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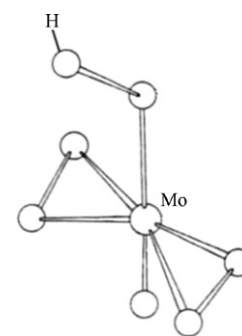
Articles

László J. Csányi

Journal of Molecular Catalysis A: Chemical 322 (2010) 1

On the peroxomolybdate complexes as sources of singlet oxygen

Peroxidation of molybdenum(VI) demonstrates that mono-, di- and tetraperoxo complexes are formed only in low quantities, triperoxomolybdate predominating. Triperoxomolybdate may react directly with reactive reductants, whereas less reactive reductants are oxidized by indirectly formed $^1\text{O}_2$.

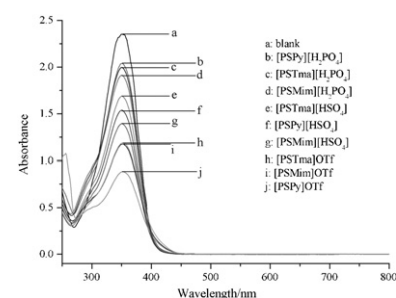


Yuanyuan Wang, Xinxin Gong, Zhizhong Wang, Liyi Dai

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SO_3H -functionalized ionic liquids as efficient and recyclable catalysts for the synthesis of pentaerythritol diacetals and diketals

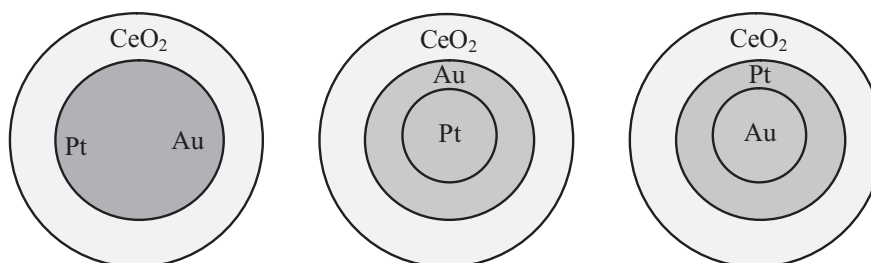
The efficient, simple and environmentally friendly synthesis of pentaerythritol diacetals and diketals using SO_3H -functional ionic liquids (ILs) as catalysts was reported. H_0 (Hammett function) values and the minimum-energy geometries of SO_3H -functionalized ILs were determined and the results revealed that the acidities and catalytic activities of ILs in acetalization were related to their structures.



Connie Mei Yu Yeung, Shik Chi Tsang

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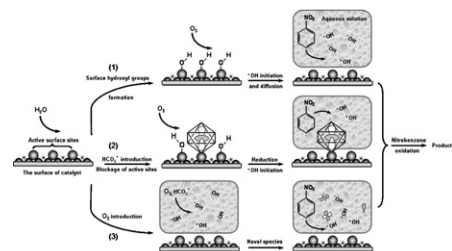
Some optimization in preparing core-shell Pt–ceria catalysts for water gas shift reaction



Lei Zhao, Zhizhong Sun, Jun Ma, Huiling Liu*Journal of Molecular Catalysis A: Chemical* 322 (2010) 26

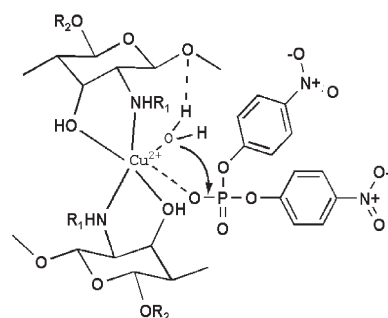
Influencing mechanism of bicarbonate on the catalytic ozonation of nitrobenzene in aqueous solution by ceramic honeycomb supported manganese

The mechanism investigation suggests that bicarbonate plays an important role as a promoter of radical chain reactions accelerating the ozone mass transformation, causing the increases in the utilization efficiency of ozone, the formation of H_2O_2 and the initiation of $\cdot OH$ at the lower concentration. Bicarbonate with the higher concentration exerts a negative effect on the degradation efficiency of nitrobenzene due to the predominance derived from its scavenging capacity of $\cdot OH$.

