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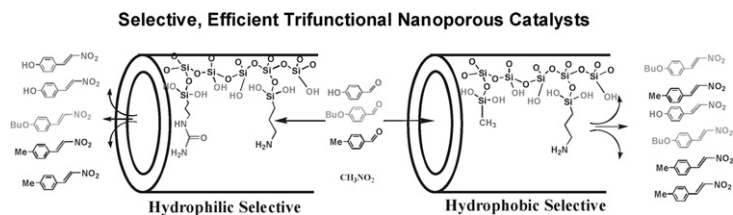
Articles

**Abhishek Anan, Krishna K. Sharma,
Tewodros Asefa**

Journal of Molecular Catalysis A: Chemical 288 (2008) 1

Selective, efficient nanoporous catalysts for nitroaldol condensation: Co-placement of multiple site-isolated functional groups on mesoporous materials

The synthesis of selective, efficient multifunctional mesoporous catalysts for various *p*-substituted hydrophilic or hydrophobic reactants in the Henry reaction was demonstrated. Grafting of 3-aminopropyl and 3-mercaptopropyl, methyl or ureidopropyl from a mixture of organosilanes in polar solvents has achieved to introduce solid-base catalytic groups as well as secondary functional groups that can modify the dielectric environment of the pores. As grafting of a mixture of organosilanes in polar solvents resulted in site-isolated catalytic groups, selectivity was accompanied by high percentage conversion in <30 min.

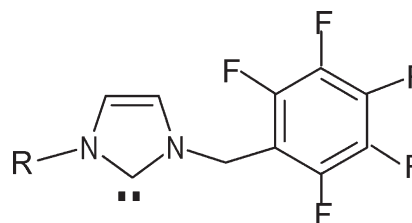


**Alberto Acosta-Ramírez, David Morales-Morales,
Juan Manuel Serrano-Becerra, Alma Arévalo,
William D. Jones, Juventino J. García**

Journal of Molecular Catalysis A: Chemical 288 (2008) 14

Study of the reactivity of 2-methyl-3-butenitrile with Ni(0)-*N*-heterocyclic carbene complexes

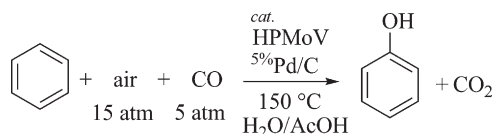
A series of fluorinated and non-fluorinated *N*-heterocyclic carbenes were used for the catalytic isomerization of 2-methyl-3-butenitrile, producing mainly a mixture of *E*- and *Z*-2M2BN, i.e., the C-H bond cleavage products.



**Takao Sakamoto, Toshikatsu Takagaki,
Aki Sakakura, Yasushi Obora, Satoshi Sakaguchi,
Yasutaka Ishii**

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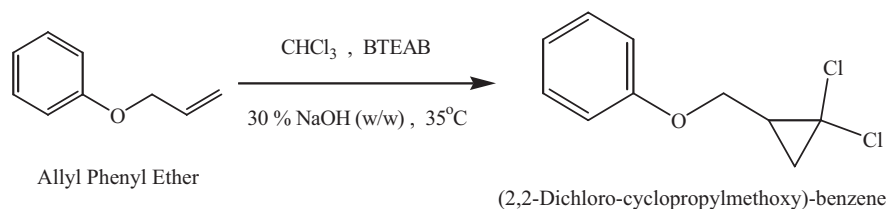
Hydroxylation of benzene to phenol under air and carbon monoxide catalyzed by molybdovanadophosphates



Venugopal Rajendran, Maw-Ling Wang
Journal of Molecular Catalysis A: Chemical 288 (2008) 23

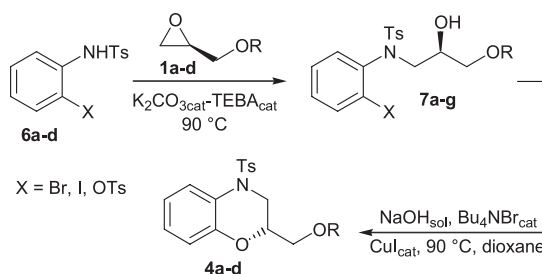
Dichlorocarbene addition to allyl phenyl ether under phase-transfer catalysis conditions—A kinetic study

The kinetics of phase-transfer catalysed dichlorocarbene addition to allyl phenyl ether has been investigated under biphase condition. The apparent rate constant of this reaction was obtained from experimental data. The effects of the reaction conditions, including agitation speed, amount of chloroform, quaternary ammonium salts, temperature and the amount of sodium hydroxide were investigated in detail.


