



## Contents

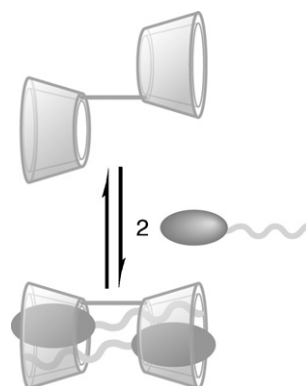
### Articles

**Hiroshi Ikeda, Satoshi Nishikawa,  
Yukinori Yamamoto, Akihiko Ueno**

*Journal of Molecular Catalysis A: Chemical 328 (2010) 1*

Homotropic cooperativity of cyclodextrin dimer as an artificial hydrolase

Cyclodextrin homo-dimer ( $\beta\text{CDH}$ ) and two kinds of cyclodextrin hetero-dimers were synthesized as artificial hydrolases. Only  $\beta\text{CDH}$  showed homotropic cooperativity with a Hill constant of 1.8.

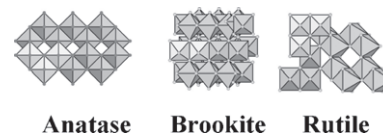


**A.R. Khataee, M.B. Kasiri**

*Journal of Molecular Catalysis A: Chemical 328 (2010) 8*

Photocatalytic degradation of organic dyes in the presence of nanostructured titanium dioxide: Influence of the chemical structure of dyes

This review explains the photocatalytic properties of nanostructured  $\text{TiO}_2$  and the influence of structure of organic dyes containing different functionalities on their photocatalytic degradation rates.

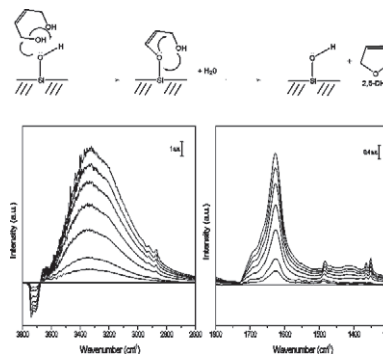


**Francesco Mauriello, Edoardo Garrone,  
Maria Grazia Musolino, Rosario Pietropaolo,  
Barbara Onida**

*Journal of Molecular Catalysis A: Chemical 328 (2010) 27*

Conversion of *cis*-2-butene-1,4-diol to hydrofurans on  $\text{Pd}/\text{SiO}_2$  and  $\text{Pt}/\text{SiO}_2$  catalysts under mild conditions: A FT-IR study

The gas-phase interaction of *cis*-2-butene-1,4-diol with silica supported Pd and Pt nanoparticles was studied using FT-IR investigating the reactivity and the nature of the species adsorbed on the catalysts.

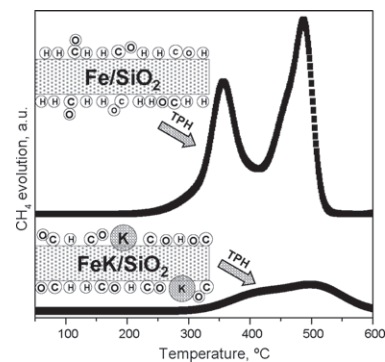


**Chenghua Zhang, Guoyan Zhao, Kangkai Liu, Yong Yang, Hongwei Xiang, Yongwang Li**

*Journal of Molecular Catalysis A: Chemical* 328 (2010) 35

Adsorption and reaction of CO and hydrogen on iron-based Fischer–Tropsch synthesis catalysts

H<sub>2</sub> and CO adsorptions have important influences on activity and selectivity of catalysts. Potassium decreases the surface H/C ratio and the hydrogenation capability of catalysts.

