

Contents

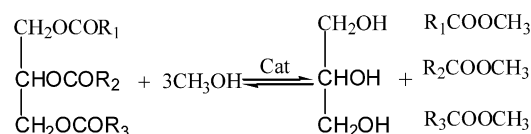
Articles

Wenlei Xie, Haitao Li

Journal of Molecular Catalysis A: Chemical 255 (2006) 1

Alumina-supported potassium iodide as a heterogeneous catalyst for biodiesel production from soybean oil

Biodiesel can be produced by transesterification of soybean oil to methyl esters using alumina-supported potassium iodide as a solid base catalyst in a heterogeneous manner.

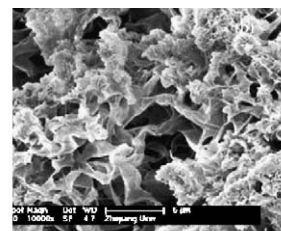


Xiaochen Dong, Li Wang, Tianxu Sun, Junfeng Zhou, Qiang Yang

Journal of Molecular Catalysis A: Chemical 255 (2006) 10

Study on ethylene polymerization catalyzed by Cp_2ZrCl_2 /carbon nanotube system

Pristine CNTs and open-ended CNTs were used as supports for Cp_2ZrCl_2 . The effects of the structural properties of supports on the activity of supported catalyst in ethylene polymerization and the resulting PE morphology were studied. It was found that the two supported catalysts had similar activities. The SEM studies proved that the resulting PE prepared with pristine CNTs supported Cp_2ZrCl_2 catalyst had fibrous morphology, while the other PE mainly had fractional morphology.



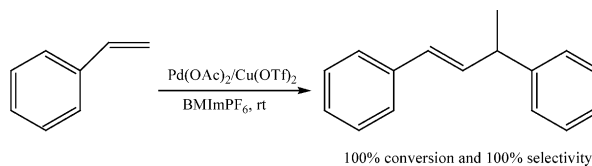
SEM micrographs of polyethylene prepared with open-ended CNTs supported Cp_2ZrCl_2 catalyst. ([Al]/[Zr]=3000, T=60 °C)

Jiajian Peng, Jiayun Li, Huayu Qiu, Jianxiong Jiang, Kezhi Jiang, Jianjiang Mao, Guoqiao Lai

Journal of Molecular Catalysis A: Chemical 255 (2006) 16

Dimerization of styrene to 1,3-diphenyl-1-butene catalyzed by palladium–Lewis acid in ionic liquid

The dimerization of styrene to 1,3-diphenyl-1-butene catalyzed with $\text{Pd}(\text{OAc})_2$ /Lewis acid was investigated. $\text{Pd}(\text{OAc})_2/\text{Cu}(\text{OTf})_2$ and $\text{Pd}(\text{OAc})_2/\text{In}(\text{OTf})_3$ in 1-butyl-3-methylimidazolium hexafluorophosphate were found to be effective catalyst systems.

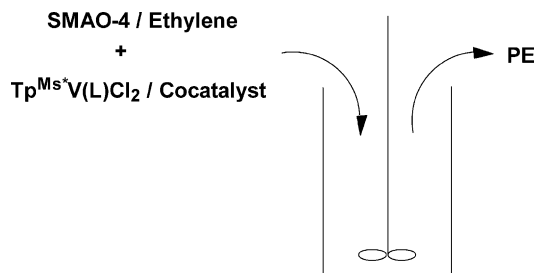


Adriana C.A. Casagrande, Patrícia S. dos Anjos, Douglas Gamba, Osvaldo L. Casagrande Jr., João H.Z. dos Santos

The in situ immobilization of $\text{Tp}^{\text{Ms}^*}\text{V}(\text{L})\text{Cl}_2$ (**1**, L = N^tBu; **2**, L = O) on SiO_2 , MAO-modified SiO_2 and on TMA-modified SiO_2 affords active ethylene polymerization systems.

Journal of Molecular Catalysis A: Chemical 255 (2006) 19

Ethylene polymerization using tris(pyrazolyl)borate vanadium (V) catalysts in situ supported on MAO-modified silica

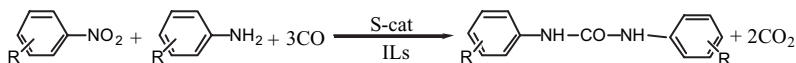


Xiaofang Wang, Peng Li, Xiaohua Yuan, Shiwei Lu

Journal of Molecular Catalysis A: Chemical 255 (2006) 25

Synthesis of symmetrical 1,3-diarylureas by sulfur-catalyzed carbonylation in ionic liquids

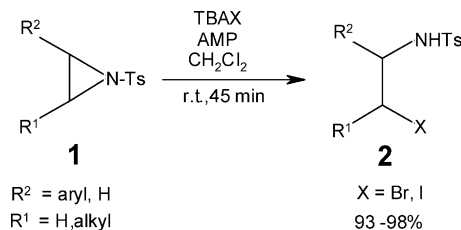
A relatively efficient catalytic system containing elemental sulfur–ionic liquid was developed for the carbonylation of nitroaromatics and corresponding aromatic amines with carbon monoxide to give symmetric diarylureas in yields up to 96%. Additionally, unsymmetrical urea *N*-phenyl-*N'*-(piperidine) urea was obtained in 70% yield in this catalytic system.