D. Albanese, D. Landini, V. Lupi, M. Penso, D. Scaletti
Journal of Molecular Catalysis A: Chemical 288 (2008) 28

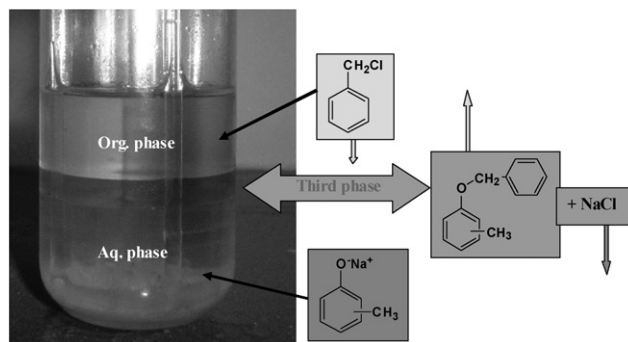
Synthesis of 2-substituted 3,4-dihydro-2H-1,4-benzoxazines through ligandless copper-catalyzed cyclization of hydroxysulfonamides under phase-transfer catalysis conditions

The ring closing under solid-liquid phase-transfer catalysis (SL-PTC) conditions of hydroxysulfonamides **7**, bearing a leaving group in the *ortho* position of the aryl moiety, generates benzoxazines **4** in good to excellent yields. In the case of hydroxysulfonamides **7** bearing a bromine or iodine atom as a leaving group, a copper(I) salt is used.


Ganapati D. Yadav, Omprakash V. Badure
Journal of Molecular Catalysis A: Chemical 288 (2008) 33

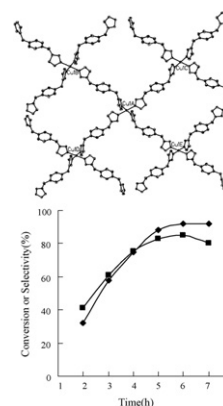
 Selective engineering in O-alkylation of *m*-cresol with benzyl chloride using liquid-liquid-liquid phase transfer catalysis

The conversion of liquid-liquid phase transfer catalysed (PTC) O-alkylation of cresols with benzyl chloride into liquid-liquid-liquid PTC leads to 100% selectivity to the ether at 50 °C and the reaction occurs in the middle phase.


Bo Xiao, Hongwei Hou, Yaoting Fan
Journal of Molecular Catalysis A: Chemical 288 (2008) 42

Syntheses and structural characteristics of copper(II)-organic polymers based on N-heterocyclic ligands: A study on the importance of steric factors in the design of potent catalysts

Two new Cu(II)-organic polymers containing coordinatively unsaturated metal sites are designed and synthesized as competent heterogeneous catalysts for the oxidative coupling of various substituted phenols in aqueous medium. It is suggested that the combination of the physical and chemical properties of inorganic and organic components can allow the achievement of the targeted polymeric materials furnishing unusual catalytic characters.

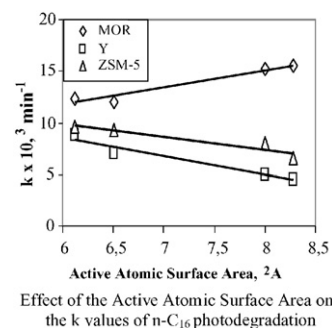


Ahmed K. Aboul-Gheit, Sahar M. Ahmed, Samia A. Hanafy

Journal of Molecular Catalysis A: Chemical 288 (2008) 52

Exchanged zeolites with transition metals of the first period as photocatalysts for *n*-hexadecane degradation

The photodegradation of *n*-hexadecane (*n*-C₁₆) was tested using photocatalysts containing MOR, ZSM-5 or Y zeolites exchanged with 5.2 wt% V, Cr, Mn, Cu or Zn. Spectra examinations indicated retaining high crystallinity and the current-exchanged metals are present as isolated species. The photocatalytic degradation rate constant, *k*, and the adsorption coefficient, *K_{ad}*, were found to correlate with the metals atomic weights and their active cationic surface area.

