

## Contents

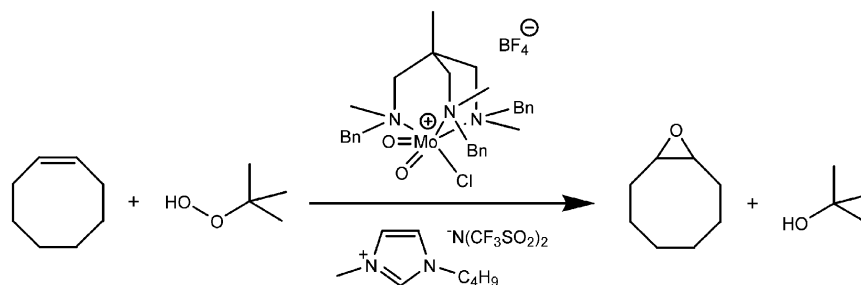
### Articles

**Anabela A. Valente, Željko Petrovski,  
Luís C. Branco, Carlos A.M. Afonso,  
Martyn Pillinger, André D. Lopes,  
Carlos C. Romão, Carla D. Nunes,  
Isabel S. Gonçalves**

*Journal of Molecular Catalysis A: Chemical 218  
(2004) 5*

Epoxydation of cyclooctene catalyzed by dioxo-  
molybdenum(VI) complexes in ionic liquids

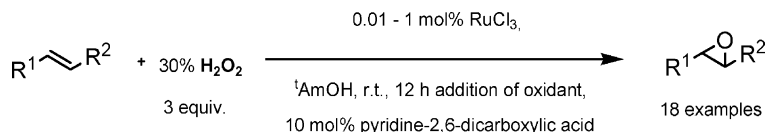
A series of room temperature ionic liquids (RTILs) were examined as solvents for dioxomolybdenum(VI) complexes in the catalytic epoxydation of *cis*-cyclooctene, using *tert*-butyl hydroperoxide (TBHP) as the oxidant. The best results in terms of catalyst/solvent recycling were obtained using a novel cationic Mo<sup>VI</sup> complex combined with the ionic liquid 1-*n*-butyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide ([BMIM]NTf<sub>2</sub>).



**Markus Klawonn, Man Kin Tse, Santosh Bhor,  
Christian Döbler, Matthias Beller**

*Journal of Molecular Catalysis A: Chemical 218  
(2004) 13*

A convenient ruthenium-catalyzed alkene epoxy-  
dation with hydrogen peroxide as oxidant

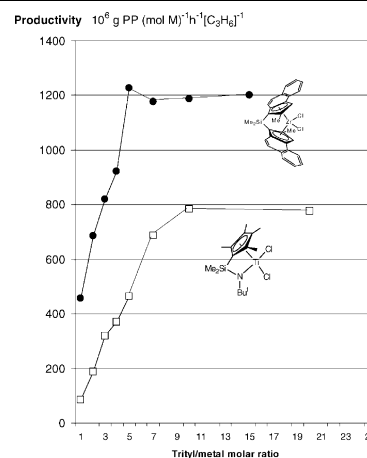


**Fuquan Song, Roderick D. Cannon,  
Simon J. Lancaster, Manfred Bochmann**

*Journal of Molecular Catalysis A: Chemical 218  
(2004) 21*

Activator effects in metallocene-based alkene  
polymerisations: unexpectedly strong dependence  
of catalyst activity on trityl concentration

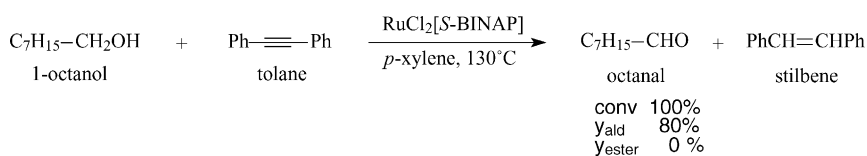
The activities of some—but not all—propene  
polymerisation catalysts L<sub>2</sub>ZrCl<sub>2</sub>/TIBA/  
CPh<sub>3</sub><sup>+</sup>B(C<sub>6</sub>F<sub>5</sub>)<sub>4</sub><sup>-</sup> increase sharply with the trityl  
salt concentration, up to an optimum [CPh<sub>3</sub><sup>+</sup>]/  
[metal] ratio. In the case of “constrained-geome-  
try” titanium catalysts activity can increase by one  
order of magnitude.