Biswanath Das, V. Saidi Reddy, P. Thirupathi

Journal of Molecular Catalysis A: Chemical 255 (2006) 28

An improved protocol for regioselective ring opening of aziridines with tetrabutylammonium halides using ammonium-12-molybdophosphate as a catalyst



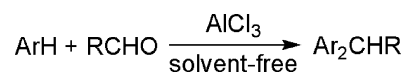
Scheme - 1

Xiao Wang, Yikai Wang, Da-Ming Du, Jiayi Xu

Journal of Molecular Catalysis A: Chemical 255 (2006) 31

Solvent-free, AlCl_3 -promoted tandem Friedel–Crafts reaction of arenes and aldehydes

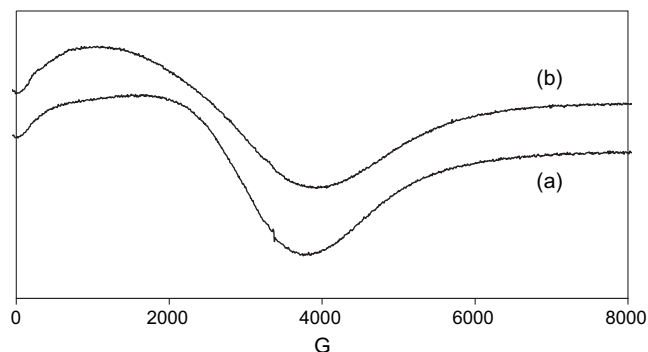
Tandem Friedel–Crafts reaction of arenes and aldehydes under the catalysis of Lewis acid was investigated. Both aromatic and aliphatic aldehydes underwent a tandem Friedel–Crafts alkylation with electron-rich arenes to afford 1,1,1-triaryl/1,1-diarylalkanes in the presence of anhydrous aluminum chloride under solvent-free conditions.



**C. Oliva, S. Cappelli, A. Kryukov,
G.L. Chiarello, A.V. Vishniakov, L. Forni**

Journal of Molecular Catalysis A: Chemical 255
(2006) 36

Effect of preparation parameters on the properties of
 $\text{La}_{0.9}\text{Ce}_{0.1}\text{CoO}_3$ catalysts: An EMR investigation

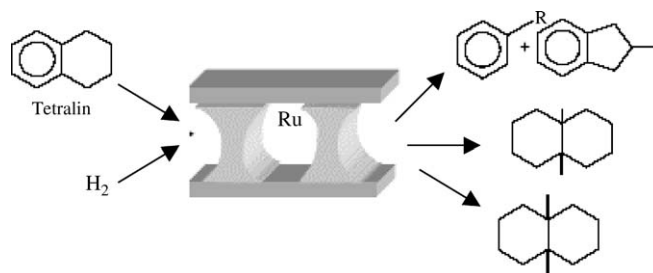


**D. Eliche-Quesada, M.I. Macías-Ortiz,
J. Jiménez-Jiménez, E. Rodríguez-Castellón,
A. Jiménez-López**

Journal of Molecular Catalysis A: Chemical 255
(2006) 41

Catalysts based on Ru/mesoporous phosphate heterostructures (PPH) for hydrotreating of aromatic hydrocarbons

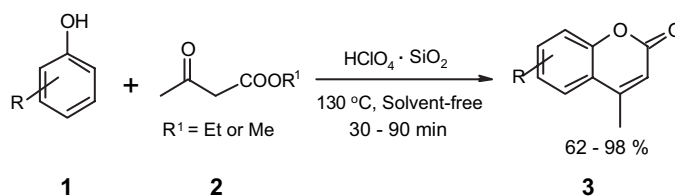
The use of acid mesoporous phosphate heterostructure (PPH) materials as supports of ruthenium catalysts prepared by the incipient wetness impregnation, with a metal content of 5 wt.%, provides active and stable catalysts for the hydrogenation and hydrogenolysis/hydrocracking of tetralin under high hydrogen pressures.



**Muchchintala Maheswara, Vidavalur Siddaiah,
Guri Lakishmi Vasantha Damu,
Yerra Koteswara Rao, Chunduri Venkata Rao**

Journal of Molecular Catalysis A: Chemical 255
(2006) 49

A solvent-free synthesis of coumarins via Pechmann condensation using heterogeneous catalyst

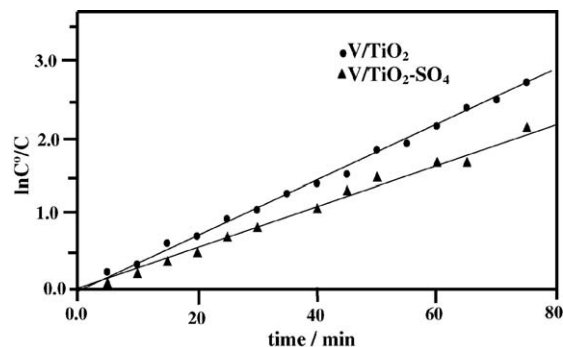


**Mohamed Mokhtar Mohamed,
Mater M. Al-Esaimi**

Journal of Molecular Catalysis A: Chemical 255
(2006) 53

Characterization, adsorption and photocatalytic activity of vanadium-doped TiO_2 and sulfated TiO_2 (rutile) catalysts: Degradation of methylene blue dye

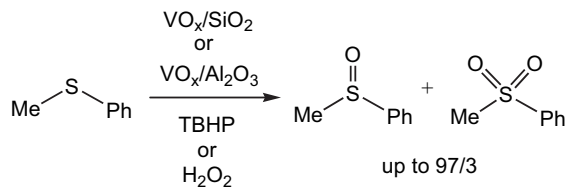
Apparent first order rate constant for the degradation of MB was faster on rutile $2\text{V}/\text{TiO}_2\text{-SO}_4$ catalyst than the sulphate free one.