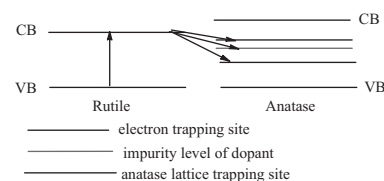


**L. Gomathi Devi, Nagaraju Kottam, B. Narasimha Murthy, S. Girish Kumar**

*Journal of Molecular Catalysis A: Chemical* 328 (2010) 44

Enhanced photocatalytic activity of transition metal ions Mn<sup>2+</sup>, Ni<sup>2+</sup> and Zn<sup>2+</sup> doped polycrystalline titania for the degradation of Aniline Blue under UV/solar light

Under visible light excitation, vectorial electron transfer takes place from rutile conduction band to dopant (Mn<sup>2+</sup>) level or electron/lattice trapping site of anatase phase favoring effective charge separation thus enhancing photocatalytic activity.

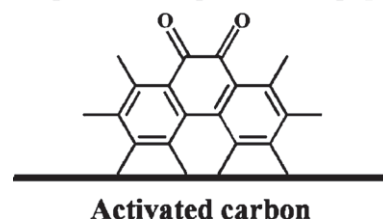


**Wei Song, Yong Li, Xiaohui Guo, Juan Li, Xiumin Huang, Wenjie Shen**

*Journal of Molecular Catalysis A: Chemical* 328 (2010) 53

Selective surface modification of activated carbon for enhancing the catalytic performance in hydrogen peroxide production by hydroxylamine oxidation

The activated carbon treated by KMnO<sub>4</sub> oxidation in acidic solution showed greatly enhanced hydrogen peroxide production by hydroxylamine oxidation due to the creation of more surface quinoid species. The yield of hydrogen peroxide was as high as 78%, and the quinoid groups serving as electron acceptors and redox mediators involved in the formation of H<sub>2</sub>O<sub>2</sub> through a redox cycle.



**Manickam Sasidharan, Asim Bhaumik**

*Journal of Molecular Catalysis A: Chemical* 328 (2010) 60

Regioselective epoxidation of different types of double bonds over large-pore titanium silicate Ti-β

Regioselective epoxidation of double bonds in cyclic and acyclic fractions of the bulky olefins has been investigated over large-pore Ti-β. Experimental results suggested side-chain vinylic double bonds selectively epoxidize here.

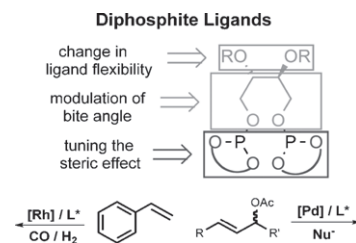


**Alonso Rosas-Hernández, Edgar Vargas-Malvaez, Erika Martin, Laura Crespi, J. Carles Bayón**

*Journal of Molecular Catalysis A: Chemical* 328 (2010) 68

Modular chiral diphosphite derived from L-tartaric acid. Applications in metal-catalyzed asymmetric reactions

New chiral diphosphite ligands have been synthesized and applied in asymmetric hydroformylation and asymmetric allylic alkylation. Rhodium and palladium complexes related to the catalytically active species were also investigated.

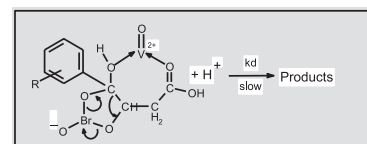


**Cherkupally Sanjeeva Reddy, Padma Sunitha Manjari**

*Journal of Molecular Catalysis A: Chemical* 328 (2010) 76

Homogeneous catalysis of oxovanadium(IV) in the oxidation of substituted 4-oxo acids by bromate in acid medium: A mechanistic study

Oxovanadium(IV)-catalyzed oxidation of substituted 4-oxo acids by bromate in acid medium leads to the formation of malonic acid and the corresponding benzoic acid. The reaction is an example of the neighboring group participation and intramolecular catalysis.

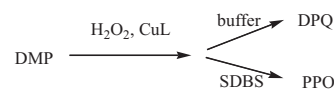


**Xiao-Hong Li, Xiang-Guang Meng, Qin-Hui Pang, Shan-Dong Liu, Jian-Mei Li, Juan Du, Chang-Wei Hu**

*Journal of Molecular Catalysis A: Chemical* 328 (2010) 88

Metal complexes catalyzed oxidative coupling of 2,6-dimethylphenol in micellar media

Micelles and catalysts showed great influences on the yield, the selectivity of product and the reaction rate for the oxidative coupling of 2,6-dimethylphenol.

