

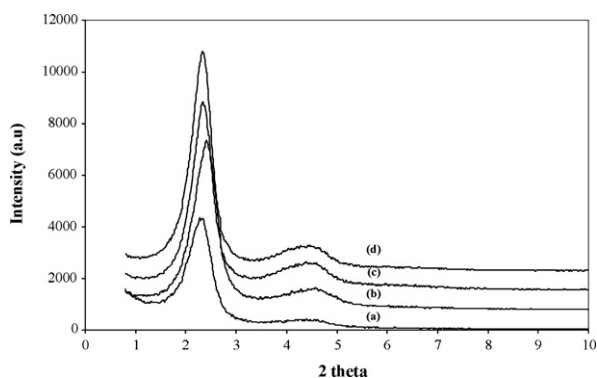
## Contents

### Articles

S. Ajaikumar, A. Pandurangan

*Journal of Molecular Catalysis A: Chemical 266 (2007) 1*

Esterification of alkyl acids with alkanols over MCM-41 molecular sieves: Influence of hydrophobic surface on condensation reaction

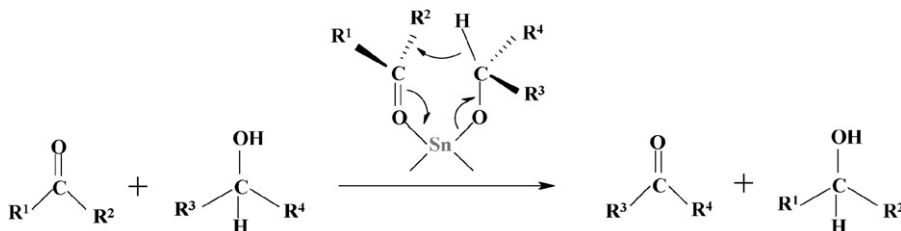


Prinson P. Samuel, S. Shylesh, A.P. Singh

*Journal of Molecular Catalysis A: Chemical 266 (2007) 11*

Catalytic properties of tin-containing mesoporous molecular sieves in the selective reduction of carbonyl compounds (Meerwein–Ponndorf–Verley (MPV) reaction)

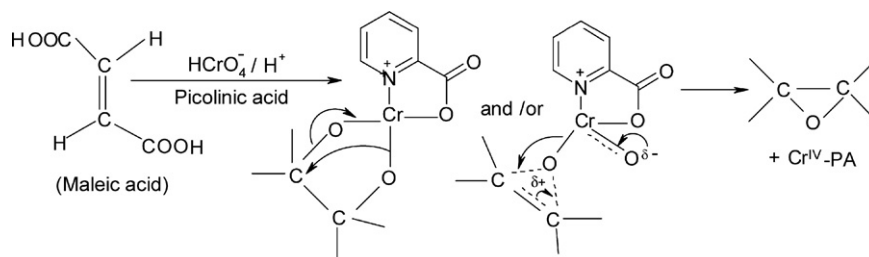
Tin-containing ordered mesoporous silica materials were synthesized by direct hydrothermal method (Sn–MCM-41, Sn–MCM-48) and by the grafting method (Sn/MCM-41, Sn/MCM-48, Sn/SBA-15) and were used as catalysts in the MPV reduction reaction of carbonyl compounds using 2-butanol and 2-propanol as hydrogen transfer agents.



Monirul Islam, Bidyut Saha, Asim K. Das

*Journal of Molecular Catalysis A: Chemical 266 (2007) 21*

Kinetics and mechanism of picolinic acid promoted chromic acid oxidation of maleic acid in aqueous micellar media

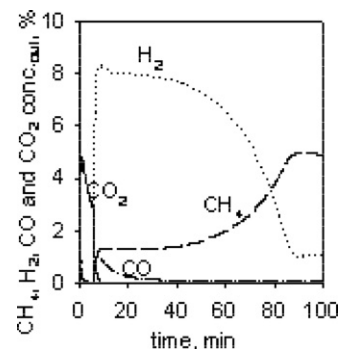


**P. Ammendola, R. Chirone, L. Lisi,  
G. Ruoppolo, G. Russo**

*Journal of Molecular Catalysis A: Chemical* 266 (2007) 31

Copper catalysts for H<sub>2</sub> production via CH<sub>4</sub> decomposition

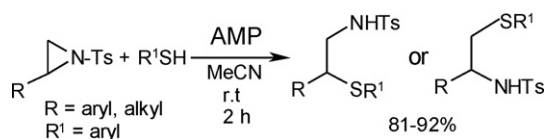
Cu/ $\gamma$ -Al<sub>2</sub>O<sub>3</sub> catalysts were studied for the thermo-catalytic decomposition of methane at 800–1000 °C. They were characterized using ICP-MS, XRD and BET analysis, H<sub>2</sub> and CH<sub>4</sub> TPR, FT-IR, TGA under reaction mixture and isothermal tests in a fixed bed. They were compared with reference compounds containing copper oxide and copper aluminate, respectively. The applicability of catalysts in a fluidized bed was analyzed.



**Biswanath Das, V. Saidi Reddy, R. Ramu**

*Journal of Molecular Catalysis A: Chemical* 266 (2007) 40

A facile regio- and stereoselective synthesis of  $\beta$ -aminosulfides from aziridines using ammonium-12-molybdophosphate

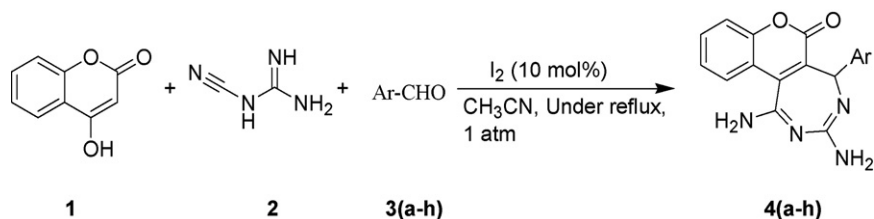


**Mazaahir Kidwai, Vikas Bansal,  
Poonam Mothsra**

*Journal of Molecular Catalysis A: Chemical* 266 (2007) 43

Molecular iodine: A highly efficient catalyst for the synthesis of 7-arylbenzopyrano[1,3]diazepines in non-protic solvents

A simple and facile synthesis of 7-arylbenzopyrano[1,3]diazepines has been accomplished by treatment of 4-hydroxycoumarin, cyanoguanidine with aromatic or heteroaromatic aldehydes using molecular iodine in non-protic solvent under reflux.