**N. Moussa, José M. Fraile, A. Ghorbel,
José A. Mayoral**

Journal of Molecular Catalysis A: Chemical 255
(2006) 62

Catalytic oxidation of thioanisole Ph-S-CH₃ over VO_x/SiO₂ and VO_x/Al₂O₃ catalysts prepared by sol-gel method

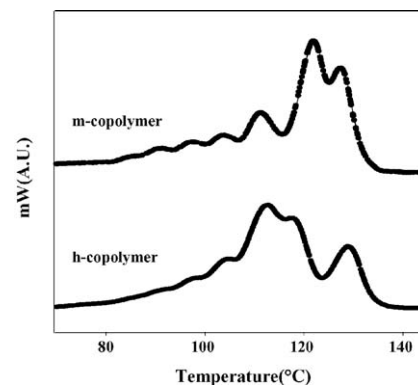


**Hai Woong Park, Jin Suk Chung,
Sung-Hyeon Baek, In Kyu Song**

Journal of Molecular Catalysis A: Chemical 255
(2006) 69

Physical property and chemical composition distribution of ethylene-hexene copolymer produced by metallocene/Ziegler-Natta hybrid catalyst

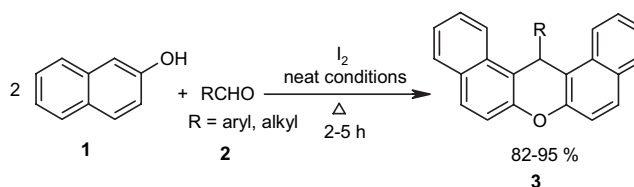
Metallocene and metallocene/Ziegler-Natta hybrid catalysts immobilized on MAO (methylaluminoxane)-treated SMB (silica-magnesium bisupport) were applied to the ethylene copolymerization with 1-hexene. It was found that h-copolymer produced by hybrid catalyst showed the narrower lamella size distribution than m-copolymer produced by metallocene catalyst.



**Biswanath Das, B. Ravikanth, R. Ramu,
K. Laxminarayana, B. Vittal Rao**

Journal of Molecular Catalysis A: Chemical 255
(2006) 74

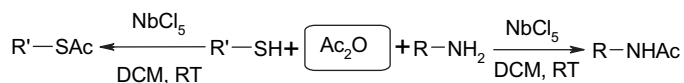
Iodine catalyzed simple and efficient synthesis of 14-aryl or alkyl-14-*H*-dibenzo[*a,j*]xanthenes



**J.S. Yadav, A.V. Narsaiah, A.K. Basak,
P.R. Goud, D. Sreenu, K. Nagaiah**

Journal of Molecular Catalysis A: Chemical 255
(2006) 78

Niobium pentachloride: An efficient catalyst for the selective acetylation of amines and thiols under mild conditions

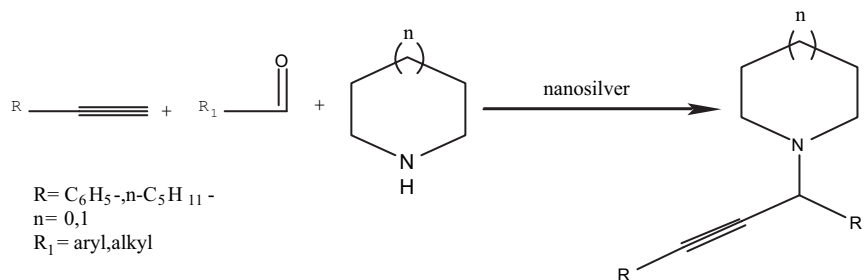


Wenjin Yan, Rui Wang, Zhaoqing Xu,
Jiangke Xu, Li Lin, Zhiqiang Shen,
Yifeng Zhou

Journal of Molecular Catalysis A: Chemical 255
(2006) 81

A novel, practical and green synthesis of Ag nanoparticles catalyst and its application in three-component coupling of aldehyde, alkyne, and amine

Ag nanoparticles were synthesized in PEG with simple bubbling of H₂, and the nanosilver catalyst was used for the three-component coupling reaction of aldehyde, alkyne, and amine giving good to excellent yields in one pot.



