

Contents

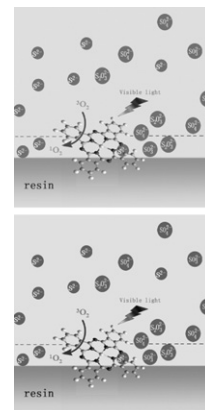
Articles

Aihua Sun, Zhigang Xiong, Yiming Xu

Journal of Molecular Catalysis A: Chemical 259 (2006) 1

Adsorption and photosensitized oxidation of sulfide ions on aluminum tetrasulfophthalocyanine-loaded anionic resin

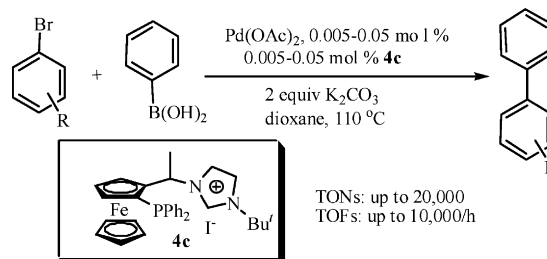
Over the AlPcTS-immobilized resin, the sulfide pollutant highly adsorbs and thus is efficiently oxidized into sulfate under visible light irradiation, with sulfite and thiosulfate as the intermediates. Importantly, the final product of sulfate can be easily desorbed from the solid into solution, which makes the composite catalyst recyclable for the photosensitized oxidation of sulfide.



Ji-Cheng Shi, Peng-Yu Yang, Qingsong Tong, Yang Wu, Yiru Peng

Journal of Molecular Catalysis A: Chemical 259 (2006) 7

Highly efficient and stable palladium/imidazolium salt-phosphine catalysts for Suzuki–Miyaura cross-coupling of aryl bromides

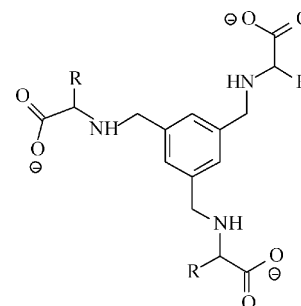


Huakuan Lin, Qiang Liu, Hai Lin

Journal of Molecular Catalysis A: Chemical 259 (2006) 11

Study on kinetics and mechanism of mononuclear rare earth metal complexes in promoting the hydrolysis of *p*-nitrophenyl phosphate (NPP)

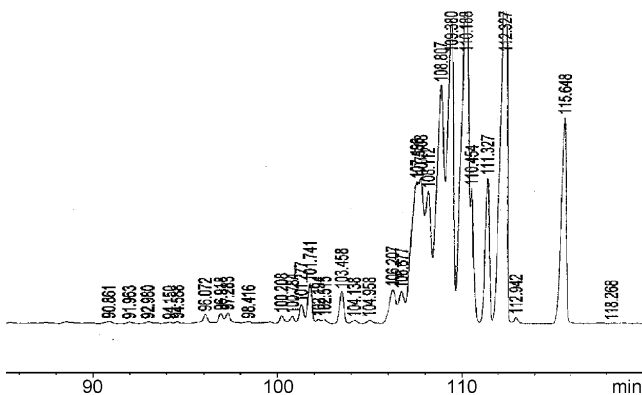
Two novel tripodal ligands, *N,N,N'*-tri-(3'-phenylpropionic acid-2'-yl)-1,3,5-triaminomethylbenzene (L1), *N,N,N'*-tri-(4'-methylvaleric acid-2'-yl)-1,3,5-triaminomethylbenzene (L2) have been synthesized. The hydrolytic kinetics of *p*-nitrophenyl phosphate (NPP) catalyzed by complexes of L1, and L2 with La(III) and Gd(III) have been studied in aqueous solution at 298 K, *I* = 0.10 mol dm⁻³ KNO₃ at pH 6.7–8.2, respectively. This paper expounds the result from the structure of the ligands and the properties of the metal ions, and deduces the catalysis mechanism.



Chuan Jun Yue, Ying Liu, Ren He

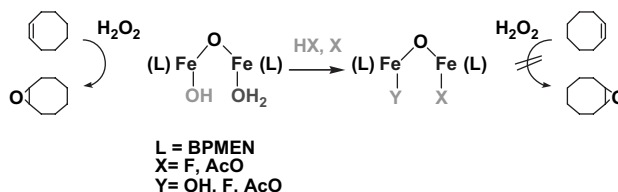
Journal of Molecular Catalysis A: Chemical 259 (2006) 17

Olefins isomerization by hydride-complexes of ruthenium

**Sonia Taktak, Sergey V. Kryatov, Terry E. Haas, Elena V. Rybak-Akimova**

Journal of Molecular Catalysis A: Chemical 259 (2006) 24

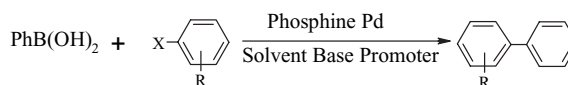
Diiron(III) oxo-bridged complexes with BPMEN and additional monodentate or bidentate ligands: Synthesis and reactivity in olefin epoxidation with H_2O_2

**Mohammad Joshaghani, Elahe Faramarzi, Ezzat Rafiee, Marzieh Daryanavard, Jianliang Xiao, Colin Baillie**

Journal of Molecular Catalysis A: Chemical 259 (2006) 35

Efficient Suzuki cross-coupling reactions using bulky phosphines

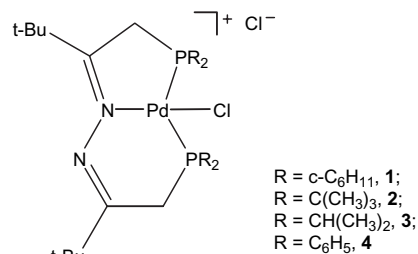
A series of phosphines, $P(\text{biphenyl})_n\text{Ph}_{3-n}$ has been used as co-catalyst in the palladium catalyzed Suzuki cross-coupling reaction of aryl-bromides and -chlorides. High conversions and turnovers were obtained in all studied phosphines.

**J. Včelák, J. Čermák, M. Czakoová, J. Storch**

Journal of Molecular Catalysis A: Chemical 259 (2006) 41

Hydroamination of methyl methacrylate catalyzed by cationic palladium diphosphinoazine complexes

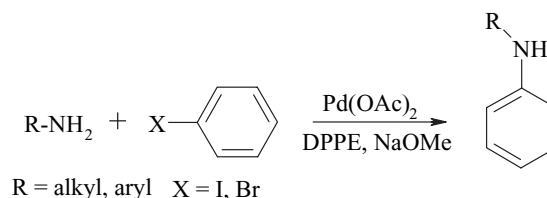
Hydroaminations of methylmethacrylate with pyrrolidine and piperidine were found to proceed without a catalyst under mild conditions. Hydroamination with morpholine catalyzed by cationic palladium diphosphinoazine complexes **1–4** was studied at temperatures 20–80 °C with catalyst loadings 0.1–1.05 mol%.