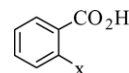


**Mohan Babu Maradolla, M. Amaravathi,  
V. Naveen Kumar, G.V.P. Chandra Mouli**

*Journal of Molecular Catalysis A: Chemical* 266 (2007) 47

Regioselective copper-catalyzed amination of halobenzoic acids using aromatic amines

Copper dipyrindine dichloride (CuPy<sub>2</sub>Cl<sub>2</sub>) has been found to be an efficient catalyst for the synthesis of *N*-aryl anthranilic acids from *ortho*-halobenzoic acids and aromatic amines. Some of the advantages of this method are high chemo selectivity, ease of operation, and high yields (56–92%).

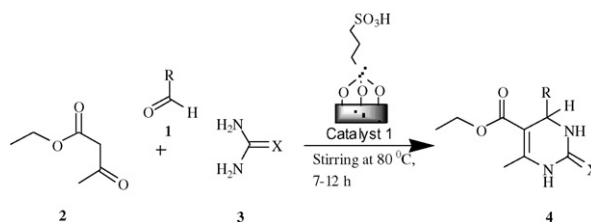


**Raman Gupta, Satya Paul, Rajive Gupta**

*Journal of Molecular Catalysis A: Chemical* 266 (2007) 50

Covalently anchored sulfonic acid onto silica as an efficient and recoverable interphase catalyst for the synthesis of 3,4-dihydropyrimidinones/thiones

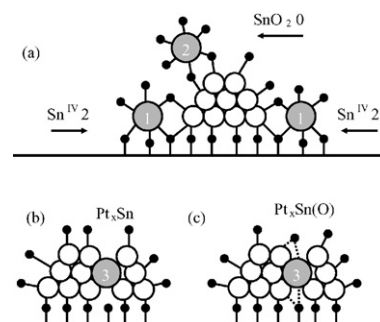
A covalently anchored sulfonic acid onto the surface of silica gel catalyzed one-pot synthesis of 3,4-dihydropyrimidinones/thiones has been reported under heterogeneous conditions. The catalyst **1** was found to be completely heterogeneous and is re-usable for several times without loss of significant activity.

**M. Womes, F. Le Peltier, S. Morin, B. Didillon, J. Olivier-Fourcade, J.C. Jumas**

*Journal of Molecular Catalysis A: Chemical* 266 (2007) 55

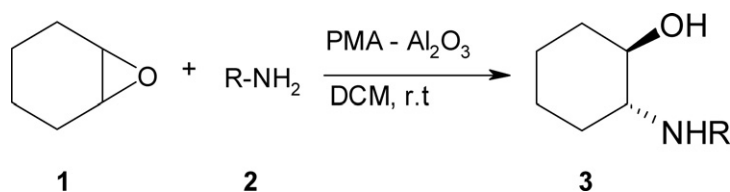
Study of the reaction mechanisms between Sn-(*n*-C<sub>4</sub>H<sub>9</sub>)<sub>4</sub> and alumina surface sites. Application to the controlled preparation of PtSn/Al<sub>2</sub>O<sub>3</sub> catalysts

The reaction mechanisms between Sn-(*n*-C<sub>4</sub>H<sub>9</sub>)<sub>4</sub> and several specific types of alumina surface sites are studied. A new preparation method for the controlled synthesis of bimetallic PtSn/Al<sub>2</sub>O<sub>3</sub> catalysts is presented avoiding undesired anchoring of tin on the support. The bimetallic particles are analysed by <sup>119</sup>Sn Mössbauer spectroscopy and a structural model of the particles is proposed.

**S. Ramesh Kumar, P. Leelavathi**

*Journal of Molecular Catalysis A: Chemical* 266 (2007) 65

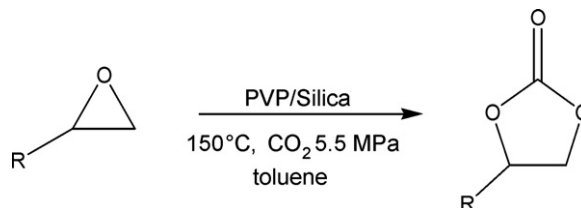
Phosphomolybdic acid-Al<sub>2</sub>O<sub>3</sub>: A mild, efficient, heterogeneous and reusable catalyst for regioselective opening of oxiranes with amines to β-amino alcohols

**Sachin R. Jagtap, Vivek P. Raje, Shrinivas D. Samant, Bhalchandra M. Bhanage**

*Journal of Molecular Catalysis A: Chemical* 266 (2007) 69

Silica supported polyvinyl pyridine as a highly active heterogeneous base catalyst for the synthesis of cyclic carbonates from carbon dioxide and epoxides

Reaction of epoxides and carbon dioxide to corresponding cyclic carbonates using silica supported polyvinyl pyridine as a highly active heterogeneous base catalyst has been reported. The roles of various reaction parameters are studied in detail for the reaction and the catalyst was found to be recyclable up to four cycles without any loss in the catalytic activity.