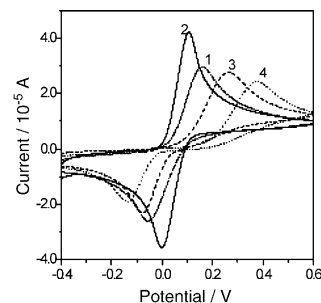
Guohua Zhao, Mingfang Li, Zhonghua Hu,
Hongxu Li, Tongcheng Cao

Journal of Molecular Catalysis A: Chemical 255
(2006) 86

Electrocatalytic redox of hydroquinone by two forms of L-Proline

The molecular mechanism and electronic transfer of hydroquinone redox by two forms of L-Proline, covalent-linked to glass carbon electrode surface and free dissolved in solution, were investigated. Owing to electrostatic effect, L-Proline covalent-linked favors electron transfer and enhances the reversibility of hydroquinone redox. This phenomenon is reflected by a significant increase in peak current of hydroquinone redox and rate constant of electron transfer in voltammetry. Furthermore, it is a three-electron-transfer mechanism. On the contrary, free dissolved L-Proline impedes electron transfer, resulting in a decrease in peak current of hydroquinone and rate constant. Besides, due to hydrogen bond formed, with increasing L-Proline concentra-

tion, the association formed between L-Proline and hydroquinone will turn from L-Proline·C₆H₆O₂ to (L-Proline)₂·C₆H₆O₂. The investigation will be useful to explore new biocatalytic strategies

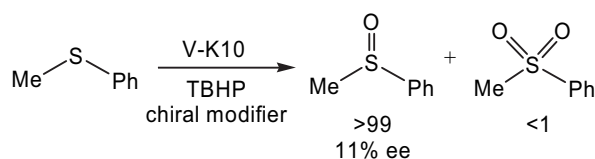


I. Khedher, A. Ghorbel, J.M. Fraile,
J.A. Mayoral

Journal of Molecular Catalysis A: Chemical 255
(2006) 92

Vanadium sites in V-K10: Characterization and catalytic properties in liquid-phase sulfide oxidation

V-K10 presents both monomeric and dimeric species, that can be reversibly transformed between V⁴⁺ and V⁵⁺ states. The species in the highest oxidation state were found to be the catalytic sites for sulfide oxidation with *tert*-butylhydroperoxide (TBHP), affording excellent sulfoxide selectivity. With chiral modifiers, V-K10 leads to enantioselectivities in the range of 9–11% ee.

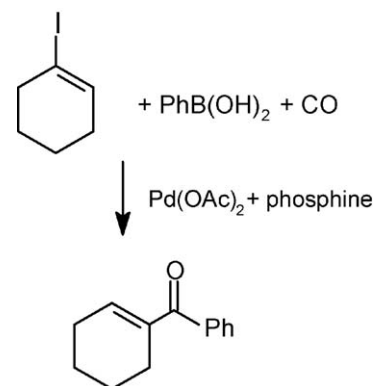


Andrea Petz, Gábor Péczely, Zoltán Pintér,
László Kollár

Journal of Molecular Catalysis A: Chemical 255
(2006) 97

Carbonylative and direct Suzuki–Miyaura cross-coupling reactions with 1-iodo-cyclohexene

The Suzuki–Miyaura reaction of 1-iodo-cyclohexene and phenylboronic acid (or 3-trifluoromethoxyphenylboronic acid) was carried out both under argon ('direct' Suzuki–Miyaura coupling) and carbon monoxide ('carbonylative' Suzuki–Miyaura coupling).

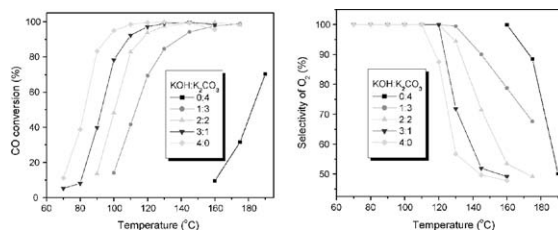


Zhigang Liu, Renxian Zhou, Xiaoming Zheng

Journal of Molecular Catalysis A: Chemical 255 (2006) 103

The preferential oxidation of CO in excess hydrogen: A study of the influence of KOH/K₂CO₃ on CuO–CeO_{2-x} catalysts

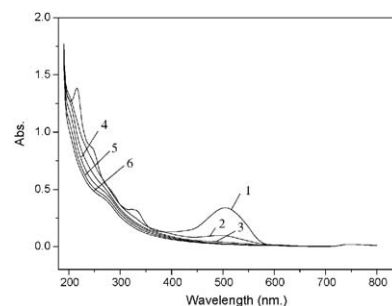
Precipitators have a beneficial influence on the catalytic performance of nano-structured CuO–CeO_{2-x} catalysts. The catalyst prepared with the KOH/K₂CO₃ ratio of 4:0 achieves the superior activity in the preferential oxidation of CO in rich hydrogen. CO conversion higher than 99% with O₂ selectivity of 100% can be obtained over this CuO–CeO_{2-x} catalyst at 90–110 °C and a space velocity of 30,000–120,000 mlg⁻¹ h⁻¹ in the absence of CO₂ and H₂O or at 150 °C and a space velocity of 120,000 mlg⁻¹ h⁻¹ in the presence of CO₂ and H₂O.