**R.H. Meijer, G.B.W.L. Ligthart, J. Meuldijk,  
J.A.J.M. Vekemans, L.A. Hulshof**

*Journal of Molecular Catalysis A: Chemical* 218  
(2004) 29

RuCl<sub>2</sub>[S-BINAP]-catalyzed synthesis of aldehydes and ketones by dehydrogenation of alcohols

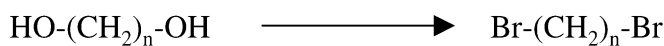


**Hoang-Phuong Nguyen, Plamen Kirilov,  
Hubert Matondo, Michel Baboulène**

*Journal of Molecular Catalysis A: Chemical* 218  
(2004) 41

The reusable couple “PTSA/1-alkyl-3-methylimidazolium ionic liquids”: excellent reagents–catalysts for halogenation of fatty diols

The conversion of 1,ω-dialcohols (C<sub>6</sub>–C<sub>16</sub>) to dihalides—dibromides and diiodides—was successfully obtained in the couple “PTSA/1-alkyl-3-methylimidazolium ionic liquids” (OMIM/X, BMIM/X; *i*-PMIM/X) for 2 h at 110 °C. The dihalogenation was improved by use of microwave irradiation. The couple “PTSA-ionic liquid” was regenerated and reused.



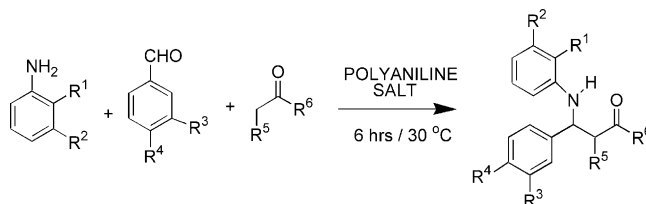
Conditions: IL, PTSA, 2h, 110°C or IL, PTSA, # 2min, microwave irradiation

**Srinivasan Palaniappan, Amalraj John,  
Chellachamy Anbalagan Amarnath,  
Vaidya Jayathirtha Rao**

*Journal of Molecular Catalysis A: Chemical* 218  
(2004) 47

Mannich-type reaction in solvent free condition using reusable polyaniline catalyst

Polyaniline salts are prepared by doping of polyaniline base with different Bronsted acids (H<sub>2</sub>SO<sub>4</sub>, HCl, HClO<sub>4</sub>, and HBF<sub>4</sub>) and organic acid [*p*-toluene sulphonic acid (PTSA) and 5-sulfosalicylic acid (SSA)]. Polyaniline complexes are also prepared using Lewis acids (ZnI<sub>2</sub> and FeCl<sub>3</sub>). Polyaniline salts and polyaniline complexes are characterized by physical, electrical and spectral methods. Polyaniline salts and polyaniline complexes are used as catalyst for the Mannich-type reaction under solvent free condition. β-Amino carbonyl compounds obtained in high yields with simple and more environmental benign procedure. The use of polyaniline catalysts are feasible because of their easy preparation, easy handling, stability, easy recovery, reusability, good activity and eco-friendly.

