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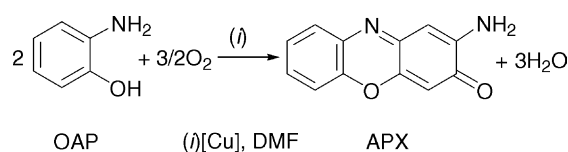
Articles

Tamás Horváth, József Kaizer, Gábor Speier

Journal of Molecular Catalysis A: Chemical 215 (2004) 9

Functional phenoxazinone synthase models. Kinetic studies on the copper-catalyzed oxygenation of 2-aminophenol

2-Aminophenol readily undergoes highly selective Cu-catalyzed oxygenation to 2-aminophenoxazine-3-one.

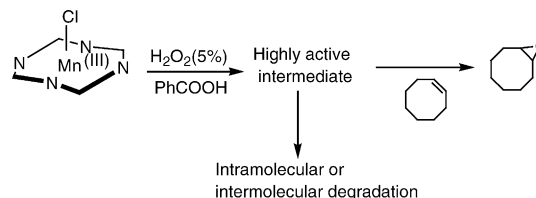


**A.C. Serra, E.C. Marçalo,
A.M.d'A. Rocha Gonsalves**

Journal of Molecular Catalysis A: Chemical 214 (2004) 17

A view on the mechanism of metalloporphyrin degradation in hydrogen peroxide epoxidation reactions

The competition between an intramolecular and an intermolecular mechanism of the catalyst degradation in hydrogen peroxide oxidations is clarified.

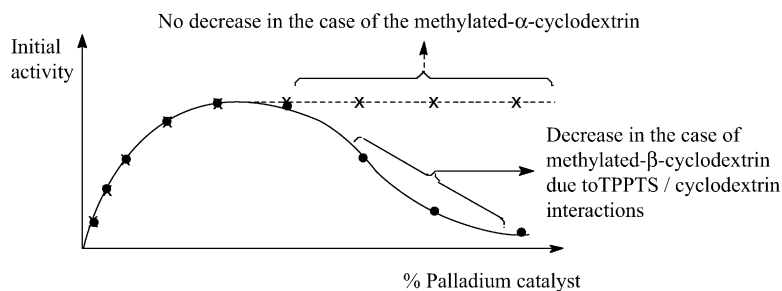


**Cécile Binkowski, Jérôme Cabou,
Hervé Bricout, Frédéric Hapiot, Eric Monflier**

Journal of Molecular Catalysis A: Chemical 215 (2004) 23

Cleavage of water-insoluble alkylallylcarbonates catalysed by a palladium/TPPTS/cyclodextrin system: effect of phosphine/cyclodextrin interactions on the reaction rate

Effect of TPPTS / methylated cyclodextrin interactions on the cleavage rate of allylic substrates as a function of catalyst concentration:

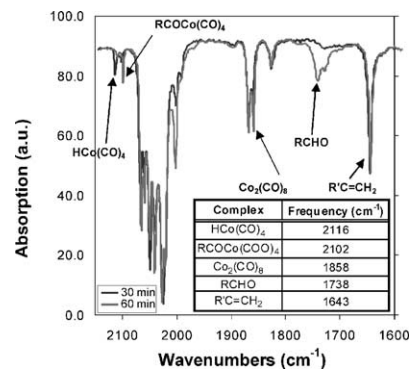


Rina Tannenbaum, György Bor

Journal of Molecular Catalysis A: Chemical 215 (2004) 33

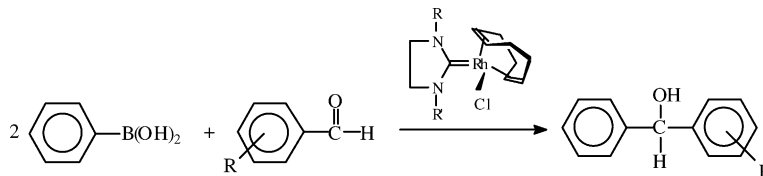
Re-evaluation of the mechanism of the stoichiometric hydroformylation of olefins with cobalt carbonyls as catalysts

Two types of stoichiometric hydroformylation reactions have been described in the literature, and have been assumed to proceed via similar mechanisms. Using a high pressure-high temperature infrared throughput cell, we have examined the similarities and discrepancies between the two systems, and offer a new approach to the understanding of these reactions.