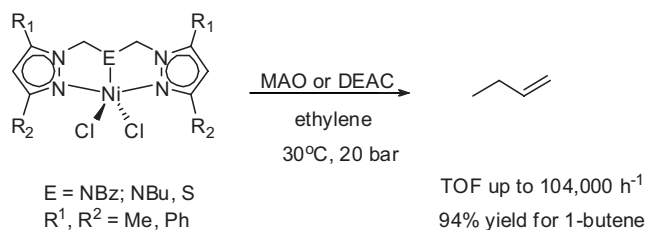


Lucilene L. de Oliveira, Roberta R. Campedelli, Maria C.A. Kuhn, Jean-François Carpentier, Osvaldo L. Casagrande Jr.

Journal of Molecular Catalysis A: Chemical 288 (2008) 58

Highly selective nickel catalysts for ethylene oligomerization based on tridentate pyrazolyl ligands

Dimerization of ethylene in the presence of Ni(II) 5-membered chelate complexes based on tridentate nitrogen- or sulfur-bridged bis(pyrazolyl) ligands (NZN) (Z = N, S) activated with alkylaluminum (MAO or DEAC) proceeds with high activity and selectivity under moderate conditions.

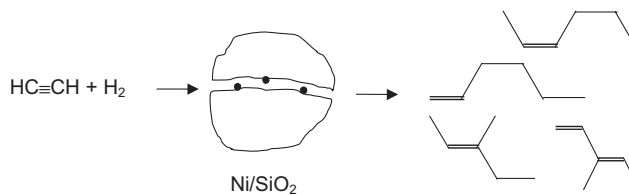


David L. Trimm, Irene O.Y. Liu, Noel W. Cant

Journal of Molecular Catalysis A: Chemical 288 (2008) 63

The oligomerization of acetylene in hydrogen over Ni/SiO₂ catalysts: Product distribution and pathways

The reaction of acetylene–hydrogen mixtures over Ni/SiO₂ catalysts is found to proceed by chain growth with complete conversion at 140 °C to ~50% C₂, ~20% C₄ and 30% C₅+ products. The principal oligomers, exemplified for C₆ products, are the terminal and *cis*-linear alkenes together with 3-methyl branched pentenes and pentadienes, with much lesser amounts of 2-methyl and cyclic products.

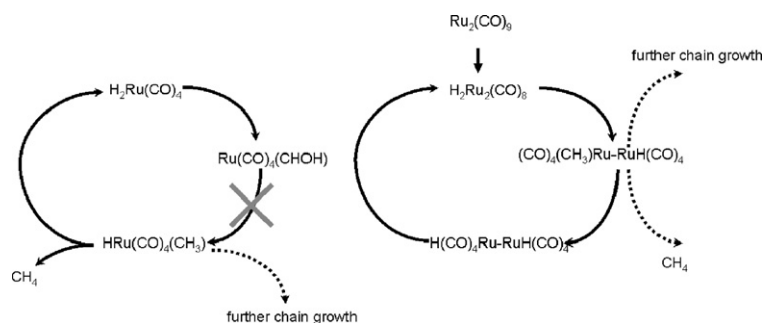


Cathrin Welker, Noko S. Phala, John R. Moss, Michael Claeys, Eric van Steen

Journal of Molecular Catalysis A: Chemical 288 (2008) 75

Theoretical feasibility of CO-activation and Fischer–Tropsch chain growth on mono- and diatomic Ru complexes

DFT-calculations show that typical Fischer–Tropsch reactions may occur over di-atomic Ru-complexes, whereas the energetics of reaction pathway over mono-atomic Ru-complexes are too high resulting in very high activation barriers.