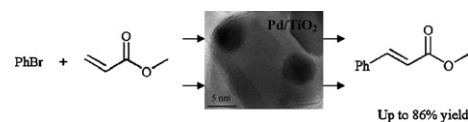


**Zhaohao Li, Jing Chen, Weiping Su, Maochun Hong**

*Journal of Molecular Catalysis A: Chemical* 328 (2010) 93

A titania-supported highly dispersed palladium nano-catalyst generated via in situ reduction for efficient Heck coupling reaction

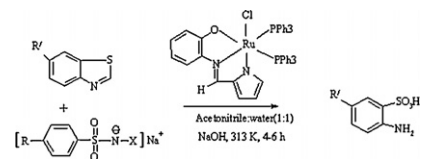
Very efficient Heck reactions were achieved under ligandless conditions using a titania-supported palladium catalyst prepared by a simple pH-controlled adsorption method. During the reaction, monodisperse palladium nanoparticles were in situ generated via reduction on the surface of  $\text{TiO}_2$ . The catalyst could be readily recovered and reused several times without significant loss of catalytic activity.



**R.V. Jagadeesh, P. Karthikeyan, P. Nithya,  
Y. Sree Sandhya, S. Sudhaker Reddy,  
P. Pradeep Kumar Reddy, M. Vinod Kumar,  
K.T. Prabhu Charan, R. Narender, P.R. Bhagat**

*Journal of Molecular Catalysis A: Chemical* 328 (2010) 99

Development of an efficient ruthenium catalyzed synthetic process and mechanism for the facile conversion of benzothiazoles to orthanilic acids

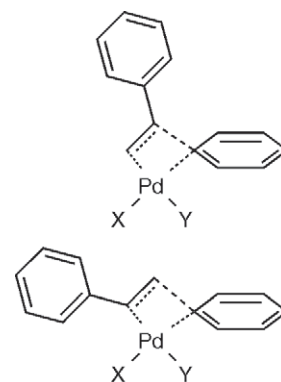


**Carina Bäcktorp, Per-Ola Norrby**

*Journal of Molecular Catalysis A: Chemical* 328 (2010) 108

Trans effects in the Heck reaction—A model study

The selectivity of the Heck reaction is determined in the carbopalladation step. The relative trans effect of the two ligands present on palladium has a profound influence on the reaction selectivity.

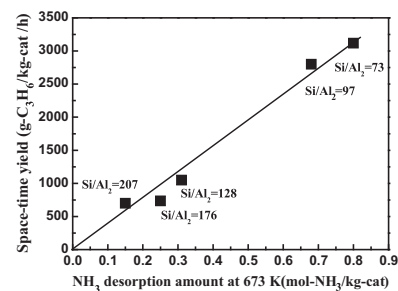


**Wei Xia, Atsushi Takahashi, Isao Nakamura,  
Hiromichi Shimada, Tadahiho Fujitani**

*Journal of Molecular Catalysis A: Chemical* 328 (2010) 114

Study of active sites on the MFI zeolite catalysts for the transformation of ethanol into propylene

MFI zeolite catalysts with various Si/Al<sub>2</sub> ratios were synthesized. Ethanol conversion reaction results imply that the acidic sites of this series of MFI-type zeolite catalysts were of the same nature.



**A. Srivani, K.T. Venkateswar Rao, P.S. Sai Prasad,  
N. Lingaiah**

*Journal of Molecular Catalysis A: Chemical* 328 (2010) 119

An efficient synthesis of benzoxazoles using silica-supported tin exchanged silicotungstic acid catalyst

An efficient heterogeneous silica-supported tin exchanged silicotungstic acid catalyst is demonstrated for the synthesis of benzaxazoles by reaction of amonophenols with orthoesters under mild reaction conditions.