**Ismail Özdemir, Serpil Demir, Bekir Çetinkaya**

Journal of Molecular Catalysis A: Chemical 215 (2004) 45

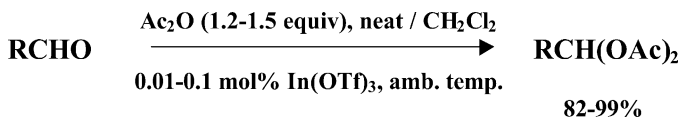
Synthesis of novel rhodium-carbene complexes as efficient catalysts for addition of phenylboronic acid to aldehydes

**Rina Ghosh, Swarupananda Maiti, Arijit Chakraborty, Rajkumar Halder**

Journal of Molecular Catalysis A: Chemical 215 (2004) 49

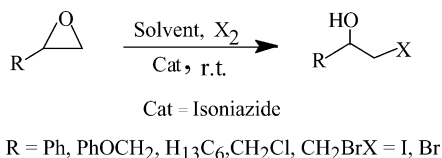
Indium triflate: a reusable catalyst for expeditious chemoselective conversion of aldehydes to acylals

A mild, efficient and expeditious method has been developed for the chemoselective conversion of aldehydes to the corresponding acylals in excellent yields, using acetic anhydride in the presence of catalytic amount (0.01–0.1 mol%) of In(OTf)₃. Ketones remain unaffected under the reaction condition. In(OTf)₃ can be recovered and reused without any loss of its catalytic activity.

**Hashem Sharghi, Mohammad Mehdi Eskandari, Raouf Ghavami**

Journal of Molecular Catalysis A: Chemical 215 (2004) 55

A facile conversion of epoxides to halohydrins with elemental halogen using isonicotinic hydrazide (isoniazide) as a new catalyst

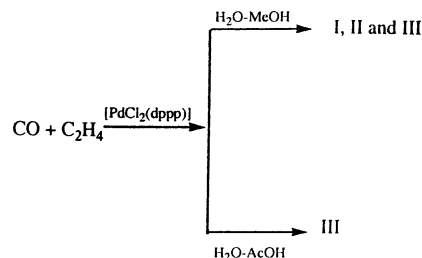


**Andrea Vavasori, Luigi Toniolo,
Gianni Cavinato**

Journal of Molecular Catalysis A: Chemical 215 (2004) 63

Carbon monoxide–ethylene copolymerisation catalysed by [PdCl₂(dppp)] in methanol–water or in acetic acid–water as solvents (dppp = 1,3-bis-(diphenylphosphine)propane)

The complex [PdCl₂(dppp)] yields a perfectly alternated polyketone in MeOH–H₂O (H₂O = 20% (mol/mol), 4100 kg/(g Pd h) at 45 atm and 90 °C) or in AcOH–H₂O (H₂O = 55%, ca. 28 000 kg/(g Pd h)) as solvents. In MeOH–H₂O keto–ester, ester–ester or keto–keto end-groups are observed whereas in AcOH–H₂O, the polyketone shows only keto–keto end-groups. A mechanism for their formation is proposed and the role of H₂O and of the acid in the formation of active species has been explained.

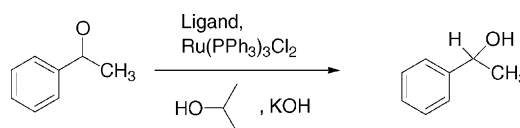


**Celia Z. Flores-López, Lucía Z. Flores-López,
Gerardo Aguirre, Lars H. Hellberg,
Miguel Parra-Hake, Ratnasamy Somanathan**

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Ruthenium(II)-assisted asymmetric hydrogen transfer reduction of acetophenone using chiral tridentate phosphorus-containing ligands derived from (1*R*,2*R*)-1,2-diaminocyclohexane

Several chiral and unsymmetrical tridentate [NNP]-type ligands with sp²-N and sp³-N were synthesized from optically pure (1*R*,2*R*)-1,2-diaminocyclohexane. Their ruthenium(II) complexes have been used as enantioselective catalysts for the asymmetric proton transfer reduction of acetophenone with enantioselectivities in the range 14–99% e.e.