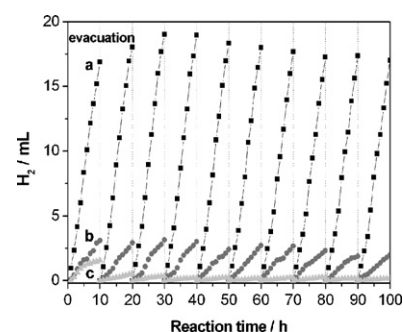


**Qiuye Li, Gongxuan Lu**

*Journal of Molecular Catalysis A: Chemical* 266 (2007) 75

Visible-light driven photocatalytic hydrogen generation on Eosin Y-sensitized Pt-loaded nanotube  $\text{Na}_2\text{Ti}_2\text{O}_4(\text{OH})_2$

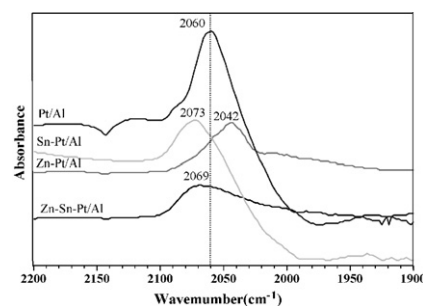
A novel and highly efficient photocatalyst, Eosin Y-sensitized Pt-loaded nanotube  $\text{Na}_2\text{Ti}_2\text{O}_4(\text{OH})_2$  (NTS), was found to be very active for hydrogen generation in triethanolamine (TEA) solution under visible-light irradiation ( $\lambda \geq 420$  nm). The catalyst showed a long-term stability over 100 h after consecutive 10 runs, up to 14.97% of quantum yield was obtained.

**Changlin Yu, Hengyong Xu, Qingjie Ge, Wenzhao Li**

*Journal of Molecular Catalysis A: Chemical* 266 (2007) 80

Properties of the metallic phase of zinc-doped platinum catalysts for propane dehydrogenation

The effects of Zn and Sn on the electronic environment of Pt atoms were different. Zn tended to increase the electronic density of the surface of Pt atoms which could be related to the formation of PtZn alloy. In contrast Sn resulted in a decrease in the electron density of Pt atoms, possibly due to the electron-attracting Sn(II) ions.

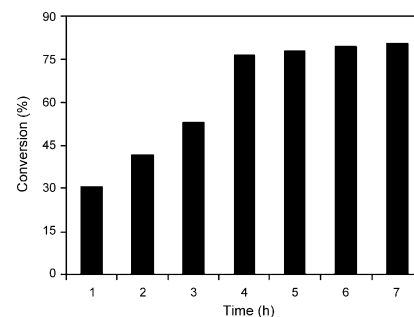
**S.S. Dash, K.M. Parida**

*Journal of Molecular Catalysis A: Chemical* 266 (2007) 88

Esterification of acetic acid with *n*-butanol over manganese nodule leached residue

Manganese nodule leached residue (MNLR) a solid waste after selective extraction of Cu, Co and Ni from Indian Ocean manganese nodule and washed with water to remove sulphate and other impurities present in its surface. The catalytic activity of the waste material was tested for liquid phase esterification of acetic acid with *n*-butanol. Water-washed leached residue calcined at 400 °C shows highest catalytic activity with 76.6% conversion and 100% selectivity for *n*-butyl acetate. A gradual rise in the conversion was seen with increase in duration of the reaction period. As seen from the above figure, 4 h of reaction time completes 76.6% of the reaction where as at the end of 7 h only 80% of the reaction is complete.

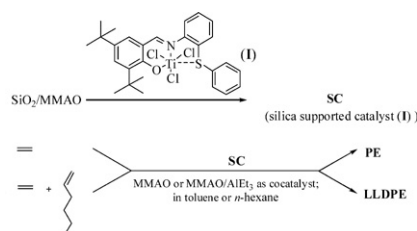
The selectivity towards *n*-butyl acetate on the other hand remains same, i.e. 100% at 7 h.

**Kun Cui, Bo Liu, Cong Wang, Jian-Yong Yu, Zhi Ma**

*Journal of Molecular Catalysis A: Chemical* 266 (2007) 93

A silica-supported titanium(IV) complex bearing  $[\text{O}^-\text{NS}]$  tridentate ligand and its behavior in ethylene homo- and copolymerization with 1-hexene

A silica-supported catalyst SC was prepared by the immobilization of the titanium(IV) complex (I) bearing  $[\text{O}^-\text{NS}]$  tridentate ligand on modified methylaluminoxane (MMAO) treated silica. Its performance in ethylene polymerizations was investigated by the variation of polymerization conditions. The results indicated that the good catalytic activities and incorporation of 1-hexene in copolymer can be obtained. In comparison with homogeneous catalyst (I), such silica-supported catalyst gave polymers with higher  $M_w$ , high-



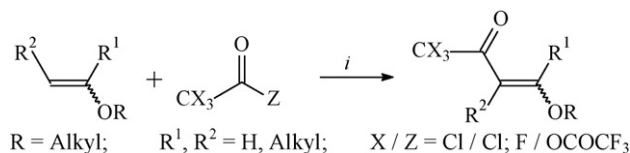
er  $T_m$  and better morphology.