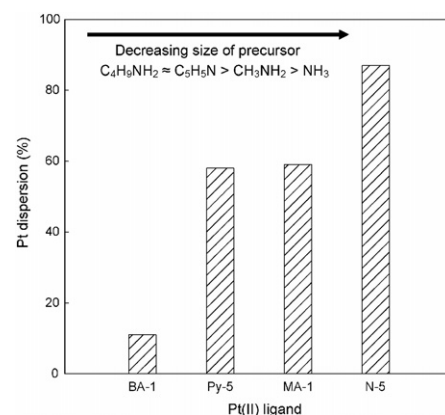
**Mayur J. Bhanushali, Nitin S. Nandurkar,
Malhari D. Bhor, Bhalchandra M. Bhanage**

Journal of Molecular Catalysis A: Chemical 259
(2006) 46

Palladium/1,2-bis(diphenylphosphino) ethane cata-
lysed amination of aryl halides with aliphatic/
aromatic amines



The effects of precursor and calcination procedure on the dispersion of 1.5 wt% alumina-supported Pt catalysts have been investigated. The prepared catalysts were characterized using X-ray diffraction, chemisorption, physisorption, and electron microscopy. Higher dispersions (up to 100%) were obtained with lower heating rates (2 °C/min), and an ammonia precursor. The decomposition of the precursors could be achieved with helium alone.



**Linjie Hu, Kenneth A. Boateng,
Josephine M. Hill**

Journal of Molecular Catalysis A: Chemical 259
(2006) 51

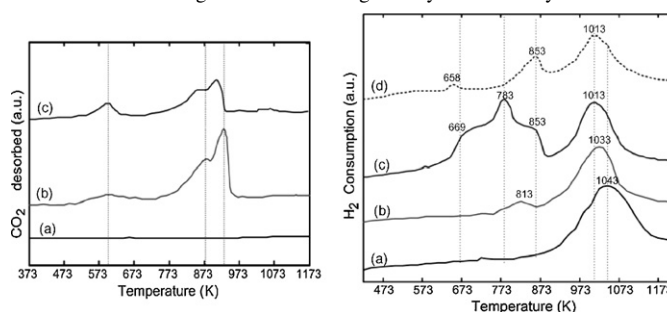
Sol-gel synthesis of Pt/Al₂O₃ catalysts: Effect of Pt
precursor and calcination procedure on Pt disper-
sion

Istadi, Nor Aishah Saidina Amin

Journal of Molecular Catalysis A: Chemical 259
(2006) 61

Synergistic effect of catalyst basicity and reducibil-
ity on performance of ternary CeO₂-based catalyst
for CO₂ OCM to C₂ hydrocarbons

The synergistic effect of catalyst basicity and reducibility are vital in enhancing the CO₂ OCM process. Introduction of CaO and MnO_x on the CeO₂-based catalyst modifies the reducibility and basicity behaviours of catalyst and led to enhancement of methane conversion and yield. The activity is enhanced by the proper amount of medium and strong basic sites and high catalyst reducibility.

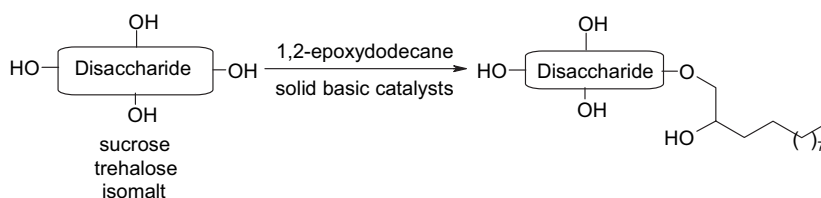


**Nicolas Villandier, Isabelle Adam,
François Jérôme, Joël Barrault, Ronan Pierre,
Alain Bouchu, Juliette Fitremann,
Yves Queneau**

Journal of Molecular Catalysis A: Chemical 259
(2006) 67

Selective synthesis of amphiphilic hydroxyalkylethers
of disaccharides over solid basic catalysts. Influence
of the superficial hydrophilic-lipophilic balance of the
catalyst

In this work, we report the etherification of three disaccharidic polyols, namely sucrose, trehalose and isomalt, with fatty 1,2-epoxydodecane over different solid basic catalysts. We show that the activity of the solid catalysts is closely linked to their superficial hydrophilic-lipophilic properties. The selectivity into monoether derivatives, the reaction regioselectivity as well as the surfactant properties of the newly prepared amphiphilic molecules are discussed.

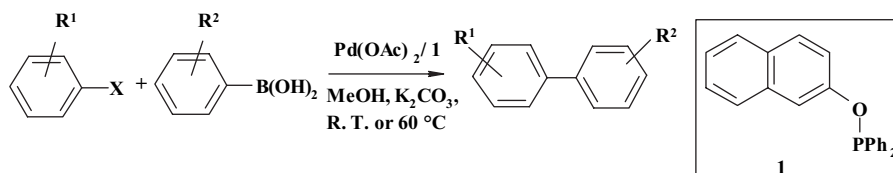


**Benudhar Punji, C. Ganesamoorthy,
Maravanji S. Balakrishna**

Journal of Molecular Catalysis A: Chemical 259
(2006) 78

Suzuki cross-coupling reactions catalyzed by palladium complex of an inexpensive phosphinite, 2-diphenylphosphinoxynaphthyl

The synthesis of monophosphinite **1** and its catalytic application towards the Suzuki cross-coupling reactions is described.

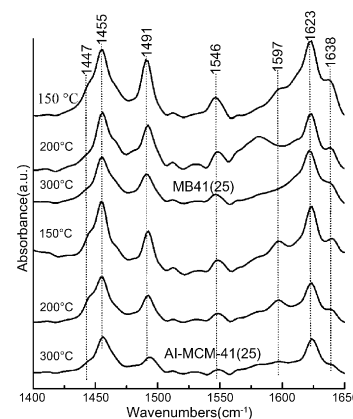


**Jiahui Huang, Lihong Xing, Hongsu Wang,
Gong Li, Shujie Wu, Tonghao Wu, Qiubin Kan**

Journal of Molecular Catalysis A: Chemical 259
(2006) 84

Tertiary butylation of phenol over hexagonal $p6mm$ mesoporous aluminosilicates with enhanced acidity

Enhancedly acidic mesoporous MB41 materials have been prepared by the self-assembly of the pre-formed zeolite Beta precursors under alkaline conditions. In the IR spectra of pyridine adsorption, MB41(25) displays stronger acidity than amorphous Al-MCM-41(25). In the *tert*-butylation reaction of phenol, MB41(25) catalyst shows obviously higher catalytic activity than Al-MCM-41(25).