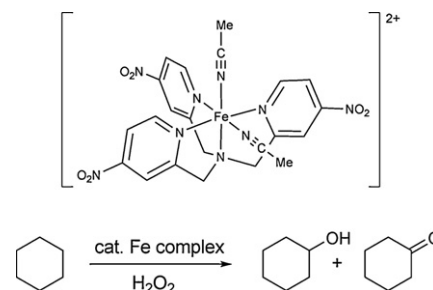


**Yutaka Hitomi, Shinya Furukawa,
Masakazu Higuchi, Tetsuya Shishido,
Tsunehiro Tanaka**

Journal of Molecular Catalysis A: Chemical 288 (2008) 83

Alkane hydroxylation catalyzed by a series of mononuclear nonheme iron complexes containing 4-nitropyridine ligands

Catalytic oxidation of cyclohexane with H_2O_2 was examined by using a series of iron(II) complexes supported by tris(2-pyridylmethyl)amine and its nitro-substituents as a catalyst. The introduction of nitro-groups retarded the generation of *cis*-oxo-hydroxo-iron(V) species, leading to a decrease in turnover number, and decreased the A/K ratio close to 1, probably through homolysis of the Fe-O bond of Fe(III)OOH species.

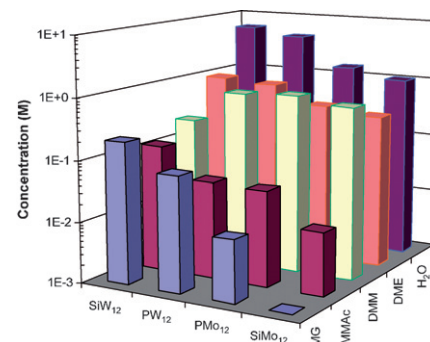


Fuat E. Celik, Henry Lawrence, Alexis T. Bell

Journal of Molecular Catalysis A: Chemical 288 (2008) 97

Synthesis of precursors to ethylene glycol from formaldehyde and methyl formate catalyzed by heteropoly acids

Formaldehyde derived from different sources was carbonylated catalytically with methyl formate using silicotungstic acid, producing methyl glycolate and methyl methoxyacetate. Release of carbon monoxide from methyl formate was found to be slow, limiting productivity. The reducibility and softness of the Keggin unit, not acid strength, was used to explain the superior activity of silicotungstic acid over other common heteropolyacids and methanesulfonic acid.

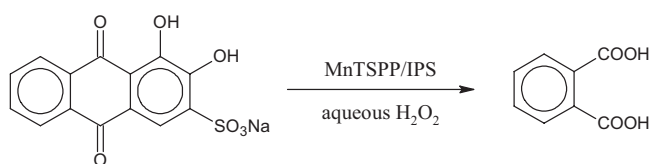


**Paolo Zucca, Carla Vinci, Francesca Sollai,
Antonio Rescigno, Enrico Sanjust**

Journal of Molecular Catalysis A: Chemical 288 (2008) 97

Degradation of Alizarin Red S under mild experimental conditions by immobilized 5,10,15,20-tetrakis(4-sulfonatophenyl)porphine-Mn(III) as a biomimetic peroxidase-like catalyst

Alizarin Red S oxidative degradation by H_2O_2 in the presence of the catalyst prepared by immobilizing 5,10,15,20-tetrakis(4-sulfonatophenyl)porphine-Mn(III) on a modified silica support is described. The bleaching process was efficient and took place under very mild experimental conditions, mainly leading to phthalic acid. Some operational features of the catalytic reaction are described and a chemical mechanism for the bleaching is proposed.

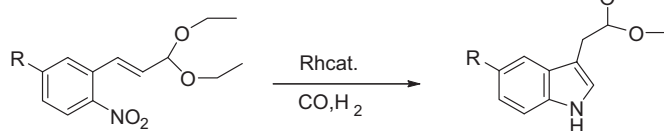


**M. Marchetti, S. Paganelli, D. Carboni, F. Ulgheri,
G. Del Ponte**

Journal of Molecular Catalysis A: Chemical 288 (2008) 103

Synthesis of indole derivatives by domino hydroformylation/indolization of 2-nitrocinnamaldehydes

Intermediates of biologically active 3,5-substituted indole derivatives have been successfully obtained by rhodium-catalyzed domino hydroformylation/indolization of *m*-substituted-*o*-nitrocinnamaldehyde diethyl acetals.