**Marcos A.P. Martins, Emerson A. Guarda,  
Clarissa P. Frizzo, Elisandra Scapin,  
Paulo Beck, Alexandre C. da Costa,  
Nilo Zanatta, Helio G. Bonacorso**

*Journal of Molecular Catalysis A: Chemical* 266  
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Synthesis of 1,1,1-trichloro[fluoro]-3-alken-2-ones using ionic liquids

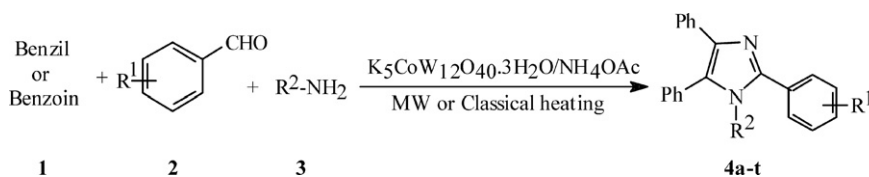
*i*: Pyridine (1 equiv.), [BMIM]·BF<sub>4</sub> or [BMIM]·PF<sub>6</sub> (0.1 equiv.), 0° to r.t., 1.5 h.



**Lingaiah Nagarapu, Satyender Apuri,  
Srinivas Kantevari**

*Journal of Molecular Catalysis A: Chemical* 266  
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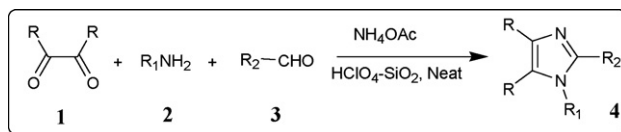
Potassium dodecatungstocobaltate trihydrate (K<sub>5</sub>CoW<sub>12</sub>O<sub>40</sub>·3H<sub>2</sub>O): A mild and efficient reusable catalyst for the one-pot synthesis of 1,2,4,5-tetrasubstituted imidazoles under conventional heating and microwave irradiation



**Srinivas Kantevari, Srinivasu V.N. Vuppalapati,  
Dhanraj O. Biradar, Lingaiah Nagarapu**

*Journal of Molecular Catalysis A: Chemical* 266  
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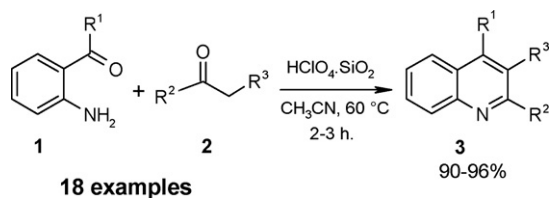
Highly efficient, one-pot, solvent-free synthesis of tetrasubstituted imidazoles using HClO<sub>4</sub>-SiO<sub>2</sub> as novel heterogeneous catalyst



**M. Narasimhulu, T. Srikanth Reddy,  
K. Chinni Mahesh, P. Prabhakar,  
Ch. Bhujanga Rao, Y. Venkateswarlu**

*Journal of Molecular Catalysis A: Chemical* 266  
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Silica supported perchloric acid: A mild and highly efficient heterogeneous catalyst for the synthesis of poly-substituted quinolines *via* Friedländer hetero-annulation

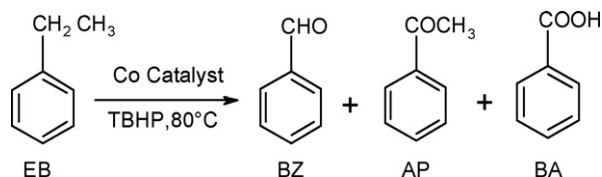


**Shrikant S. Bhoware, A.P. Singh**

*Journal of Molecular Catalysis A: Chemical* 266 (2007) 118

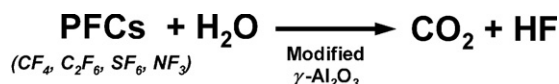
Characterization and catalytic activity of cobalt containing MCM-41 prepared by direct hydrothermal, grafting and immobilization methods

Cobalt containing MCM-41 was prepared by direct hydrothermal, grafting and immobilization methods. The catalyst shows excellent activity in the oxidation of ethylbenzene in presence of *tert*-butyl hydroperoxide oxidant, under solvent free conditions.

**Xiu-Feng Xu, Jong Yeol Jeon, Mi Hwa Choi, Hee Young Kim, Won Choon Choi, Yong-Ki Park**

*Journal of Molecular Catalysis A: Chemical* 266 (2007) 131

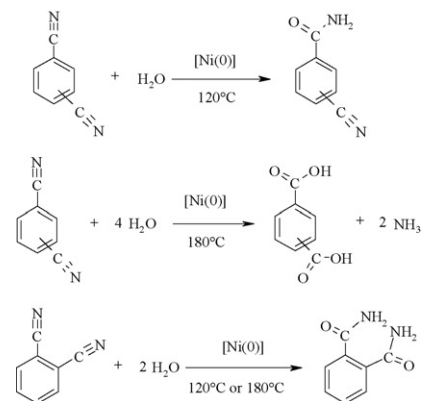
The modification and stability of  $\gamma$ -Al<sub>2</sub>O<sub>3</sub> based catalysts for hydrolytic decomposition of CF<sub>4</sub>

**Carmela Crisóstomo, Marco G. Crestani, Juventino J. García**

*Journal of Molecular Catalysis A: Chemical* 266 (2007) 139

The catalytic hydration of 1,2-, 1,3- and 1,4-dicyanobenzenes using nickel(0) catalysts

The homogeneous catalytic hydration of 1,2-, 1,3- and 1,4-dicyanobenzenes was achieved under heating using organometallic nickel(0) catalysts of general formula [(dippe)Ni( $\eta^2$ -N,C-1,n-(CN)<sub>2</sub>-benzene)].