**Gaoke Zhang, Xi Zou, Jie Gong, Fangsheng He, Hao Zhang, Shixi Ouyang, Hanxing Liu, Qiang Zhang, Ying Liu, Xia Yang, Bo Hu**

Journal of Molecular Catalysis A: Chemical 255 (2006) 109

Characterization and photocatalytic activity of Cu-doped K₂Nb₄O₁₁

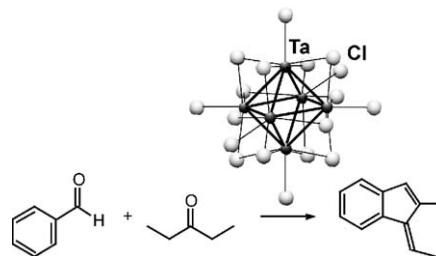
The Cu-doped TB potassium niobate K₂Nb₄O₁₁ was synthesized by solid state-reaction method in air, which shows high photocatalytic activity to photodegrade acid red G under UV irradiation. The effects of the Cu-doped and the mixed valence state of niobium on the photocatalytic activity of the catalyst were discussed. The Cu-doped K₂Nb₄O₁₁ may find potential application in water treatment fields.

**Satoshi Kamiguchi, Satoru Nishida, Ikuko Takahashi, Hideki Kurokawa, Hiroshi Miura, Teiji Chihara**

Journal of Molecular Catalysis A: Chemical 255 (2006) 117

Aldol condensation of acyclic ketones with benzaldehyde and subsequent cyclodehydration to form indenenes over halide cluster catalysts

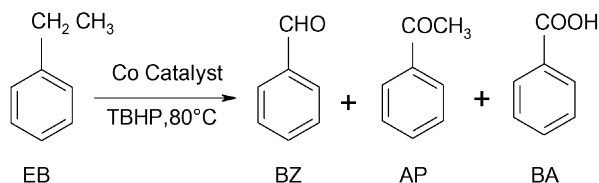
A molecular halide cluster [(Ta₆Cl₁₂)Cl₂(H₂O)₄·4H₂O] catalyzed the aldol condensation of acetone with benzaldehyde to yield *E*-4-phenyl-3-buten-2-one above 200 °C. 3-Pentanone combined with benzaldehyde provided indenenes such as *E*- and *Z*-1-ethylidene-2-methylindene, by cyclodehydration of the aldol condensation product, *E*-2-methyl-1-phenyl-1-penten-3-one. One of the advantages of halide cluster catalysts is thermal stability, and high temperatures above 350 °C promoted the cyclodehydration.

**Shrikant S. Bhoware, S. Shylesh, K.R. Kamble, A.P. Singh**

Journal of Molecular Catalysis A: Chemical 255 (2006) 123

Cobalt-containing hexagonal mesoporous molecular sieves (Co-HMS): Synthesis, characterization and catalytic activity in the oxidation reaction of ethylbenzene

Cobalt-containing hexagonal mesoporous molecular sieves were prepared by direct hydrothermal method as well as by post-synthesis grafting method, for the first time. The catalyst shows excellent activity in the oxidation of ethylbenzene in presence of *tert*-butyl hydroperoxide oxidant, under solvent free conditions.

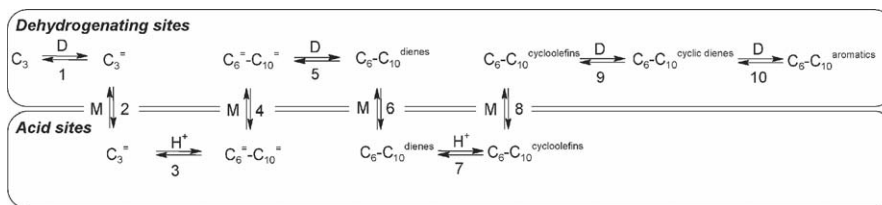


**G. Caeiro, R.H. Carvalho, X. Wang,
M.A.N.D.A. Lemos, F. Lemos, M. Guisnet,
F. Ramôa Ribeiro**

Journal of Molecular Catalysis A: Chemical 255
(2006) 131

Activation of C₂–C₄ alkanes over acid and bifunctional zeolite catalysts

This review paper presents the significant advances which were made in the last decade in the understanding of the transformation over acid and bifunctional zeolite catalysts of the cheap and readily available C₂–C₄ alkanes into more valuable products. Thus, the bifunctional character of the complex aromatization pathway over Ga/HMFI catalysts is now well demonstrated: successive intervention of (probably bifunctional) species containing Ga for dehydrogenation steps and of protonic acid sites for oligomerization and cyclization steps.

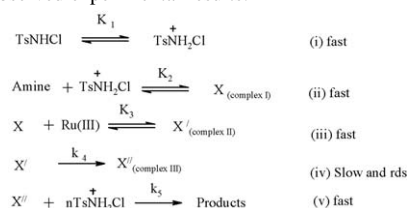


**K.N. Shivananda, R.V. Jagadeesh, Puttaswamy,
K.N. Mahendra**

Journal of Molecular Catalysis A: Chemical 255
(2006) 159

Ru(III)-catalysed oxidation of some amines by chloramine-T in hydrochloric acid medium: Mechanistic aspects and kinetic modeling

The following general scheme is proposed for the Ru(III)-catalysed oxidation of amines of cholramine-T in acid medium to explain the observed experimental results:



Here, Ts = *p*-CH₃C₆H₄SO₂ and *n* = 1 for ethylenediamine, aminoethylpiperazine and isophoronediamine, 3 for diethylenetriamine and 7 for triethylenetetramine.