**Yan Xiang, Qi Zhang, Jiangju Si, Jianping Du, Hong Guo, Tao Zhang***Journal of Molecular Catalysis A: Chemical* 322 (2010) 33

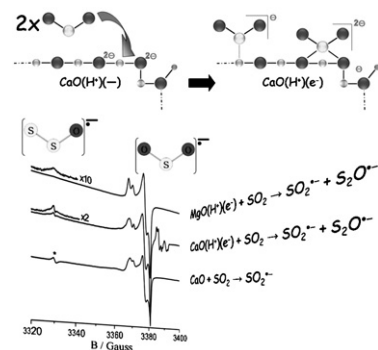
Characterization and catalytic kinetics studies of *N*-cetyl-*O*-sulfate chitosan multinuclear copper complex as an artificial hydrolase

In the hydrolysis of bis-(4-nitrophenyl)phosphate (BNPP) catalyzed by *N*-cetyl-*O*-sulfate-chitosan Cu(II) complex, *N*-cetyl-*O*-sulfate-chitosan constructed hydrophobic microenvironment for the catalysis and enhanced the interactions between Cu(II) ions and BNPP. Copper-hydroxide associates with substrate to form the intermediate. Then Cu(II)-bound hydroxyl group act as strong nucleophile to attack the P-O bond.

**Stefano Livraghi, M. Cristina Paganini, Elio Giamello***Journal of Molecular Catalysis A: Chemical* 322 (2010) 39

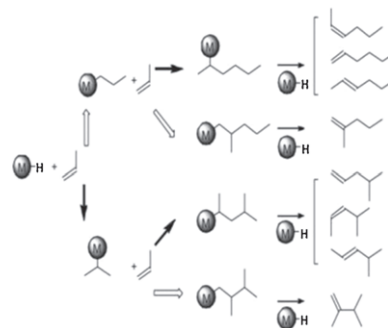
SO_2 reactivity on the MgO and CaO surfaces: A CW-EPR study of oxo-sulphur radical anions

Electron Paramagnetic Resonance (EPR) technique has been used to study SO_2 interaction with MgO and CaO bare and electron enriched surfaces. Two paramagnetic products due to this interaction, the $SO_2^{\cdot-}$ and $S_2O^{\cdot-}$ radicals, whose abundance depends on the surface oxide properties, have been identified.

**Julian R.V. Lang, Christine E. Denner, Helmut G. Alt***Journal of Molecular Catalysis A: Chemical* 322 (2010) 45

Homogeneous catalytic dimerization of propylene with bis(imino)pyridine vanadium(III) complexes

Based on new own and known published bis(imino)pyridine vanadium(III) complexes the catalytic dimerization of propylene was performed under homogeneous conditions. The additive PPh_3 was an important point for the product selectivity.

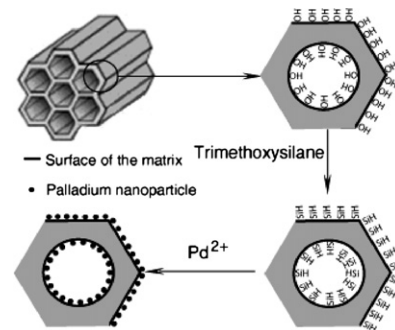


**Yingjun Feng, Liang Li, Yongsheng Li,
Wenru Zhao, Jinlou Gu, Jianlin Shi**

Journal of Molecular Catalysis A: Chemical 322 (2010) 50

Pd colloid grafted mesoporous silica and its extraordinarily high catalytic activity for Mizoroki-Heck reactions

Palladium ions were evenly reduced to form metal colloids existing as isolated islands both on the inner and outer surfaces of the SBA-15 matrix. In this heterogeneous catalyst, the evenly dispersed catalyst species showed extraordinarily high catalytic activity with extremely low amounts of Pd catalysts for Heck reactions.

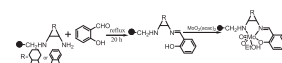


Yuedong Li, Xiangkai Fu, Biwei Gong, Xiaochuan Zou, Xiaobo Tu, Junxian Chen

Journal of Molecular Catalysis A: Chemical 322 (2010) 55

Synthesis of novel immobilized tridentate Schiff base dioxomolybdenum(VI) complexes as efficient and reusable catalysts for epoxidation of unfunctionalized olefins

New types of immobilized tridentate Schiff base dioxomolybdenum(VI) complexes onto organic-inorganic hybrid support were prepared and exhibited excellent activity for olefins epoxidation reaction. These promising heterogeneous catalysts are of higher stability and reusability, which can be reused ten times, retaining a large part of the activity of the fresh catalyst.