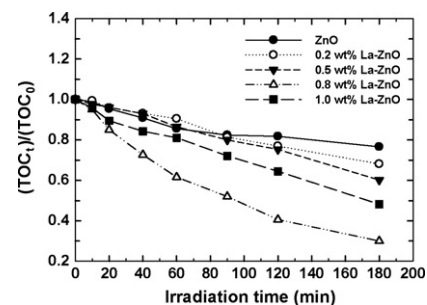
**S. Anandan, A. Vinu, K.L.P. Sheeja Lovely, N. Gokulakrishnan, P. Srinivasu, T. Mori, V. Murugesan, V. Sivamurugan, K. Ariga**

*Journal of Molecular Catalysis A: Chemical* 266 (2007) 149

Photocatalytic activity of La-doped ZnO for the degradation of monocrotophos in aqueous suspension

La-doped ZnO nanoparticles with different La contents were synthesized and characterized by various sophisticated techniques such as XRD, UV-vis, AFM, XPS, and HR-SEM. It was found that the particle size of La-doped ZnO is much smaller as compared to that of pure ZnO and decreases with increasing La loading. The effects of the adsorption of MCP, lights of wavelength, and the solution pH on the photocatalytic activity of La-doped ZnO with different La loading were studied and the results were compared with pure ZnO and pure TiO<sub>2</sub>. It was observed that the rate of degradation of MCP over La-doped ZnO increases with increasing La loading up to 0.8 wt% and then decreases. Among the catalyst studied, the 0.8 wt% La-doped ZnO was the

most active, showing high relative photonic efficiencies and high photocatalytic activity for the degradation of MCP (see figure).

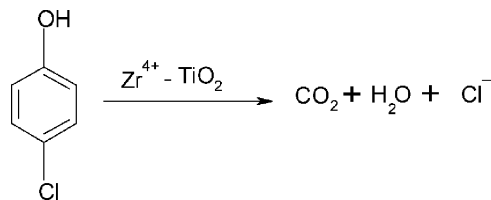


**N. Venkatachalam, M. Palanichamy,  
Banumathi Arabindoo, V. Murugesan**

*Journal of Molecular Catalysis A: Chemical* 266  
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Enhanced photocatalytic degradation of 4-chlorophenol by  $Zr^{4+}$  doped nano  $TiO_2$

Pure and  $Zr^{4+}$  doped nano  $TiO_2$  was prepared by sol-gel method using titanium(IV) isopropoxide and zirconium nitrate as precursors. The photocatalytic degradation of 4-chlorophenol (4-CP) in aqueous solution was carried out using pure and  $Zr^{4+}$  doped  $TiO_2$ . Experimental results revealed that 3 mol%  $Zr^{4+}$  doped  $TiO_2$  requires shorter irradiation time for complete mineralization of 4-CP than pure nano  $TiO_2$  and commercial  $TiO_2$  (Degussa P25).

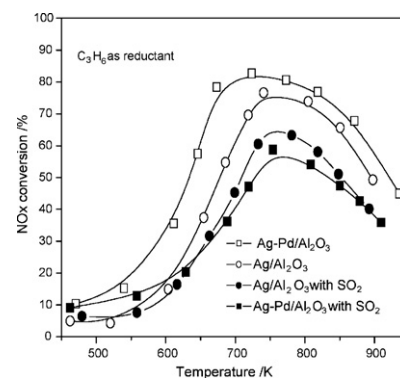


**Shuxia Xie, Jin Wang, Hong He**

*Journal of Molecular Catalysis A: Chemical* 266  
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Poisoning effect of sulphate on the selective catalytic reduction of  $NO_x$  by  $C_3H_6$  over  $Ag-Pd/Al_2O_3$

Pd-promoted  $Ag/Al_2O_3$  ( $Ag-Pd/Al_2O_3$ ) showed a better performance than  $Ag/Al_2O_3$  in the selective catalytic reduction (SCR) of  $NO_x$  by  $C_3H_6$ . However, the situation is just the contrary in the presence of  $SO_2$ . This phenomenon is due to the formation of sulphate on Ag sites promoted by Pd. The accumulation of surface sulphate on  $Ag-Pd/Al_2O_3$  inhibited the formation of nitrate and  $-NCO$  species, subsequently inhibiting the SCR of  $NO_x$ .

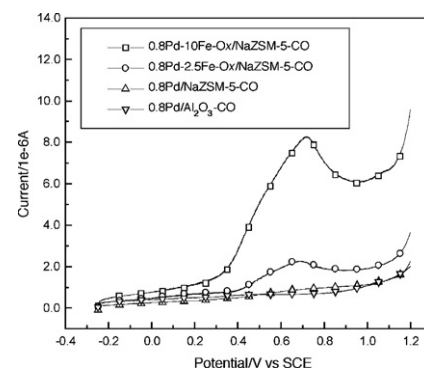


**Yushui Bi, Liang Chen, Gongxuan Lu**

*Journal of Molecular Catalysis A: Chemical* 266  
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Constructing surface active centres using Pd-Fe-O on zeolite for CO oxidation

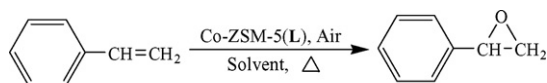
Artificial designed surface active centres using Pd-M-O (M = transition metal) on zeolite, including special Pd chemical environments and "weakly" chemical-adsorbed oxygen, not only showed excellent performance for CO oxidation at low temperature but was also successfully applied to CO electro-oxidation.