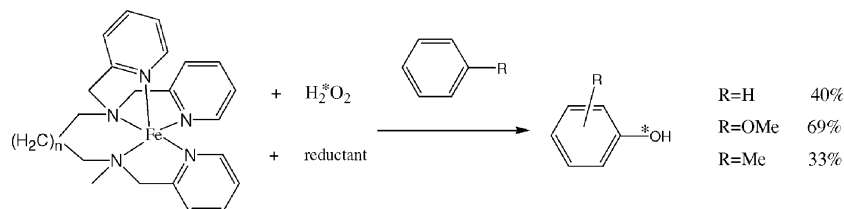


**Véronique Balland, Delphine Mathieu,
Nathalie Pons-Y-Moll, Jean François Bartoli,
Frédéric Banse, Pierrette Battioni,
Jean-Jacques Girerd, Daniel Mansuy**

Journal of Molecular Catalysis A: Chemical 215 (2004) 81

Non-heme iron polyazadentate complexes as catalysts for oxidations by H₂O₂: particular efficiency in aromatic hydroxylations and beneficial effects of a reducing agent

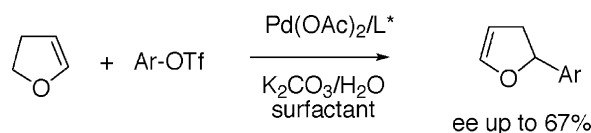
Iron(II) polyazadentate complexes catalyze the hydroxylation of aromatic compounds by H₂O₂. Addition of appropriate reducing agents (hydroquinones, PhSH or tetrahydropterins) led to important increases of the yields based on H₂O₂ (up to 69, 33, 18, 40 and 47% in the case of anisole, toluene, ethylbenzene, benzene and naphthalene, respectively).



Cedric Rabeyrin, Denis Sinou

Journal of Molecular Catalysis A: Chemical 215 (2004) 89

Palladium-catalyzed asymmetric arylation of 2,3-dihydrofuran with aryl triflates in water in the presence of surfactants



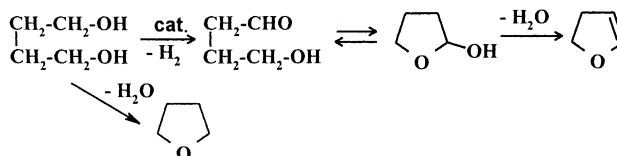
Ar = 4-ClC₆H₄, C₆H₅, CH₃OC₆H₄, 1-naphthyl

**Ludmila Leite, Vladislavs Stonkus,
Kristine Edolfa, Luba Ilieva, Donka Andreeva,
Ludmila Plyasova, Janusz W. Sobczak,
Sorana Ionescu, Gabriel Munteanu**

Journal of Molecular Catalysis A: Chemical 215
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Active phases of supported cobalt catalysts for 2,3-
dihydrofuran synthesis

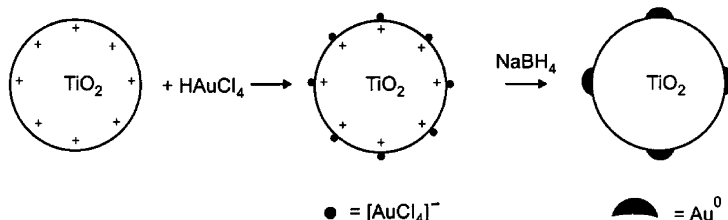
The reaction was studied on kaolin-supported Co and Co–Au catalysts in the liquid phase. It could be suggested that the both Co^0 and Co^{2+} phases in the appropriate ratios are involved in dehydrogenation of 1,4-butanediol into 4-hydroxybutanal intermediate. Catalytic test and XRD analysis show that the presence of metallic cobalt with hexagonal structure is favorable for the selectivity to 2,3-dihydrofuran.



**Kaushik Mallick, Mike J. Witcomb,
Mike S. Scurrall**

Journal of Molecular Catalysis A: Chemical 215
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Simplified single-step synthetic route for the pre-
paration of a highly active gold-based catalyst for
CO oxidation

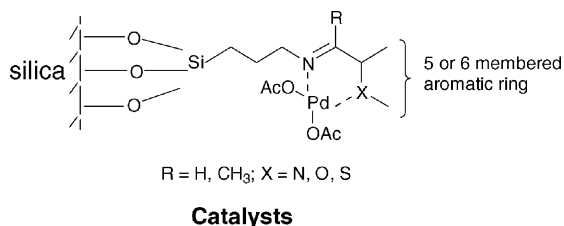


Satya Paul, James H. Clark

Journal of Molecular Catalysis A: Chemical 215
(2004) 107

Structure-activity relationship between some
novel silica supported palladium catalysts: a study
of the Suzuki reaction