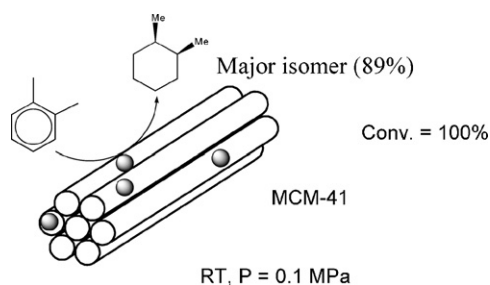


**Maya Boutros, Franck Launay,
Audrey Nowicki, Thomas Onfroy,
Virginie Herledan-Semmer, Alain Roucoux,
Antoine Gédéon**

Journal of Molecular Catalysis A: Chemical 259
(2006) 91

Reduced forms of Rh(III) containing MCM-41 silicas as hydrogenation catalysts for arene derivatives

This work reports on the synthesis of rhodium containing MCM-41 from rhodium(III) chloride and tetraethoxysilane in aqueous ammonia. Subsequent reduction step led to Rh^0 nanoparticles with 25–40% dispersion which are active and stable catalysts for the hydrogenation of arene derivatives under mild pressure and temperature. *Cis/trans* selectivity of dimethylcyclohexanes was discussed in the light of dispersion measurements.

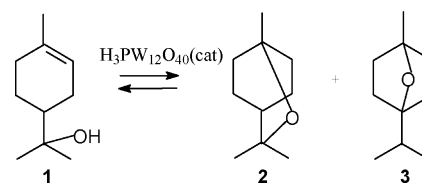


**Enio J. Leão Lana, Kelly A. da Silva Rocha,
Ivan V. Kozhevnikov, Elena V. Gusevskaya**

Journal of Molecular Catalysis A: Chemical 259
(2006) 99

Synthesis of 1,8-cineole and 1,4-cineole by isomerization of α -terpineol catalyzed by heteropoly acid

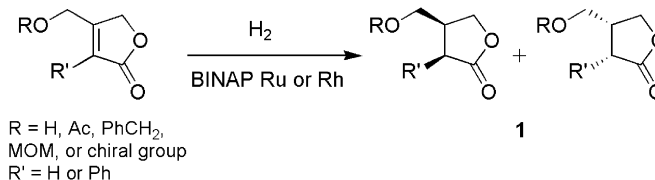
The isomerization of α -terpineol (**1**) catalyzed by dissolved or silica-supported heteropoly acid $H_3PW_{12}O_{40}$ (PW) yields 1,8-cineole (**2**) and 1,4-cineole (**3**), both useful for flavoring and pharmaceutical applications, with a 50–60% combined selectivity. PW showed a higher catalytic activity and selectivity than conventional acid catalysts such as H_2SO_4 and Amberlyst-15.



**Erika Soares Bronze-Uhle,
Mirela Inês de Sairre, Paulo Marcos Donate,
Daniel Frederico**

Journal of Molecular Catalysis A: Chemical 259
(2006) 103

Enantioselective hydrogenation of 4-(hydroxy-
methyl)furan-2(5*H*)-one derivatives

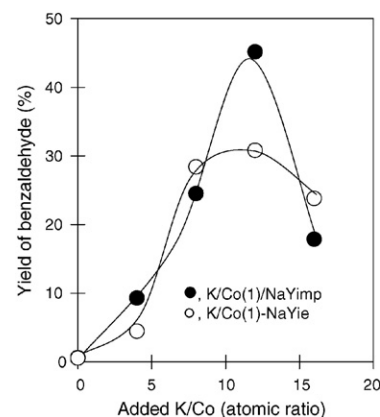


**Daisuke Nakashima, Yuichi Ichihashi,
Satoru Nishiyama, Shigeru Tsuruya**

Journal of Molecular Catalysis A: Chemical 259
(2006) 108

Promoted partial oxidation activity of alkali metal
added-Co catalysts supported on NaY and NaUSY
zeolites in the gas-phase catalytic oxidation of
benzyl alcohol

The formation of benzaldehyde was selectively
promoted by adding alkali metal (potassium) to the
1 wt.% Co impregnated and ion-exchanged NaY
catalysts (K/Cu(1)/NaY_{imp}, K/Cu(1)/NaY_{ie}).

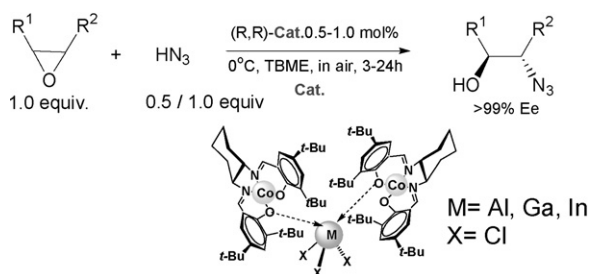


**Shu-Wei Chen, Santosh Singh Thakur, Wenji Li,
Chang-Kyo Shin, Rahul B. Kawthekar,
Geon-Joong Kim**

Journal of Molecular Catalysis A: Chemical 259
(2006) 116

Efficient catalytic synthesis of optically pure 1,2-
azido alcohols through enantioselective epoxide
ring opening with HN₃

Inactive Co(salen) complexes are easily activated by the Lewis acid of group 13 metal chlorides as a result of formation of heterometallic complexes. These complexes show very high catalytic activity for the asymmetric ring opening of epoxides with HN₃.

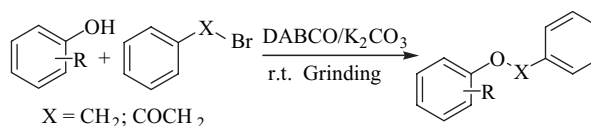


**Xiuli Bu, Huanwang Jing, Li Wang, Tao Chang,
Lili Jin, Yongmin Liang**

Journal of Molecular Catalysis A: Chemical 259
(2006) 121

Organic base catalyzed *O*-alkylation of phenols
under solvent-free condition

Several phenyl ethers were prepared under solvent-free condition at room temperature with good to excellent yields by simply grinding the mixture of relevant phenol, alkyl bromide, anhydrous potassium carbonate and organic base as catalyst in a mortar. This method is easy to handle and provides also a convenient procedure for protecting phenols in organic synthesis.