The above scheme leads to the following rate law:

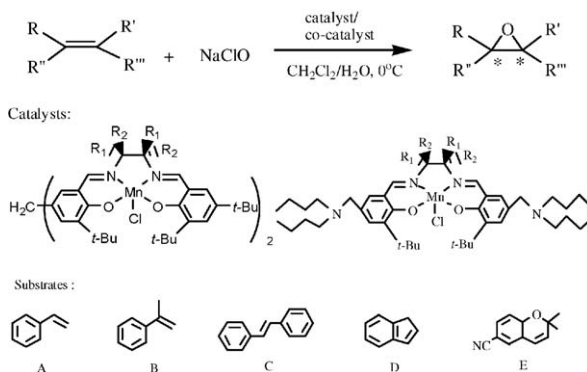
$$\text{rate} = \frac{K_1 K_2 K_3 k_4 [\text{CAT}]_t [\text{amine}] [\text{H}^+] [\text{Ru(III)}]}{1 + K_1 [\text{H}^+] + K_1 K_2 [\text{amine}] [\text{H}^+] + K_1 K_2 K_3 [\text{amine}] [\text{H}^+] [\text{Ru(III)}]}$$

Yang Sun, Ning Tang

Journal of Molecular Catalysis A: Chemical 255
(2006) 171

Enantioselective epoxidation of olefins catalyzed by chiral dimeric and partially water-soluble monomeric salen-Mn(III) complexes in the presence of novel co-catalysts

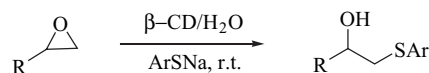
Co-catalyst: pyridine *N*-oxide and Fujita's porous coordination polymer, respectively.



**M. Somi Reddy, B. Srinivas, R. Sridhar,
M. Narender, K. Rama Rao**

Journal of Molecular Catalysis A: Chemical 255
(2006) 180

Highly regioselective thiolysis of oxiranes under supramolecular catalysis involving β -cyclodextrin in water

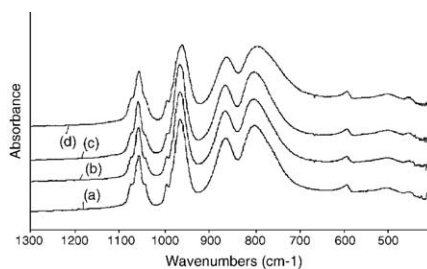


R = Aryloxy, aryl, hexyl

Nikolaos Dimitratos, Jacques C. Védrine

Journal of Molecular Catalysis A: Chemical 255 (2006) 184

Study of Ga modified $C_{82.5}H_{1.5}PV_1Mo_{11}O_{40}$ heteropolyoxometallates for propane selective oxidation



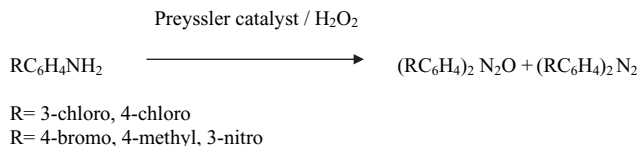
The selective oxidation of propane by oxygen has been investigated on a series of gallium modified $C_{82.5}H_{1.5}PV_1Mo_{11}O_{40}$ samples, with Ga content varying from 0 to 0.32 per Keggin unit (KU). The physicochemical properties of the samples have been studied by using a variety of techniques, namely FTIR, XRD, ^{31}P -NMR, BET and TG-DTG-DSC. The effect of several parameters, such as pre-treatment temperature, reaction temperature, residence time (WF) on the conversion and product distribution have been examined. The presence of gallium has been observed to increase surface area by a factor of more than two and to improve the selectivity to oxygenates (acrylic and acetic acids, acrolein). It has been found that there is an optimum value of Ga content of 0.16 per KU in the Keggin structure and of pre heating temperature of 300 °C for maximizing propane conversion and acrylic acid selectivity.

Fatemeh F. Bamoharram, Majid M. Heravi, Mina Roshani, Mina Akbarpour

Journal of Molecular Catalysis A: Chemical 255 (2006) 193

Catalytic performance of Preyssler heteropolyacid as a green and recyclable catalyst in oxidation of primary aromatic amines

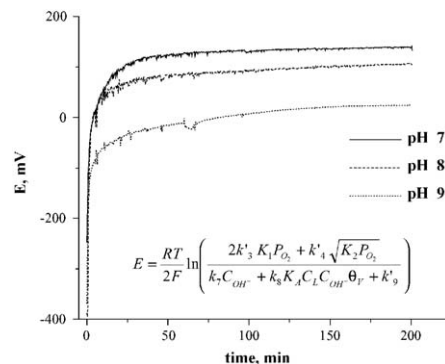
Oxidation of aniline derivatives with hydrogen peroxide in the presence of Preyssler catalyst results in the formation of corresponding azoxy compounds as major product at reflux temperature and 4 h. This catalyst catalyzes oxidation reactions without any degradation of structure in the presence of hydrogen peroxide.

**Anton V. Tokarev, Elena V. Murzina, Jyrki Kuusisto, Jyri-Pekka Mikkola, Kari Eränen, Dmitry Yu. Murzin**

Journal of Molecular Catalysis A: Chemical 255 (2006) 199

Kinetic behaviour of electrochemical potential in three-phase heterogeneous catalytic oxidation reactions

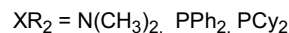
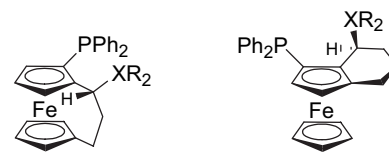
Kinetic behaviour of catalyst electrochemical potential was studied during three-phase heterogeneous reaction of D-lactose oxidation. The influence of different factors on in situ measured catalyst electrochemical potential is considered. A kinetic model capable to explain transient behaviour of catalyst electrochemical potential at different conditions such as conversion, oxygen partial pressure, temperature and pH is proposed.

