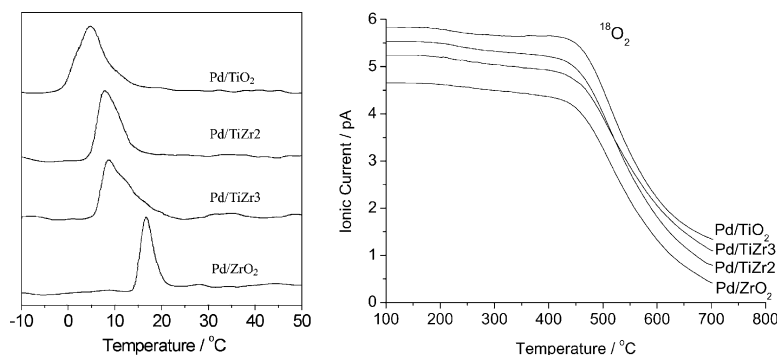


**W. Lin, L. Lin, Y.X. Zhu, Y.C. Xie, K. Scheurell,
E. Kemnitz**

Journal of Molecular Catalysis A: Chemical 226
(2005) 263

Novel Pd/TiO₂–ZrO₂ catalysts for methane total oxidation at low temperature and their ¹⁸O-isotope exchange behavior

The results of TPR and ¹⁸O-isotope exchange experiments of Pd/TiO₂–ZrO₂ catalysts demonstrate that the excellent activity of Pd/TiZr2 is due to its high oxygen mobility and moderate reducibility.

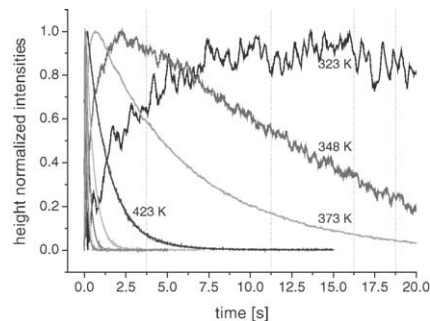


Cornelia Breittkopf

Journal of Molecular Catalysis A: Chemical 226
(2005) 269

A transient TAP study of the adsorption of C₄-hydrocarbons on sulfated zirconias

The TAP reactor was employed to investigate the sorption properties of sulfated zirconias. Temperature dependent measurements allowed the estimation of heats of adsorption for *n*-butane and *iso*-butane and revealed comparable values as from calorimetry.

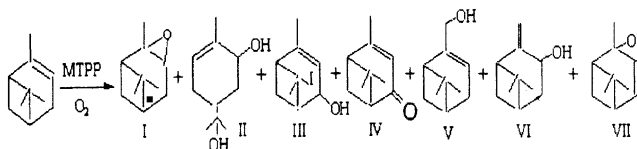


Can-Cheng Guo, Wei-Jun Yang, Yan-Li Mao

Journal of Molecular Catalysis A: Chemical 226
(2005) 279

Selectively aerobic oxidation of C=C and allylic C–H bonds in α -pinene over simple metalloporphyrins

Simple metalloporphyrins (TPPM) were employed as the catalysts for the aerobic oxidation of α -pinene in the absence of co-catalyst and solvents, and the catalytic selectivity of metalloporphyrins for aerobic oxidation of double bond and allylic C–H of α -pinene was investigated.

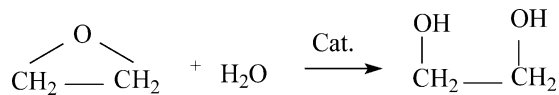


**Yingcheng Li, Shirun Yan, Weimin Yang,
Zaiku Xie, Qingling Chen, Bin Yue, Heyong He**

Journal of Molecular Catalysis A: Chemical 226
(2005) 285

Effects of support modification on Nb₂O₅/α-Al₂O₃
catalyst for ethylene oxide hydration

Effect of modification of α-Al₂O₃ support with MgAl₂O₄ on the structure, acidity as well as the catalytic performance of Nb₂O₅/α-Al₂O₃ catalyst for ethylene oxide hydration was studied using IR, XRD, NH₃-TPD, CO₂-TPD and catalytic reaction.



**Mónica A. Pérez, Raúl Quijada,
Fernando Ortega-Jiménez,
Cecilio Alvarez-Toledano**

Journal of Molecular Catalysis A: Chemical 226
(2005) 291

Cyclopalladated complexes derivatives of phenyl-
hydrazones and their use as catalysts in ethylene
polymerization

As it is observed in the reaction mechanism, to generate the vacancy in the metallic atom, it is proposed the rupture of the Pd–N bond of the side non-orthopalladated, since it presents smaller energy bond.