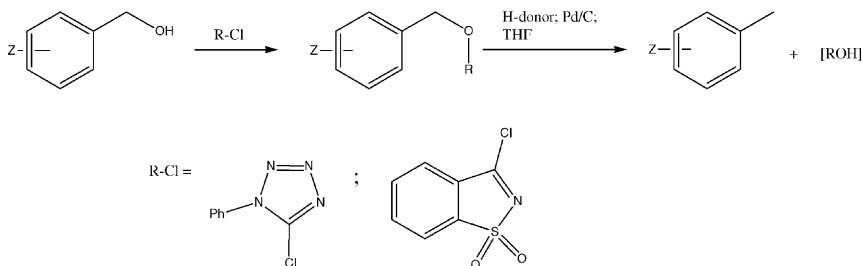
A series of novel silica supported palladium catalysts bearing N–N, N–S and N–O chelating ligands have been prepared and characterized on the basis of STA, BET, DRIFT and XPS. Structure-activity relationship between these catalysts has been discussed on the basis of DRIFT and XPS data.



**Nuna C.P. Araújo, Amadeu F. Brigas,
M. Lurdes S. Cristiano, Luís M.T. Frija,
Emanuel M.O. Guimarães, Rui M.S. Loureiro**

Journal of Molecular Catalysis A: Chemical 215
(2004) 113

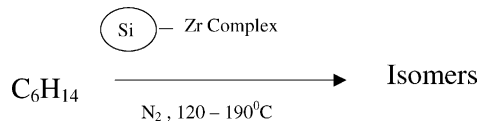
Heteroaromatic benzyl ethers as intermediates for
palladium-catalysed transfer hydrogenolysis of
benzyl alcohols



K.S. Anisia, G.S. Mishra, A. Kumar

Journal of Molecular Catalysis A: Chemical 215 (2004) 121

Reforming of *n*-hexane in presence of [1,2-bis-(salicylidene amino)-phenylene]-zirconium complex chemically bound on modified silica gel support

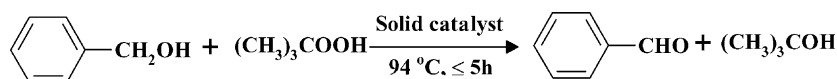


V.R. Choudhary, D.K. Dumbre, B.S. Uphade, V.S. Narkhede

Journal of Molecular Catalysis A: Chemical 215 (2004) 129

Solvent-free oxidation of benzyl alcohol to benzaldehyde by *tert*-butyl hydroperoxide using transition metal containing layered double hydroxides and/or mixed hydroxides

Mn, Cu, and Co containing layered double hydroxides and/or mixed hydroxides show good activity and selectivity in the oxidation of benzyl alcohol by TBHP to benzaldehyde in absence of solvent.

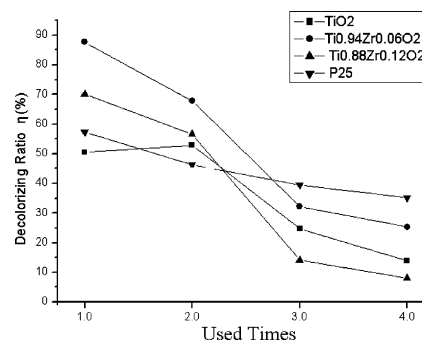


Yan Min Wang, Su Wen Liu, Meng Kai Lü, Shu Fen Wang, Feng Gu, Xue Zhou Gai, Xiao Peng Cui, Jie Pan

Journal of Molecular Catalysis A: Chemical 215 (2004) 137

Preparation and photocatalytic properties of Zr⁴⁺-doped TiO₂ nanocrystals

The photocatalytic property of the Zr⁴⁺-doped powders is not only higher than that of the pure TiO₂, but also higher than that of Degussa P₂₅.