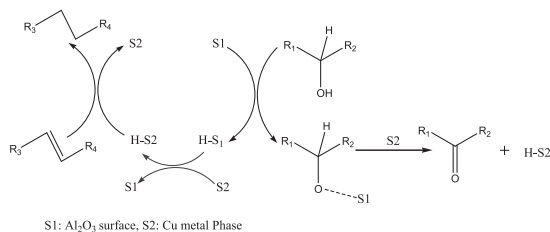


Long Huang, Yulei Zhu, Chunfang Huo, Hongyan Zheng, Gang Feng, Chenghua Zhang, Yongwang Li

Journal of Molecular Catalysis A: Chemical 288 (2008) 109

Mechanistic insight into the heterogeneous catalytic transfer hydrogenation over Cu/Al₂O₃: Direct evidence for the assistant role of support

By the means of mechanical mixture of supported catalyst and its pure support, the support is demonstrated to play a remarkable assistant role in heterogeneous catalytic transfer hydrogenation between alkene and alcohol over Cu/Al₂O₃. The reaction results strongly suggest a bifunctional mechanism as follows: (Step 1) alcohols absorption, (Step 2) alcohols dehydrogenation with cooperation of Al₂O₃ and Cu, (Step 3) reverse hydrogen spillover from Al₂O₃ surface to metal phase, (Step 4) the alkene hydrogenation on metal phase.

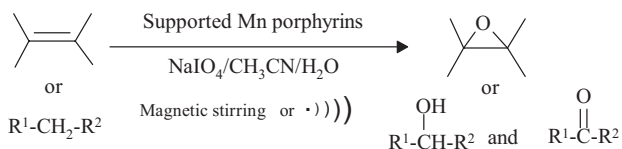


Majid Moghadam, Valiollah Mirkhani, Shahram Tangestaninejad, Iraj Mohammadpoor-Baltork, Hadi Kargar

Journal of Molecular Catalysis A: Chemical 288 (2008) 116

Silica supported Mn(Br₈TPP)Cl and Mn(TPP)Cl as efficient and reusable catalysts for selective hydrocarbon oxidation under various reaction conditions: The effect of substituted bromines on the catalytic activity and reusability

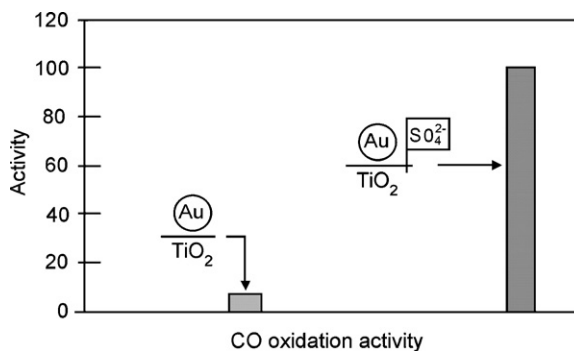
The imidazole-modified silica (SiIm) was used for immobilization of Mn(Br₈TPP)Cl and Mn(TPP)Cl. These heterogeneous catalysts were used as biomimetic oxidation catalysts in alkene epoxidation and alkane hydroxylation with sodium periodate under agitation with magnetic stirring and ultrasonic irradiation. These new heterogenized catalysts could be reused several times without significant loss of their catalytic activity.



K.M. Parida, P. Mohapatra, John Moma, W.A. Jordaan, Mike S. Scurrell

Journal of Molecular Catalysis A: Chemical 288 (2008) 125

Effects of preparation methods on gold/titania catalysts for CO oxidation



Shingo Yamada, Shin-ichiro Ohashi, Yasushi Obora, Satoshi Sakaguchi, Yasutaka Ishii

Journal of Molecular Catalysis A: Chemical 288 (2008) 131

Corrigendum to "Carboxylation of benzene with CO and O₂ catalyzed by Pd(OAc)₂ and molybdovanadophosphates" [*J. Mol. Catal. A: Chem.* 282 (2008) 22–27]