**G. Xu, Q.-H. Xia, X.-H. Lu, Q. Zhang,  
H.-J. Zhan**

*Journal of Molecular Catalysis A: Chemical* 266  
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Selectively catalytic epoxidation of styrene with dry air over the composite catalysts of Co-ZSM-5 coordinated with ligands



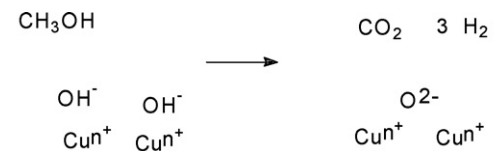
$L_1$ : salicylaldehyde salicylhydrazone

$L_2$ : vanillic aldehyde salicylhydrazone

**M.A. Larrubia Vargas, G. Busca, U. Costantino,  
F. Marmottini, T. Montanari, P. Patrono,  
F. Pinzari, G. Ramis**

*Journal of Molecular Catalysis A: Chemical* 266  
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An IR study of methanol steam reforming over ex-  
hydrotalcite Cu–Zn–Al catalysts

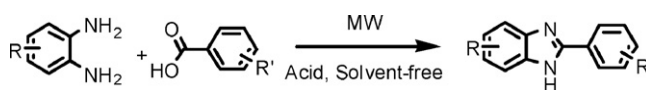


**Rui Wang, Xiao-xia Lu, Xiao-qi Yu, Lin Shi,  
Yong Sun**

*Journal of Molecular Catalysis A: Chemical* 266  
(2007) 198

Acid-catalyzed solvent-free synthesis of 2-arylben-  
zimidazoles under microwave irradiation

2-Arylbenzimidazoles have been synthesized from aromatic carboxylic acid and *o*-phenylenediamine under microwave irradiation (MW) and solvent-free conditions with catalytic amounts of hydrochloric acid in ambient pressure. This procedure constitutes a simple and practical green synthetic method for benzimidazoles and their structural analogs.

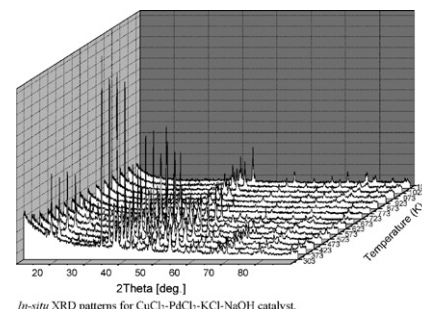


**Zhen Zhang, Xinbin Ma, Pingbo Zhang,  
Yeming Li, Shengping Wang**

*Journal of Molecular Catalysis A: Chemical* 266  
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Effect of treatment temperature on the crystal structure of activated carbon supported CuCl<sub>2</sub>–PdCl<sub>2</sub> catalysts in the oxidative carbonylation of ethanol to diethyl carbonate

There were significant changes in the crystal structure of copper hydroxide chloride at the treating temperatures of 303 K, 523 K, 573 K and 673 K. Part of  $\gamma$ -Cu<sub>2</sub>(OH)<sub>3</sub>Cl crystals were converted to Cu(OH)Cl at temperature 523 K, which is more active as the catalyst in the oxidative carbonylation of ethanol to diethyl carbonate.

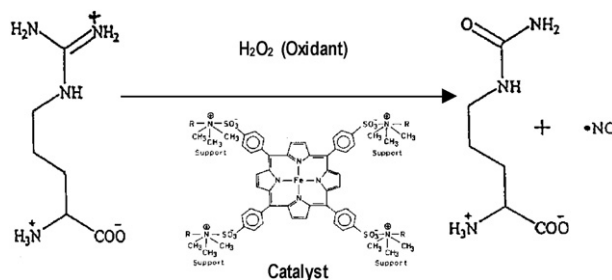


**Monalisa Mukherjee, Alok R. Ray**

*Journal of Molecular Catalysis A: Chemical* 266  
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Biomimetic oxidation of L-arginine with hydrogen peroxide catalyzed by the resin-supported iron (III) porphyrin

The water-soluble iron (III) porphyrin containing sulphonate group was immobilized into anionic Dowex resin. This catalyst was efficient for the release of nitric oxide (NO<sup>•</sup>) and the citrulline formation in the oxidation of L-arginine with hydrogen peroxide. The catalyst was quite stable and recovered quantitatively by simple filtration and reused without loss of activity.

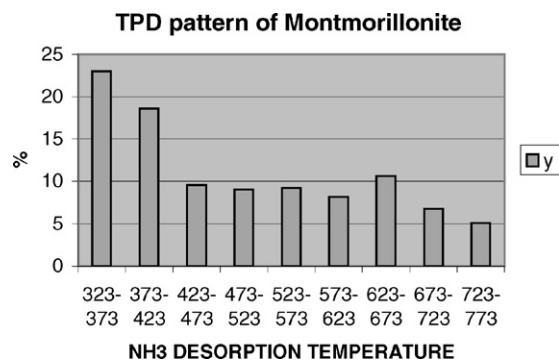




**Baldev Singh, Jyoti Patial, Parveen Sharma,  
S.G. Agarwal, G.N. Qazi, Sudip Maity**

*Journal of Molecular Catalysis A: Chemical* 266  
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Influence of acidity of montmorillonite and modified montmorillonite clay minerals for the conversion of longifolene to isolongifolene

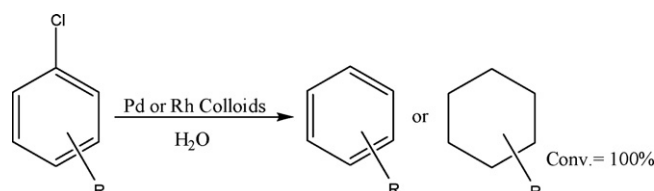


**Bastien Léger, Audrey Nowicki, Alain Roucoux,  
Jean-Paul Rolland**

*Journal of Molecular Catalysis A: Chemical* 266  
(2007) 221

Competitive hydrogenation/dehalogenation of halogenoarenes with surfactant-stabilized aqueous suspensions of rhodium and palladium colloids: A major effect of the metal nature

The present work describes the synthesis of the surfactant-stabilized aqueous palladium nanoparticle suspension. The catalytic hydrogenation and dehalogenation of various halogenoarenes have been investigated with Pd and Rh nanoparticles under mild pressure and temperature. The competitive dehalogenation/hydrogenation was discussed in the light of the nature of metal.