**Thomas Sturm, Beatriz Abad, Walter Weissensteiner, Kurt Mereiter, Blanca R. Manzano, Félix A. Jalón**

Journal of Molecular Catalysis A: Chemical 255 (2006) 209

Palladium-catalysed allylic alkylations and aminations with hetero- and homoannularly bridged bidentate ferrocene ligands

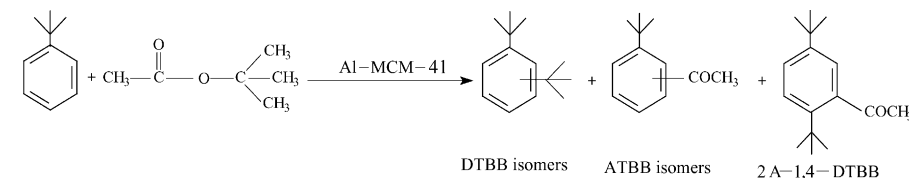
Sets of hetero- and homoannularly bridged ferrocenyl aminophosphine and diphosphine ligands were investigated in palladium-catalysed enantioselective allylic alkylation and amination reactions.



**S. Sudha, M. Palanichamy,
V.V. Balasubramanian, Banumathi Arabindoo,
V. Murugesan**

Journal of Molecular Catalysis A: Chemical 255
(2006) 220

The vapour phase reaction of *tert*-butylbenzene and *tert*-butyl acetate over Al-MCM-41 molecular sieves

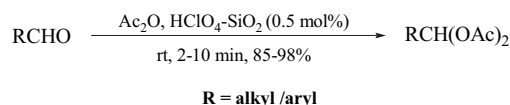


**Abu T. Khan, Lokman H. Choudhury,
Subrata Ghosh**

Journal of Molecular Catalysis A: Chemical 255
(2006) 230

Silica supported perchloric acid ($\text{HClO}_4\text{-SiO}_2$): A highly efficient and reusable catalyst for geminal diacylation of aldehydes under solvent-free conditions

Silica supported perchloric acid ($\text{HClO}_4\text{-SiO}_2$): A highly efficient and reusable catalyst for geminal diacylation of aldehydes under solvent-free conditions.

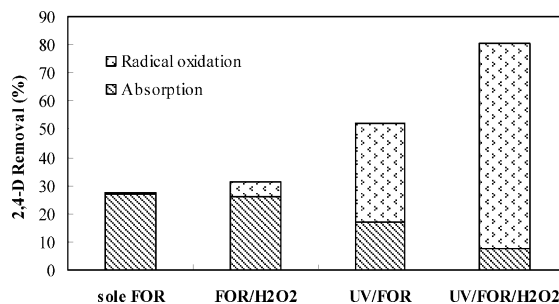


Cheuk Yan Kwan, Wei Chu

Journal of Molecular Catalysis A: Chemical 255
(2006) 236

Effect of ferrioxalate-exchanged resin on the removal of 2,4-D by a photocatalytic process

A new approach combining sorption and an advanced oxidation process for wastewater treatment has successfully shown that ferrioxalate-exchanged resin (FOR) is capable of catalyzing and enhancing the removal as well as degradation of organic pollutants. The modified resin was found to be a non-selective catalyst; pre-sorption on the surface of the resin was not an essential step for the photocatalysis.

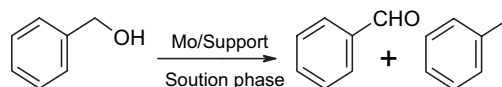


Shanty Mathew, C. Shiva Kumara, N. Nagaraju

Journal of Molecular Catalysis A: Chemical 255
(2006) 243

Influence of nature of support on the catalytic activity of supported molybdenum-oxo species in benzyl alcohol conversion

By incorporating 15 wt.% Mo from ammonium molybdate into aluminum hydroxide, alumina and zirconium hydroxide supports the activity towards disproportionation reaction of benzyl alcohol increases. Disproportionation of benzyl alcohol takes place on strong acid sites giving benzaldehyde and toluene. Dehydration of benzyl alcohol results on weak acid sites giving dibenzyl ether. The dehydration activity of aluminum hydroxide and alumina supports decreased by the incorporation of 15 wt.% Mo.

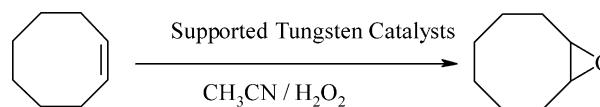


**Shahram Tangestaninejad,
Mohammad Hossein Habibi,
Valiollah Mirkhani, Majid Moghadam,
Gholamhossein Grivani**

Journal of Molecular Catalysis A: Chemical 255 (2006) 249

Simple preparation of some reusable and efficient polymer-supported tungsten carbonyl catalysts and clean epoxidation of *cis*-cyclooctene in the presence of H_2O_2

Efficient oxidation of cyclooctene with H_2O_2 catalyzed by supported tungsten carbonyl catalysts is reported.