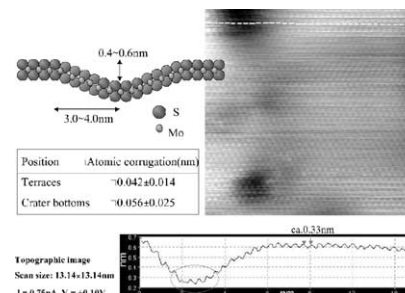


Masaharu Komiyama, Kohei Kiyohara, Yanjun Li, Takashi Fujikawa, Takeshi Ebihara, Takeshi Kubota, Yasuaki Okamoto

Journal of Molecular Catalysis A: Chemical 215 (2004) 143

Crater structures on a molybdenite basal plane observed by ultra-high vacuum scanning tunneling microscopy and its implication to hydrotreating

Crater structures were observed on a natural molybdenite basal plane by STM. Atomic structure was continuous from the surrounding terrace to the crater bottom, with no steps at the rim of the crater. Atomic corrugations were higher at the crater bottoms than on the terraces, indicating higher electronic density of states in the craters.

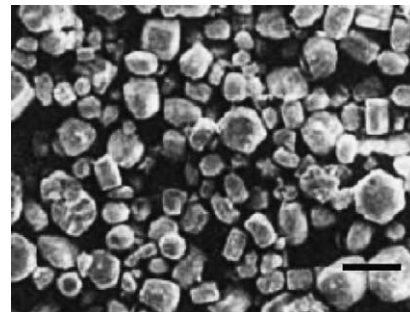


S. Seelan, A.K. Sinha

Journal of Molecular Catalysis A: Chemical 215 (2004) 149

Crystallization and characterization of high silica silicoaluminophosphate SAPO-5

SAPO-5 with a high Si content, synthesized by using dipropylamine as a template in ethylene glycol show higher activity for toluene alkylation reaction than samples prepared from the gel with up to 0.6 molar ratio of silica.

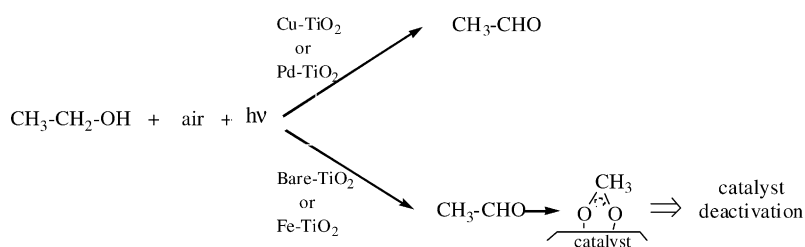


J. Araña, J.M. Doña-Rodríguez, O. González-Díaz, E. Tello Rendón, J.A. Herrera Melián, G. Colón, J.A. Navío, J. Pérez Peña

Journal of Molecular Catalysis A: Chemical 215 (2004) 153

Gas-phase ethanol photocatalytic degradation study with TiO₂ doped with Fe, Pd and Cu

During the gas-phase ethanol photocatalytic degradation in a continuous flow system, bare-TiO₂ and Fe-TiO₂ are deactivated in opposition to what was observed for Pd-TiO₂ and Cu-TiO₂. Pd and Cu oxide deposits can be capturing the photogenerated electrons, thus avoiding the formation of O₂^{•-} radicals that generate acetates.

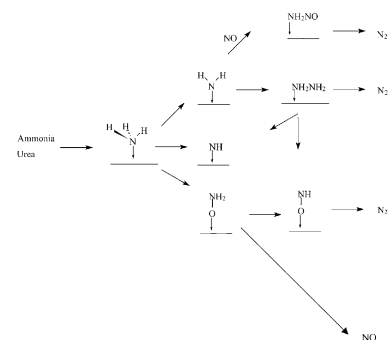


Gianguido Ramis, M. Angeles Larrubia

Journal of Molecular Catalysis A: Chemical 215 (2004) 161

An FT-IR study of the adsorption and oxidation of N-containing compounds over Fe₂O₃/Al₂O₃ SCR catalysts

On Fe₂O₃/Al₂O₃ SCR catalyst hydrazine can be intermediate in the oxidation of ammonia to nitrogen, while hydroxylamine-type species, can be intermediate in the oxidation of ammonia to NO, on contrary to those over Fe₂O₃/TiO₂ indicating that Fe₂O₃/Al₂O₃ is less selective in SCR reaction with ammonia.