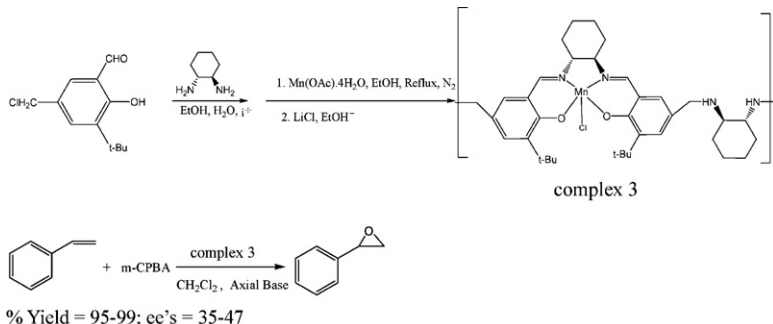


**Rong Tan, Donghong Yin, Ningya Yu,
Liang Tao, Zaihui Fu, Dulin Yin**

Journal of Molecular Catalysis A: Chemical 259 (2006) 125

A novel polymeric chiral salen Mn(III) complex as solvent-regulated phase transfer catalyst in the asymmetric epoxidation of styrene

A novel solvent-regulated phase transfer catalyst of polymeric chiral salen Mn(III) complex **3** was synthesized and used as a catalyst in the asymmetric epoxidation of styrene in the presence of axial base with *m*-CPBA as an oxidant. Excellent yield and high ee value of the epoxide could be obtained.

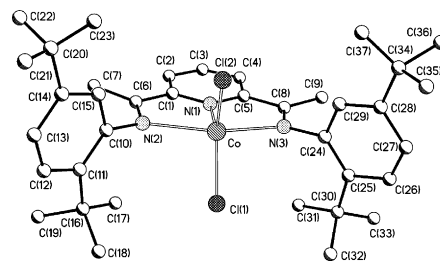


**Jianxin Chen, Yuanbiao Huang, Zhongshui Li,
Zhichun Zhang, Chunxia Wei, Tingyan Lan,
Wenjie Zhang**

Journal of Molecular Catalysis A: Chemical 259 (2006) 133

Syntheses of iron, cobalt, chromium, copper and zinc complexes with bulky bis(imino)pyridyl ligands and their catalytic behaviors in ethylene polymerization and vinyl polymerization of norbornene

The syntheses, characterization and ethylene and norbornene polymerization behaviors of iron, cobalt, chromium, copper, and zinc complexes (**3–7b**) bearing chelating bulky 2,6-bis[1-(2,6-diisopropylphenylimino)ethyl]pyridine ligand (**1**) or 2,6-bis[1-(2,5-ditertbutylphenylimino)ethyl]pyridine ligand (**2**) are reported. And the cobalt complex **4** was characterized by the X-ray diffraction. Except copper and zinc complexes (**6a–7b**), the other complexes (**3–5**) show good activities in ethylene and vinyl norbornene polymerization. It is interested that FeCl₂, CoCl₂(THF)_{1.5} and CrCl₃(THF)₃ can catalyze vinyl polymerization of norbornene activated with MAO and show good activities.

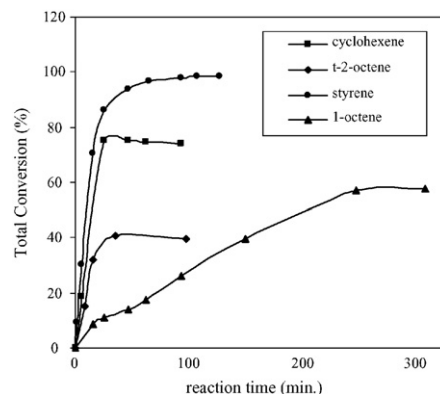


Ibrahim Kani, Filiz Sisman

Journal of Molecular Catalysis A: Chemical 259 (2006) 142

Synthesis and catalytic activity of perfluoroalkylated pyridine–palladium(II) complex toward olefin hydrogenation in scCO₂ and conventional organic solvents

The synthesis and characterization of the scCO₂ soluble complex [Pd(*o*-COOCH₂-(CF₂)₇CF₃-NC₅H₄)₂(OAc)₂] is described. The complex was used as catalyst precursor for the hydrogenation of olefins in scCO₂ and organic solvents. The observed catalytic activity was styrene > cyclohexene > *t*-2-octene > 1-octene.

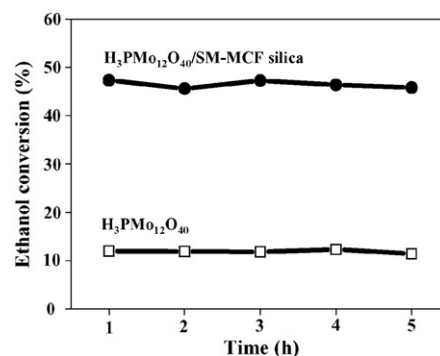


**Heesoo Kim, Ji Chul Jung, Pil Kim,
Sung Ho Yeom, Kwan-Young Lee, In Kyu Song**

Journal of Molecular Catalysis A: Chemical 259 (2006) 150

Preparation of H₃PMo₁₂O₄₀ catalyst immobilized on surface modified mesostructured cellular foam (SM-MCF) silica and its application to the ethanol conversion reaction

By taking advantage of the overall negative charge of [PMo₁₂O₄₀]³⁻, H₃PMo₁₂O₄₀ catalyst was immobilized on the surface modified mesostructured cellular foam (SM-MCF) silica as a charge matching component. The H₃PMo₁₂O₄₀/SM-MCF silica catalyst showed a remarkably enhanced ethanol conversion than the bulk H₃PMo₁₂O₄₀ catalyst.

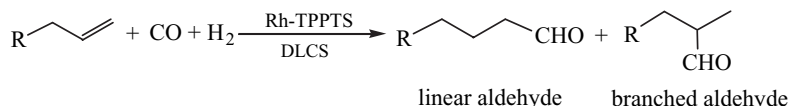


Haiyan Fu, Min Li, Hua Chen, Xianjun Li

Journal of Molecular Catalysis A: Chemical 259 (2006) 156

Higher olefin hydroformylation in organic/aqueous biphasic system accelerated by double long-chain cationic surfactants

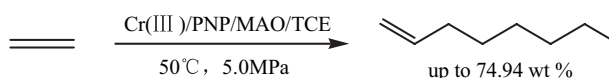
Double long-chain cationic surfactants (DLCS) were used for higher olefin hydroformylation catalyzed by water-soluble rhodium catalyst in the aqueous/organic biphasic system. The reaction rate was greatly accelerated and the TOF (turn over frequency defined as the moles of converted olefin per mole Rh per hour) in 1-dodecene hydroformylation achieved 2291 h^{-1} even without stirring.