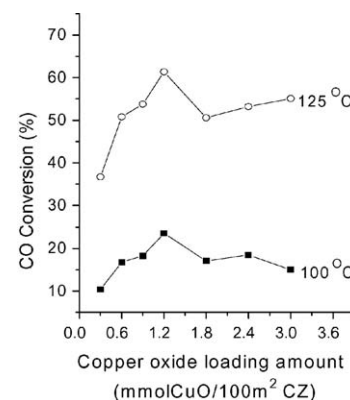


**Hongliang Chen, Haiyang Zhu, Yong Wu,
Fei Gao, Lin Dong, Junjie Zhu**

Journal of Molecular Catalysis A: Chemical 255 (2006) 254

Dispersion, reduction and catalytic properties of copper oxide supported on $Ce_{0.5}Zr_{0.5}O_2$ solid solution

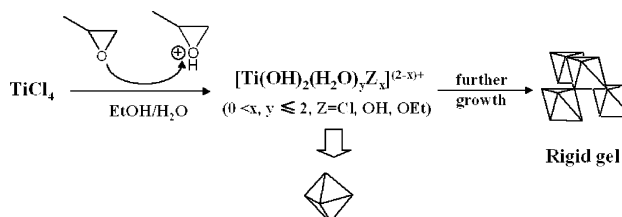
The catalytic activities of $CuO/Ce_{0.5}Zr_{0.5}O_2$ for low temperature CO oxidation were tested, which showed that the sample with CuO loading amount of 1.2 mmolCuO/100 $m^2Ce_{0.5}Zr_{0.5}O_2$ presented the highest activity. Combined with the XRD and TPR results, it seems to suggest that the main active species in this system should be the surface and/or small particle copper oxide species.



**Lin Chen, Jian Zhu, Yong-Mei Liu, Yong Cao,
He-Xing Li, He-Yong He, Wei-Lin Dai,
Kang-Nian Fan**

Journal of Molecular Catalysis A: Chemical 255 (2006) 260

Photocatalytic activity of epoxide sol-gel derived titania transformed into nanocrystalline aerogel powders by supercritical drying

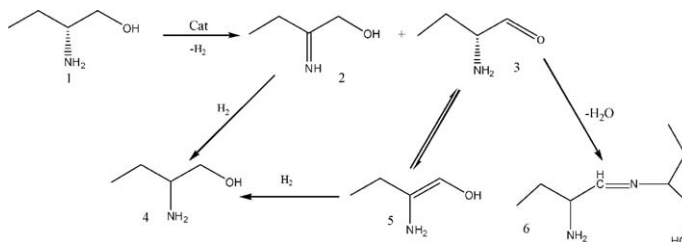


**Yuecheng Zhang, Guoyi Bai, Yang Li,
Xilong Yan, Ligong Chen**

Journal of Molecular Catalysis A: Chemical 255 (2006) 269

Racemization of *R*-2-amino-1-butanol catalyzed by a fixed-bed Raney cobalt catalyst

The catalytic racemization of *R*-2-amino-1-butanol was studied in a continuous fixed-bed reactor. The differences between a fixed-bed Raney Co catalyst and a pulverous Raney Co catalyst were studied by X-ray photoelectron spectroscopy (XPS), X-ray diffractometry (XRD), environment scanning electron microscopy (ESEM) and N_2 adsorption measurement (BET). The catalytic activity and stability of this Raney Co catalyst for the racemization of *R*-2-amino-1-butanol was studied, and the reaction parameters were optimized.

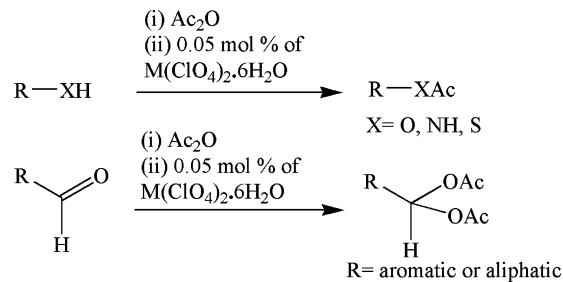


Kandasamy Jeyakumar, Dillip Kumar Chand

Journal of Molecular Catalysis A: Chemical 255 (2006) 275

Copper perchlorate: Efficient acetylation catalyst under solvent free conditions

Acetylation of alcohols, phenols, amines, thiols and aldehydes is performed using acetic anhydride as acylating agent and $M(\text{ClO}_4)_2 \cdot 6\text{H}_2\text{O}$ as catalyst where M is Mn, Co, Ni, Cu and Zn at room temperature under solvent free conditions. Transition metal perchlorates used here are found to be more efficient than the already reported metal triflates and s, p-block perchlorates.

**Debabrata Chatterjee, Susan Basak, Abdelkhalek Riahi, Jacques Muzart**

Journal of Molecular Catalysis A: Chemical 255 (2006) 283

Highly efficient asymmetric epoxidation of alkenes with a novel chiral complex of ruthenium(III) containing a sugar based ligand and triphenylphosphines

Mixed-ligand ruthenium catalyst containing tridentate sugar-based chiral ligand and triphenylphosphines effect remarkably high asymmetric induction in epoxidation of styrenes using *t*-BuOOH as a terminal oxidant.