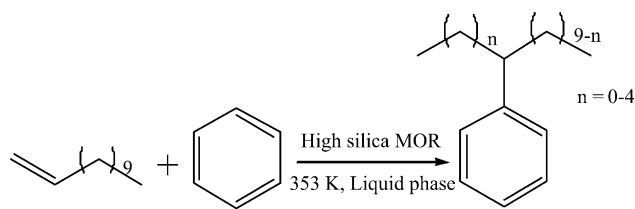


Sujit Samanta, Nawal Kishor Mal, Prashant Kumar, Asim Bhaumik

Journal of Molecular Catalysis A: Chemical 215 (2004) 169

Hydrothermally synthesized high silica mordenite as an efficient catalyst in alkylation reaction under liquid phase condition

High silica mordenite samples have been synthesized hydrothermally using low aluminum contents (Si/Al molar ratios 40 and 60 in the gel) in the presence of orthophosphoric acid as promoter. These materials showed excellent catalytic activity and selectivity towards linear alkyl benzenes in the alkylation of benzene using 1-dodecene as alkylating agent under mild liquid phase condition.

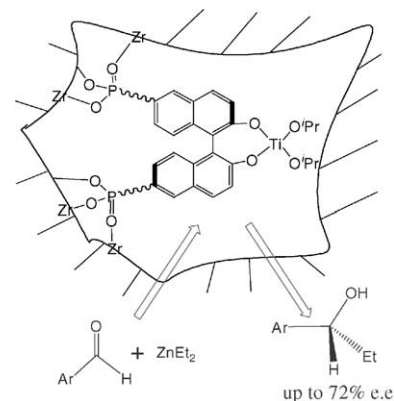


Helen L. Ngo, Aiguo Hu, Wenbin Lin

Journal of Molecular Catalysis A: Chemical 215 (2004) 177

Molecular building block approaches to chiral porous zirconium phosphonates for asymmetric catalysis

Chiral porous solids based on BINOL-derived Zr phosphonates have been synthesized via a molecular building block approach, whose dihydroxy functionalities coordinate to Ti(IV) centers to form active catalysts for the asymmetric additions of diethylzinc to aromatic aldehydes with high conversions and e.e. values of up to 72%.

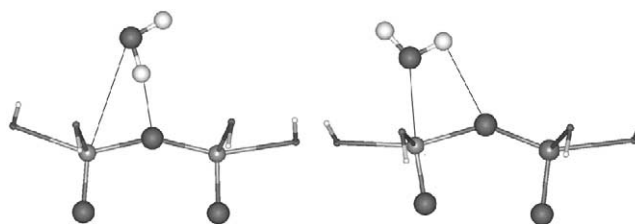


A. Góra, E. Broclawik

Journal of Molecular Catalysis A: Chemical 215 (2004) 187

Theoretical estimation of acid–base properties of Lewis and Brønsted centres at the V-W-O catalyst surface: water molecule as the probe in DFT calculations

Water molecule adsorbed on models of active sites postulated on the surface of V-W-O catalysts served as a probe for sites acidity and basicity. Geometry, OH stretching frequencies and water binding energy were chosen as three computed parameters to characterise the Lewis acid and basic sites and Brønsted acid sites situated in varying environment.

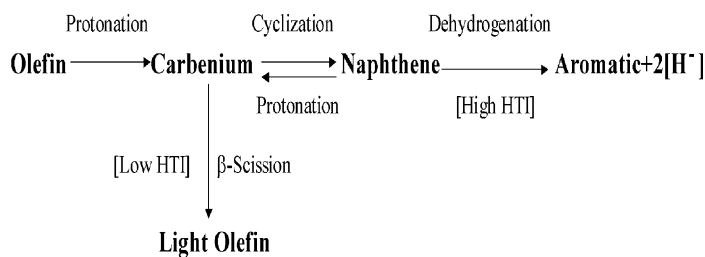


Conghua Liu, Youquan Deng, Yuanqing Pan, Yusheng Gu, Botao Qiao, Xionghou Gao

Journal of Molecular Catalysis A: Chemical 215 (2004) 195

Effect of ZSM-5 on the aromatization performance in cracking catalyst

Journal of Molecular Catalysis A: Chemical; reaction pathways over ZSM-5 zeolite contained FCC catalyst in catalytic cracking reaction.



V.N. Sheemol, Beena Tyagi, Raksh V. Jasra

Journal of Molecular Catalysis A: Chemical 215 (2004) 201

Acylation of toluene using rare earth cation exchanged zeolite β as solid acid catalyst

The catalytic activity of rare earth cations exchanged zeolite β was studied for the acylation of toluene with acetic anhydride as an acylating agent in the liquid phase. The correlation of catalytic activities of the different catalysts with the cyclohexanol dehydration as well as DRIFT spectroscopy showed that the toluene acylation is a Brønsted acid catalyzed reaction.