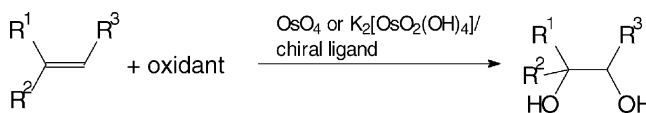


**A. Köckritz, M. Bartoszek, C. Döbler, M. Beller,  
W. Mägerlein, H.-C. Militzer**

*Journal of Molecular Catalysis A: Chemical* 218  
(2004) 55

Development of protocols for the separation of Os catalysts from organic products in the catalytic dihydroxylation of olefins

Different approaches were described to achieve separation of osmium species from products in the asymmetric dihydroxylation (AD). The retention of osmium succeeded applying chitin or a cationic polyelectrolyte as support. The best and most simple solution was discovered in the method of homogeneous catalysis/heterogeneous separation of products and the reuse of the aqueous catalyst phase.

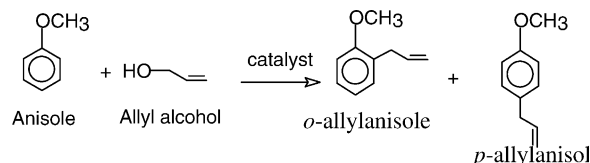


**G.V. Shanbhag, B.M. Devassy, S.B. Halligudi**

*Journal of Molecular Catalysis A: Chemical* 218 (2004) 67

Liquid phase allylation of anisole using TPA/ZrO<sub>2</sub> catalyst

The allylation of anisole by allyl alcohol was investigated in liquid phase using TPA/ZrO<sub>2</sub> catalyst. The catalytic activity has been compared with different zeolites. Under optimized conditions conversion of anisole was 26% with 86% allylated product selectivity.

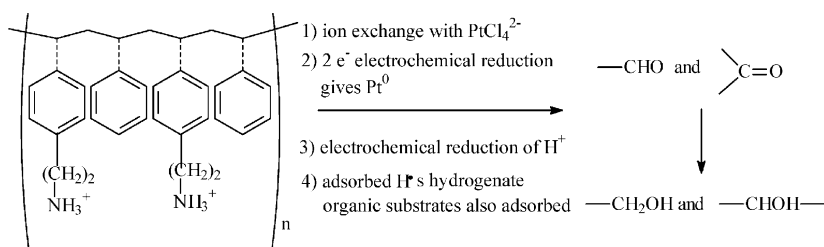


**R.C.Z. Lofrano, J.M. Madurro, L.M. Abrantes, J.R. Romero**

*Journal of Molecular Catalysis A: Chemical* 218 (2004) 73

Electrocatalytic hydrogenation of carboxylic compounds using an electrode with platinum particles dispersed in films of poly-[allyl ether *p*-(2-aminoethyl) phenol] and poly-(allyl phenyl ether) co-polymerized with allyl phenyl ether

A 0.6 V versus SCE was applied in a cell with a carbon vitreous electrode containing Pt particles dispersed in a film of poly-[allyl ether *p*-(2-aminoethyl) phenol] and poly-(allyl phenyl ether) co-polymerized, to reduce H<sup>+</sup> to H<sup>•</sup> from a H<sub>2</sub>SO<sub>4</sub> solution. Aromatic or aliphatic aldehydes and ketones, saturated or unsaturated, were reduced in good yields to alcohols and saturated ketones, respectively.



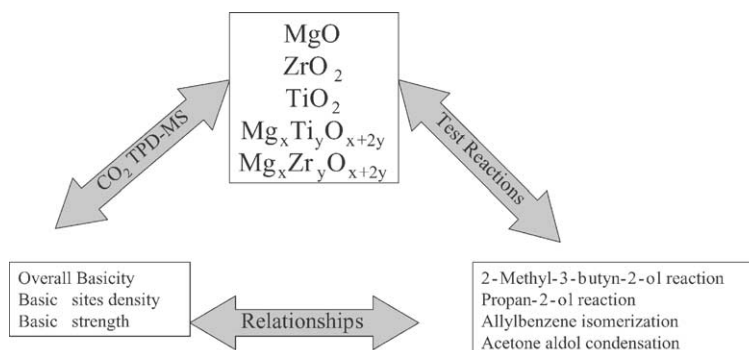
film of poly-[allyl ether *p*-(2-aminoethyl) phenol] and poly-(allyl phenyl ether) co-polymerized