**Tao Jiang, Yingnan Ning, Baojun Zhang, Jianzhong Li, Gang Wang, Jianjun Yi, Qiang Huang**

Journal of Molecular Catalysis A: Chemical 259 (2006) 161

Preparation of 1-octene by the selective tetramerization of ethylene

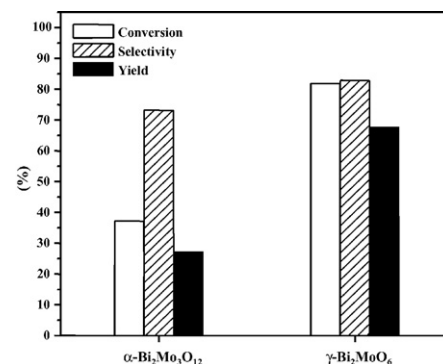
The effects of tetrachloroethane on the catalytic performance in ethylene tetramerization reactions were studied using a homogeneous $[\text{Cr}(\text{acac})_3/\text{diphosphinoamine}(\text{PNP})/\text{methylaluminoxane}(\text{MAO})/\text{tetrachloroethane}]$ catalyst system. The results show that the tetrachloroethane has significant promotion effect to assist chromium center in improving selectivity toward 1-Octene.

**Ji Chul Jung, Heesoo Kim, Ahn Seop Choi, Young-Min Chung, Tae Jin Kim, Seong Jun Lee, Seung-Hoon Oh, In Kyu Song**

Journal of Molecular Catalysis A: Chemical 259 (2006) 166

Preparation, characterization, and catalytic activity of bismuth molybdate catalysts for the oxidative dehydrogenation of *n*-butene into 1,3-butadiene

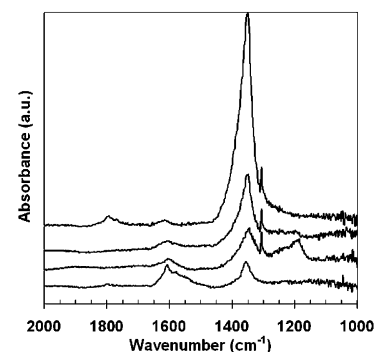
In the oxidative dehydrogenation of *n*-butene into 1,3-butadiene, $\gamma\text{-Bi}_2\text{Mo}_6\text{O}_{12}$ showed a better catalytic performance than $\alpha\text{-Bi}_2\text{Mo}_3\text{O}_{12}$ due to the facile oxygen mobility of $\gamma\text{-Bi}_2\text{Mo}_6\text{O}_{12}$.

**Nuray Oktar, Junko Mitome, Erik M. Holmgren, Umit S. Ozkan**

Journal of Molecular Catalysis A: Chemical 259 (2006) 171

Catalytic reduction of N_2O and NO_2 with methane over sol-gel palladium-based catalysts

Pd/TiO_2 and Gd-doped Pd/TiO_2 prepared through a 'one-pot' sol-gel method are shown to be active for the reduction of both N_2O and NO_2 using CH_4 as a reducing agent under excess O_2 conditions. In the figure presented here surface species formed during the sequential introduction of NO_2 , CH_4 , O_2 are monitored through DRIFTS. These results provide evidence of a CH_4 -nitrate interaction during the reduction of NO_2 . These catalysts are quite active and selective to N_2 .

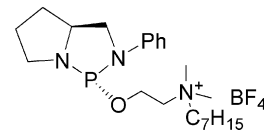


**Sergey E. Lyubimov, Vadim A. Davankov,
Marina G. Maksimova, Pavel V. Petrovskii,
Konstantin N. Gavrilov**

Journal of Molecular Catalysis A: Chemical 259
(2006) 183

Chiral cationic diamidophosphite: Novel effective ligand for Pd-catalysed enantioselective allylic substitution

Novel diamidophosphite ligand bearing alkylammonium fragment was prepared by a one-step phosphorylation of a quaternised aminoalcohol. The ionic ligand demonstrated high enantioselectivity in the Pd-catalysed allylic substitution of 1,3-diphenylallyl acetate (up to 99% ee)

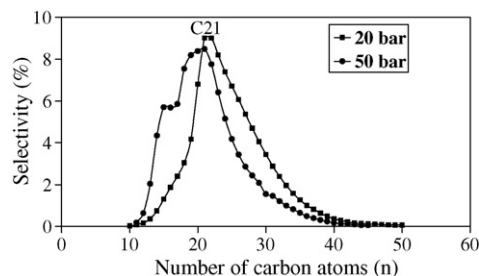


**A. Griboval-Constant, J.-M. Giraudon,
I. Twagishema, G. Leclercq, M.E. Rivas,
J. Alvarez, M.J. Pérez-Zurita, M.R. Goldwasser**

Journal of Molecular Catalysis A: Chemical 259
(2006) 187

Characterization of new Co and Ru on α -WC catalysts for Fischer-Tropsch reaction. Influence of the carbide surface state

An investigation of the performances in Fischer-Tropsch reaction at 473 K and 20 bar of 1 wt% Co and Ru dispersed on bulk α -WC covered either with polymeric carbon layers (WC(A)) or oxygen species (WC(B)) was carried out. Among the different catalysts, Ru/WC(A) combines the highest activity and production of heavy hydrocarbons. Such behaviour is likely due to a better stable dispersion of ruthenium on the carbon polymeric surface of α -WC.

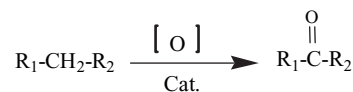


Hamid R. Mardani, Hamid Golchoubian

Journal of Molecular Catalysis A: Chemical 259
(2006) 197

Selective and efficient C–H oxidation of alkanes with hydrogen peroxide catalyzed by a manganese(III) Schiff base complex

A variety of hydrocarbons were efficiently oxidized to the corresponding carbonyl compounds in good yields at the ambient temperature with a Schiff base Mn(III) complex as catalyst in the presence of 30% hydrogen peroxide. The oxidation took place selectively at the benzylic C–H bond through a Mn(V)-oxo intermediate.

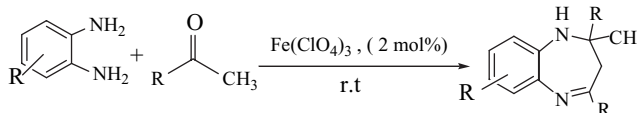


**Majid M. Heravi, Vahideh Zadsirjan,
Farahnaz K. Behbahani, Hossien A. Oskooie**

Journal of Molecular Catalysis A: Chemical 259
(2006) 201

Catalytic synthesis of 2,3-dihydro-1H-1,5-benzodiazepines by ferric perchlorate

2,3-Dihydro-1H-1,5-benzodiazepines are synthesized by the condensation of *o*-phenyldiamine and various ketones in the presence of $Fe(ClO_4)_3$ under solventless conditions.