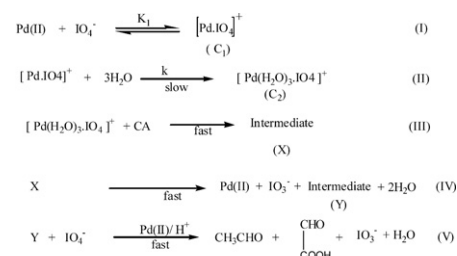


**Ashish, Surya Prakash Singh, Ajaya K. Singh,  
Bharat Singh**

*Journal of Molecular Catalysis A: Chemical* 266  
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Mechanistic study of palladium(II) catalysed oxidation of crotonic acid by periodate in aqueous perchloric acid medium

The following reaction scheme is proposed for the kinetics of oxidation of crotonic acid by periodate in aqueous perchloric acid medium catalysed by Pd(II) to explain the observed experimental results:



The above scheme leads to the following rate law:

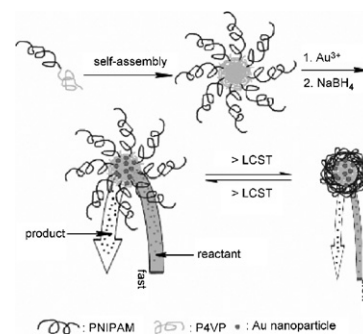
$$\text{Rate} = \frac{2 k K_1 [\text{Pd(II)}]_T [\text{IO}_4^-]_T}{1 + K_1 [\text{IO}_4^-]_T + K_1 [\text{Pd(II)}]_T}$$

**Yao Wang, Guangwei Wei, Wangqing Zhang,  
Xiaowei Jiang, Peiwen Zheng, Linqi Shi,  
Anjie Dong**

*Journal of Molecular Catalysis A: Chemical* 266  
(2007) 233

Responsive catalysis of thermoresponsive micelle-supported gold nanoparticles

Gold nanoparticles were loaded in thermoresponsive micelles of PS-*b*-PNIPAM to form a responsive catalyst. The catalytic activity of the responsive catalyst was modulated due to the thermoresponsive PNIPAM. Below LCST of the PNIPAM chains, the activity increased with the increase in temperature; above LCST, the activity decreased with the increase in temperature.

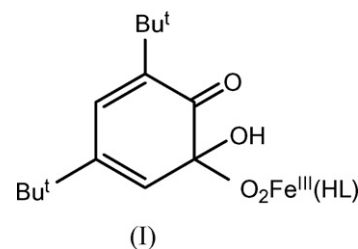


**Zoltán May, László I. Simándi, Attila Vértes**

*Journal of Molecular Catalysis A: Chemical* 266 (2007) 239

Iron-assisted, base-catalyzed biomimetic activation of dioxygen by dioximatoiron(II) complexes. Kinetics and mechanism of model catecholase activity

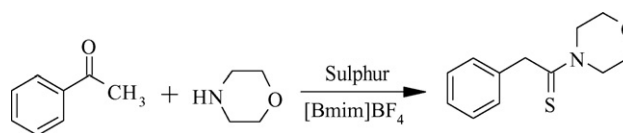
A novel iron-enhanced, base-catalyzed biomimetic oxidation of 3,5-di-*tert*-butylcatechol has been observed in the presence of dioximatoiron(II) complexes in methanol. The active intermediate is the iron-peroxo species (I) formed from catecholato(1-) and O<sub>2</sub>. UV-vis and ESR spectroscopy were used to support kinetic analysis aimed at elucidating the reaction mechanism.



**J.S. Yadav, B.V.S. Reddy, G. Kondaji, J.S.S. Reddy, K. Nagaiah**

*Journal of Molecular Catalysis A: Chemical* 266 (2007) 249

Green protocol for Willgerodt–Kindler transformation using [bmim]BF<sub>4</sub> ionic medium

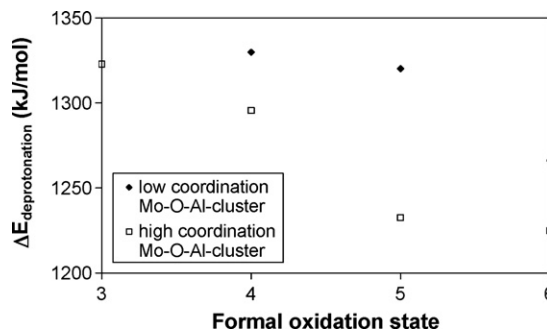


**E. van Steen, E.L. Viljoen, M. Claeys**

*Journal of Molecular Catalysis A: Chemical* 266 (2007) 254

A DFT-study on the acidity of Mo–O–Al-clusters

The acidity of Mo–O–Al clusters can be determined using the deprotonation energy and it increases with increasing formal oxidation state of molybdenum in the cluster. The acidity is related to the activation energy for double bond isomerisation of olefins.

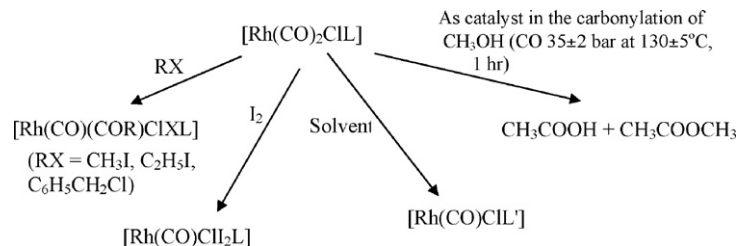


**Nandini Kumari, Bhaskar Joyti Sarmah, Dipak Kumar Dutta**

*Journal of Molecular Catalysis A: Chemical* 266 (2007) 260

Dicarbonylrhodium(I) complexes of functionalized pyridine ligands and their catalytic activities

The complexes [Rh(CO)<sub>2</sub>CiL] (L = Py-2-COOR, Py-3-COOR and Py-4-COOR; R = CH<sub>3</sub>, C<sub>2</sub>H<sub>5</sub>) have been synthesized, which undergo partial decarbonylation to produce [Rh(CO)CiL'] (L' = Py-2-COOR). The rate of oxidative addition reactions of electrophiles like CH<sub>3</sub>I, C<sub>2</sub>H<sub>5</sub>I, C<sub>6</sub>H<sub>5</sub>CH<sub>2</sub>Cl and I<sub>2</sub> to the complexes depends on the ligand. The catalytic activity of the complexes in carbonylation of methanol is higher than that of the species [Rh(CO)<sub>2</sub>I<sub>2</sub>]<sup>-</sup>.