**María A. Aramendía, Victoriano Borau, César Jiménez, Alberto Marinas, José M. Marinas, José R. Ruiz, Francisco J. Urbano**

*Journal of Molecular Catalysis A: Chemical* 218 (2004) 81

Magnesium-containing mixed oxides as basic catalysts: base characterization by carbon dioxide TPD-MS and test reactions

A set of magnesium containing catalysts has been prepared. The basic sites density was determined for all solids from TPD-MS of CO<sub>2</sub>. Four test reactions were also applied and the results compared.

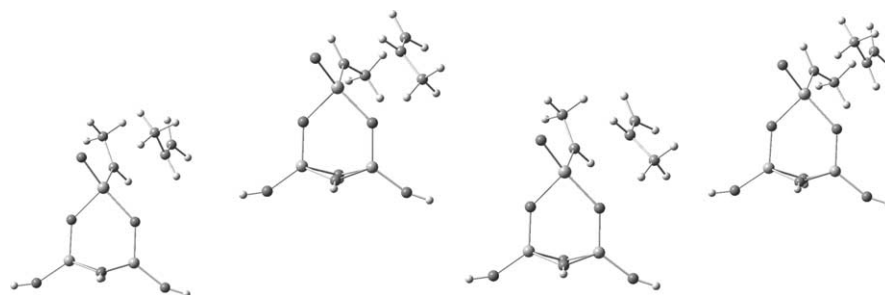


**Jarosław Handzlik**

*Journal of Molecular Catalysis A: Chemical* 218 (2004) 91

Degenerate propene metathesis on Mo-alkylidene centres of molybdena-alumina catalyst—a DFT study

Degenerate propene metathesis proceeding on Mo-alkylidene centres situated on alumina was investigated with the B3LYP functional. It was concluded that on the Mo-ethylidene sites the degenerate metathesis is preferred over the productive one. The population of the Mo-ethylidene centres is higher than in the case of the Mo-methylidene ones and the formers are the predominant chain carriers.

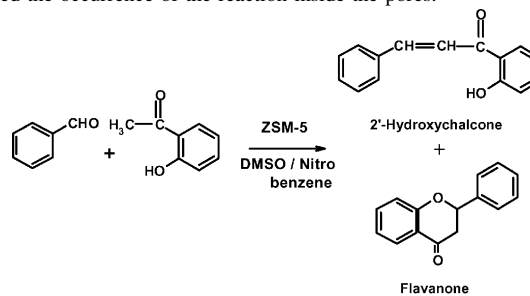


**S. Saravanamurugan, M. Palanichamy,  
Banumathi Arabindoo, V. Murugesan**

*Journal of Molecular Catalysis A: Chemical* 218  
(2004) 101

Liquid phase reaction of 2'-hydroxyacetophenone  
and benzaldehyde over ZSM-5 catalysts

The Claisen–Schmidt condensation of benzaldehyde with 2'-hydroxyacetophenone to flavanone was studied over H-ZSM-5, Mg-ZSM-5 and Ba-ZSM-5 catalysts. Dimethyl sulphoxide and nitrobenzene were used as solvents. The reaction proceeded through 2'-hydroxychalcone intermediate. The activity of the catalysts followed the order Mg-ZSM-5 > Ba-ZSM-5 > H-ZSM-5. The catalytic study with passivated Ba-ZSM-5 confirmed the occurrence of the reaction inside the pores.



**Xiangping Hu, Changmin Bai, Huicong Dai,  
Huilin Chen, Zhuo Zheng**

*Journal of Molecular Catalysis A: Chemical* 218  
(2004) 107

Chiral ferrocene-based phosphine-imine and sul-  
fur-imine ligands for palladium-catalyzed asym-  
metric allylic alkylation of cycloalkenyl esters