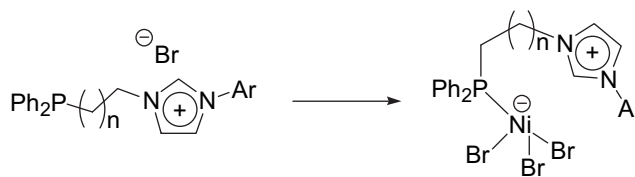


Joffrey Wolf, Agnès Labande, Michael Natella, Jean-Claude Daran, Rinaldo Poli

Journal of Molecular Catalysis A: Chemical 259 (2006) 205

Aryl Grignard cross-coupling of aryl chlorides catalysed by new, highly active phosphine/imidazolium nickel(II) complexes

Three zwitterionic nickel(II) complexes, bearing phosphine/imidazolium ligands, have been prepared and characterised. Their catalytic activity has been evaluated with a range of aryl chlorides and arylmagnesium halides. They have shown moderate to very high activities with most substrates, and very good selectivities in favour of the heterocoupling products.



Ar = 2,4,6-Me₃C₆H₂ or 2,6-*i*-Pr₂C₆H₃

n = 1 or 2

Majid M. Heravi, Fatemeh F. Bamoharram, Ghadir Rajabzadeh, Nasim Seifi, Mola Khatami

Journal of Molecular Catalysis A: Chemical 259 (2006) 213

Preyssler heteropolyacid [NaP₅W₃₀O₁₁₀]¹⁴⁻, as a new, green and recyclable catalyst for the synthesis of [1,2,4]triazino[4,3-b][1,2,4,5]tetrazines

Preyssler solid catalyst [NaP₅W₃₀O₁₁₀]¹⁴⁻ have been proved to be efficient homogeneous and heterogeneous catalyst for the cyclocondensation reaction of 4-AHMT with orthoesters. The results have been compared with sulfuric acid, HY-zeolite and H₃[PW₁₂O₄₀]. Solid acid: H₁₄[NaP₅W₃₀O₁₁₀], H₃[PW₁₂O₄₀], H₁₄[NaP₅W₃₀O₁₁₀]/SiO₂, H₃[PW₁₂O₄₀]/SiO₂.



1

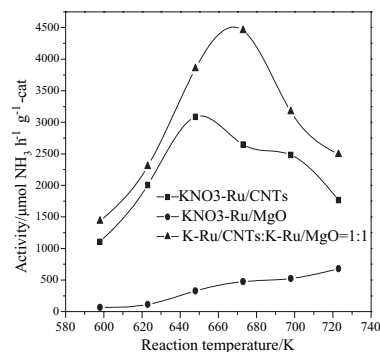
2a ; R=H
b:R=CH₃

Qing-Chi Xu, Jing-Dong Lin, Jun Li, Xian-Zhu Fu, Zhen-Wei Yang, Wei-Ming Guo, Dai-Wei Liao

Journal of Molecular Catalysis A: Chemical 259 (2006) 218

Combination and interaction of ammonia synthesis ruthenium catalysts

A novel combination-type ruthenium catalyst has been developed, in which two catalysts, K-Ru/MgO and K-Ru/CNTs, are combined with weight ratio of 1/1. The highest activity of the combination-type catalyst, K-Ru/CNTs + K-Ru/MgO, reaches 4453 μmol NH₃ h⁻¹ g⁻¹ cat at 673 K under 0.2 MPa, which is two times higher than the average activity of the two catalysts.

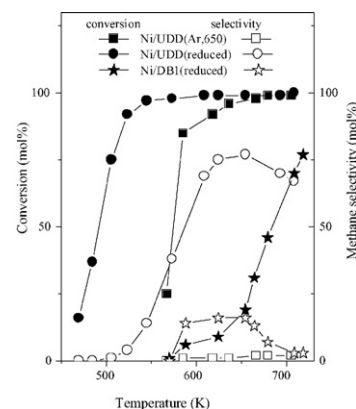


Tanya Tsoncheva, Veselina Mavrodinova, Ljubomira Ivanova, Momtchil Dimitrov, Stavry Stavrev, Christo Minchev

Journal of Molecular Catalysis A: Chemical 259 (2006) 223

Nickel modified ultrananosized diamonds and their application as catalysts in methanol decomposition

Methanol decomposition to hydrogen, carbon monoxide and methane on nickel modified shock-wave synthesized ultrananosized diamond materials could be successfully regulated by the support carbon phase composition and the pretreatment procedures.

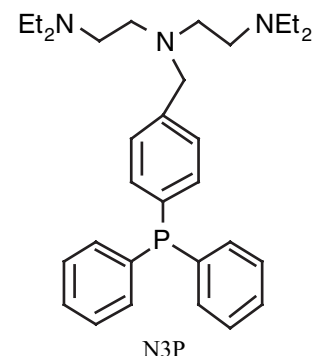


**Magnus Karlsson, Adriana Ionescu,
Carlaxel Andersson**

Journal of Molecular Catalysis A: Chemical 259 (2006) 231

Hydrocarboxylation of olefins using an amphiphilic palladium catalyst, activity and recycling properties. NMR identification of some reaction intermediates

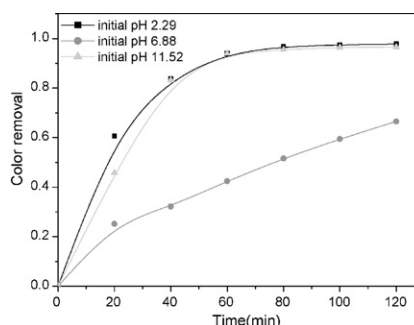
The aqueous phase hydrocarboxylation of styrene, 1-octene and 4-pentenoic acid using a palladium catalyst with the amphiphilic phosphine N3P as ligand, demonstrates that the reaction rate is strongly dependent on the solubility of the substrates. The catalyst employing N3P also shows an inverted regioselectivity compared to the TPPTS system. Due to N3P amphiphilic character, it is possible to recycle the catalyst, both by extracting the substrate and by extracting the catalyst into an organic solvent. Employing the water-soluble 3-buten-1-ol as substrate, several reaction intermediates were identified by means of NMR and IR.



**Guoting Li, Jiuhui Qu, Xiwang Zhang,
Huijuan Liu, Haining Liu**

Journal of Molecular Catalysis A: Chemical 259 (2006) 238

Electrochemically assisted photocatalytic degradation of Orange II: Influence of initial pH values

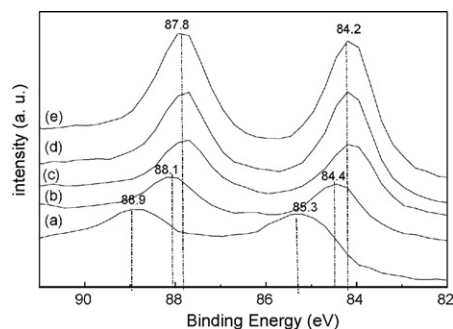


**Shurong Wang, Jing Huang, Yingqiang Zhao,
Shuping Wang, Xiaoying Wang, Tongying Zhang,
Shihua Wu, Shoumin Zhang, Weiping Huang**

Journal of Molecular Catalysis A: Chemical 259 (2006) 245

Preparation, characterization and catalytic behavior of SnO₂ supported Au catalysts for low-temperature CO oxidation