**K.N. Mohana, N. Prasad**

*Journal of Molecular Catalysis A: Chemical* 266 (2007) 267

Ruthenium(III)-catalyzed oxidation of 2-phenylethylamine with sodium *N*-chlorobenzene-sulphonamide in hydrochloric acid solution: A kinetic and mechanistic study

The kinetics of Ru(III)-catalyzed oxidation of 2-phenylethylamine with sodium *N*-chlorobenzene-sulphonamide has been studied in acid medium. The reaction rate shows first-order dependence each on [CAB], [H<sup>+</sup>] and [Ru(III)Cl<sub>3</sub>] and fractional order on [PEA] and [Cl<sup>-</sup>]. The reaction stoichiometry was found to be 1:1 and the oxidation product was identified as phenyl acetaldehyde. Activation parameters have been evaluated from the Arrhenius plot. RN<sup>+</sup>H<sub>2</sub>Cl has been postulated as the reactive oxidizing species. Plausible mechanism and the related rate laws have been deduced.

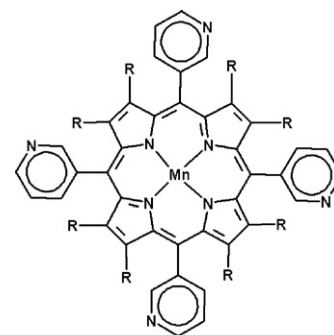
$$\text{rate} = \frac{K_5 K_6 k_7 k_8 [\text{CAB}][\text{H}^+][\text{Ru(III)}]_0 [\text{Cl}^-][\text{Sub}]}{\{k_{-7} + k_8 [\text{Sub}]\} \{[\text{H}_2\text{O}] + K_5 [\text{Cl}^-]\}}$$

**Gilson de Freitas Silva, Dayse Carvalho da Silva, Adriano Silva Guimarães, Eliane do Nascimento, Júlio Santos Rebouças, Márcio Peres de Araujo, Maria Eliza Moreira Dai de Carvalho, Ynara Marina Idemori**

*Journal of Molecular Catalysis A: Chemical* 266 (2007) 274

Cyclohexane hydroxylation by iodobenzene and iodobenzene diacetate catalyzed by a new β-octahalogenated Mn-porphyrin complex: The effect of *meso*-3-pyridyl substituents

The Mn(II)Br<sub>8</sub>T3PyP complex, a new β-octabrominated derivative of Mn(III)T3PyP, exhibits unexpected catalytic and electrochemical properties, which are in sharp contrast to the *ortho*-isomer analogue and other perbrominated porphyrin complexes. Catalytic efficiency could be tuned by the choice of oxidant (PhIO or PhI(OAc)<sub>2</sub>) and/or the use of additives (imidazole, water), but bromination did not yield overall an oxidatively robust catalyst.



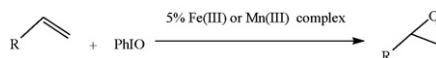
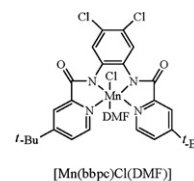
R = H, Mn(III)T3PyP\*  
R = Br, Mn(II)Br<sub>8</sub>T3PyP

**Li Yang, Rui-Ning Wei, Rui Li, Xiang-Ge Zhou, Jing-Lin Zuo**

*Journal of Molecular Catalysis A: Chemical* 266 (2007) 284

Epoxidation catalyzed by iron(III) and manganese(III) pyridine-2-carboxamido complexes

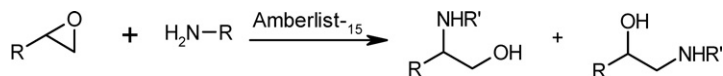
A series of Fe(III) and Mn(III) complexes containing tetradentate pyridine-2-carboxamido ligands have been synthesized and their applications in epoxidation have been studied with the best yield of 92% for 4-methoxystyrene by using [Mn(bbpc)Cl(DMF)] (H<sub>2</sub>bbpc = 1,2-bis(4'-*tert*-butylpyridine-2'-carboxamido)-4,5-dichloro-benzene) as catalyst.



**Medamoni Vijender, P. Kishore, P. Narender, B. Satyanarayana**

*Journal of Molecular Catalysis A: Chemical* 266 (2007) 290

Amberlist-15 as heterogeneous reusable catalyst for regioselective ring opening of epoxides with amines under mild conditions



R = aryl, aryloxy, alkyl, cycloalkyl

R' = aryl, alkyl, heterocyclic

**Ivonne Arellano, Pankaj Sharma, José Luis Arias, Alfredo Toscano, Armando Cabrera, Noé Rosas**

The reaction of 6-amino-1,3-dimethyluracil with substituted ferrocenyl-ketoalkynes using nickel cyanide as homogeneous catalyst precursor in aqueous alkaline medium, affords 7-ferrocenyl-2,4-dioxypyrido[2,3-*d*]pyrimidines derivatives, in moderates yields under mild conditions.

*Journal of Molecular Catalysis A: Chemical* 266 (2007) 294

First catalytic synthesis of 7-ferrocenyl-2,4-dioxypyrido [2,3-*d*]pyrimidines derivatives in water