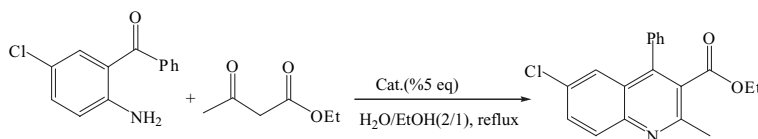
SnO₂ nano-crystals were synthesized by a precipitation process and then used as the support for Au/SnO₂ catalysts preparation via a deposition-precipitation method. The influence of calcination temperature of SnO₂ support, calcination temperature of Au/SnO₂ catalysts and Au loading on the catalytic activity of Au/SnO₂ catalysts was investigated. The SnO₂ samples calcined at 573 and 673 K were found to be the suitable support materials for Au/SnO₂ catalysts. In all investigated Au/SnO₂ catalysts, the catalytic activity of the catalyst with 2.86 wt.% Au loading was the highest. The optimum calcination temperature of the Au/SnO₂ catalysts was 473 K. According to XRD, HRTEM and XPS, the catalytic activity of the Au/SnO₂ catalysts was related to the particle size of gold and tin oxide support, the fraction of metallic state Au and the degree of crystallinity of tin dioxide support.



**Mohammad Ali Zolfigol, Peyman Salehi,
Arash Ghaderi, Morteza Shiri,
Zahra Tanbakouchian**

Journal of Molecular Catalysis A: Chemical 259 (2006) 253

An eco-friendly procedure for the synthesis of polysubstituted quinolines under aqueous media

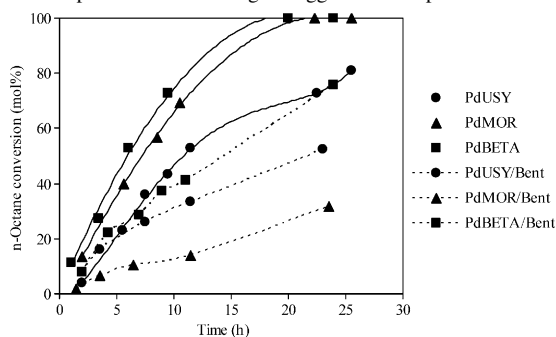


A. De Lucas, P. Sánchez, A. Fúnez, M.J. Ramos, J.L. Valverde

Journal of Molecular Catalysis A: Chemical 259 (2006) 259

Influence of clay binder on the liquid phase hydroisomerization of *n*-octane over palladium-containing zeolite catalysts

The presence of the binder decreased the catalytic performance of all the catalysts because of the decrease of the number of strong acid sites and the possible partial blocking of the micropore mouths of the zeolites by the binder and the EFAL species created during the agglomeration process.

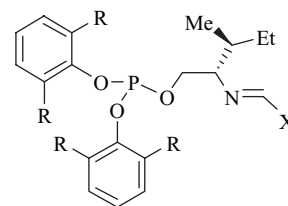


K.N. Gavrilov, V.N. Tsarev, M.G. Maksimova, O.G. Bondarev, E.A. Rastorguev, S.E. Lyubimov, P.V. Petrovskii, V.A. Davankov

Journal of Molecular Catalysis A: Chemical 259 (2006) 267

Iminoarylphosphites with ferrocenylidene and cymantrenylidene fragments: Coordination properties and use in palladium-catalysed asymmetric allylic substitution

New chiral *P,N*-bidentate ferrocene- and cymantrene-based iminoarylphosphites were synthesised and their complexation with the Rh(I), Pd(II) and Pt(II) atoms investigated. The new ligands gave up to 97% ee in the enantioselective Pd-catalysed allylic alkylation and up to 96% ee in the Pd-catalysed allylic amination of 1,3-diphenyl-2-propenyl acetate.



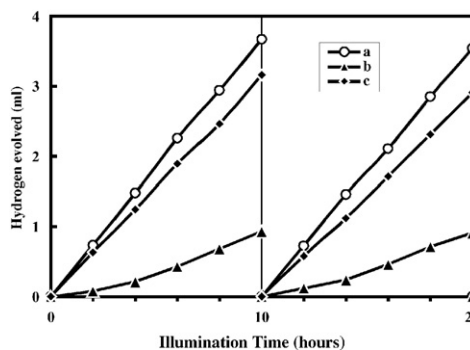
- 3a:** R = Me, X = Fc
3b: R = Me, X = Cym
3c: R = Prⁱ, X = Fc

Zhiliang Jin, Xiaojie Zhang, Gongxuan Lu, Shuben Li

Journal of Molecular Catalysis A: Chemical 259 (2006) 275

Improved quantum yield for photocatalytic hydrogen generation under visible light irradiation over eosin sensitized TiO₂—Investigation of different noble metal loading

Hydrogen evolution from 15% (v/v) DEA–H₂O solution under visible light ($\lambda > 420$ nm) irradiation over (a) 1.0 wt.% Eo-Rh/TiO₂; (b) 1.0 wt.% Eo-Pt/TiO₂ and (c) 1.0 wt.% Eo-Ru/TiO₂ photocatalysts.

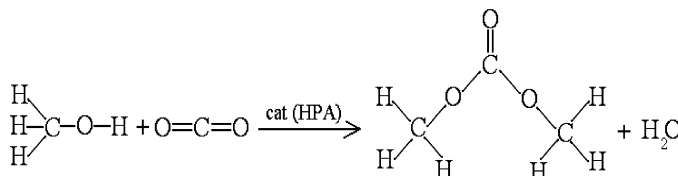


L.A. Allaoui, A. Aouissi

Journal of Molecular Catalysis A: Chemical 259 (2006) 281

Effect of the Brønsted acidity on the behavior of CO₂ methanol reaction

Several studies have demonstrated that the DMC can be obtained by the reaction of methanol with carbon dioxide: The influence of Brønsted-acid sites on the behaviour of this reaction was investigated using Keggin-type heteropolyanions (HPA) as catalysts.

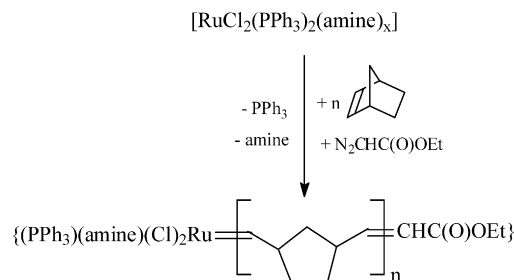


José Milton E. Matos, Benedito S. Lima-Neto

Journal of Molecular Catalysis A: Chemical 259 (2006) 286

Acyclic amines as ancillary ligands in Ru-based catalysts for ring-opening metathesis polymerization. Probing the electronic and steric aspects of cyclic and acyclic amines

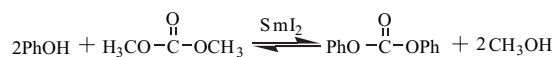
The role of amines as ancillary ligands are discussed in the ROMP of norbornene with $[\text{RuCl}_2(\text{PPh}_3)_2(\text{amine})_x]$, where $x = 1$ or 2 , at room temperature or 50°C for 5 min.

**Hongying Niu, Haiming Guo, Jie Yao, Yue Wang, Gongying Wang**

Journal of Molecular Catalysis A: Chemical 259 (2006) 292

Transesterification of dimethyl carbonate and phenol to diphenyl carbonate catalyzed by samarium diiodide

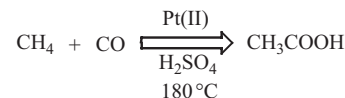
Samarium diiodide was found to be a novel and efficient catalyst for the synthesis of DPC by transesterification of phenol and DMC. Compared with other catalysts, samarium diiodide can reach high activity with a very low catalyst amount (0.2 mol%) and can enhance the conversion of phenol greatly.

**Mark Zerella, Alexis T. Bell**

Journal of Molecular Catalysis A: Chemical 259 (2006) 296

Pt-catalyzed oxidative carbonylation of methane to acetic acid in sulfuric acid

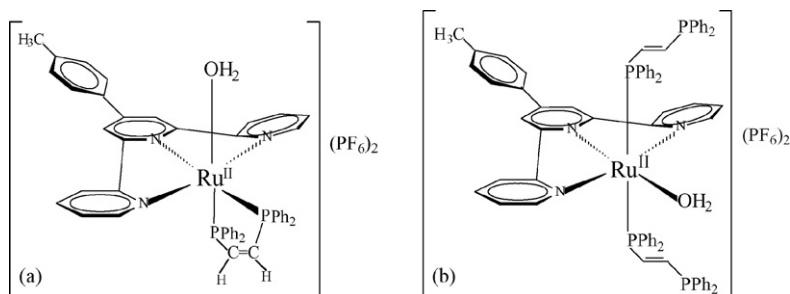
Pt(II) catalyzes the oxidative carbonylation of methane to acetic acid. Methyl bisulfate is an intermediate that CO carbonylates to produce acetic acid. CO also reduces the active catalyst from Pt(II) to Pt(0). Catalytic activity can be increased by promoting re-oxidation using a co-catalyst and O_2 .

**Eliana M. Sussuchi, Andréia A. de Lima, Wagner F. De Giovanni**

Journal of Molecular Catalysis A: Chemical 259 (2006) 302

Effect of the *cis*- and *trans*-[1,2-bis(diphenylphosphino)ethylene] ligands in the properties of diphosphine–polypyridyl complexes of ruthenium(II). Application to electrocatalytic oxidations of organic compounds

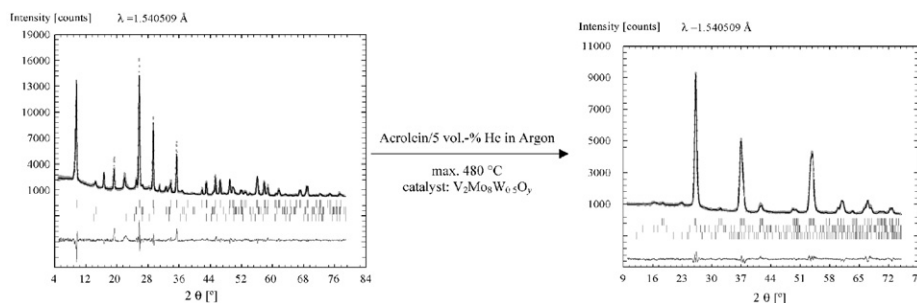
The ruthenium(II) complexes $[\text{Ru}(\text{cis-L})(\text{totpy})(\text{H}_2\text{O})](\text{PF}_6)_2$ (**a**) and $[\text{Ru}(\text{trans-L})_2(\text{totpy})(\text{H}_2\text{O})](\text{PF}_6)_2$ (**b**) ($\text{L} = 1,2$ -bis(diphenylphosphino)ethylene; $\text{totpy} = 4'$ -(4-tolyl)-2,2':6',2''-terpyridine) were synthesized. They were used, in solution and immobilized in carbon paste electrode, as catalysts in electrocatalytic oxidations of benzyl alcohol, cyclohexanol, 1-pentanol, 1,2-butanediol, 1,4-butanediol and cyclohexene.



**Lars Giebeler, Philip Kampe, Andreas Wirth,
Andreas H. Adams, Jan Kunert,
Hartmut Fuess, Herbert Vogel**

Journal of Molecular Catalysis A: Chemical 259
(2006) 309

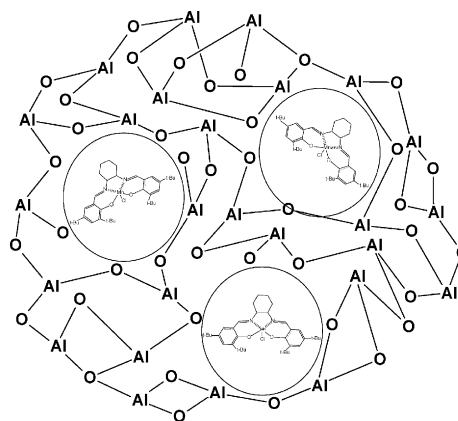
Structural changes of vanadium–molybdenum–tungsten mixed oxide catalysts during the selective oxidation of acrolein to acrylic acid



**Tatiana C.O. Mac Leod, Debora F.C. Guedes,
Marina R. Lelo, Rafael A. Rocha,
Bruno L. Caetano, Katia J. Ciuffi,
Marilda D. Assis**

Journal of Molecular Catalysis A: Chemical 259
(2006) 319

Catalytic activity of Jacobsen catalyst encapsulated in an alumina matrix by the sol–gel process



**Rusiene M. de Almeida, Humberto V. Fajardo,
Daniela Z. Mezalira, Giselle B. Nuernberg,
Lúcia K. Noda, Luiz F.D. Probst,
Nefalí L.V. Carreño**

Journal of Molecular Catalysis A: Chemical 259
(2006) 328

Preparation and evaluation of porous nickel-alumina spheres as catalyst in the production of hydrogen from decomposition of methane

This paper presents the synthesis of Al_2O_3 and Ni-doped Al_2O_3 spherical catalysts. The catalytic activity of the materials obtained was evaluated in the catalytic decomposition of methane. The catalysts were shown to be active and stable in relation to the catalytic decomposition of the methane reaction. After the catalytic tests, characterization of the deposited carbon was carried out and the analyses indicated the presence of single-walled nanotubes and multiwalled nanotubes. It was observed that the catalytic behaviour and the form of carbon produced depend on the characteristics of the sites present on the catalyst surface and on the operational conditions employed.