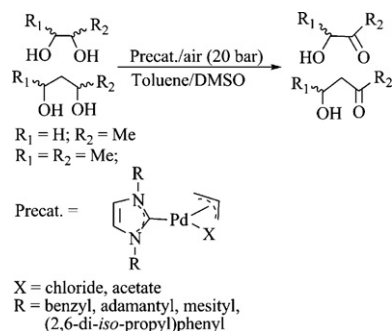


**Lorenzo Bettucci, Claudio Bianchini,
Werner Oberhauser, Tsun-Hung Hsiao,
Hon Man Lee**

Journal of Molecular Catalysis A: Chemical 322 (2010) 63

Chemoselective aerobic oxidation of unprotected diols catalyzed by Pd-(NHC) (NHC = N-heterocyclic carbene) complexes

Neutral Pd(X)(η^3 -allyl) (X = Cl, OAc) complexes bearing mono-coordinating NHC ligands have been used to catalyze the aerobic oxidation of unprotected 1,2- and 1,3-diols yielding hydroxy ketones as the only product.

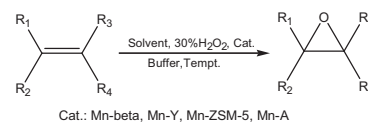


**B. Qi, X.-H. Lu, D. Zhou, Q.-H. Xia, Z.-R. Tang,
S.-Y. Fang, T. Pang, Y.-L. Dong**

Journal of Molecular Catalysis A: Chemical 322 (2010) 73

Catalytic epoxidation of alkenes with 30% H₂O₂ over Mn²⁺-exchanged zeolites

Mn²⁺-exchanged zeolites Mn-beta, Mn-Y, Mn-ZSM-5, and Mn-A efficiently catalyzed the epoxidation of alkenes with 30% H₂O₂, in which Mn-beta and Mn-Y exhibited highly recyclable activity.

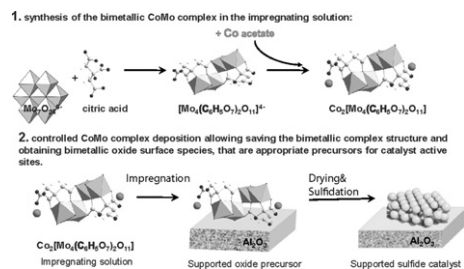


Oleg V. Klimov, Anastasiya V. Pashigreva, Martin A. Fedotov, Dmitri I. Kochubey, Yuri A. Chesalov, Galina A. Bukhtiyarova, Alexandr S. Noskov

Journal of Molecular Catalysis A: Chemical 322 (2010) 80

Co–Mo catalysts for ultra-deep HDS of diesel fuels prepared via synthesis of bimetallic surface compounds

The preparation of catalysts for the ultra-deep hydrodesulfurization of straight run gas oil via synthesis of bimetallic Co–Mo compounds from ammonium heptamolybdate, citric acid and cobalt acetate is reported. The catalysts preparation route includes two stages.

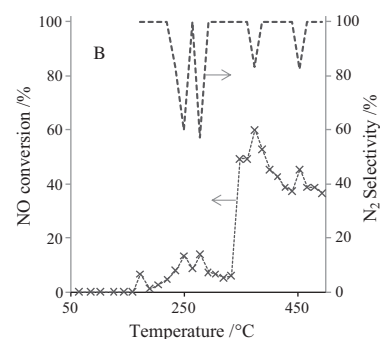


P. Miquel, P. Granger, N. Jagtap, S. Umbarkar, M. Dongare, C. Dujardin

Journal of Molecular Catalysis A: Chemical 322 (2010) 90

NO reduction under diesel exhaust conditions over Au/Al₂O₃ prepared by deposition-precipitation method

Au/γAl₂O₃ prepared by urea deposition-precipitation method exhibited good activity in the reduction of NO to N₂ in lean conditions above 300 °C. Comparison with Ag/γAl₂O₃ and characterizations were discussed.

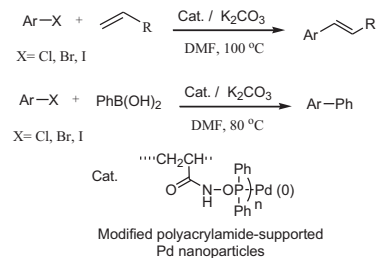


Bahman Tamami, Soheila Ghasemi

Journal of Molecular Catalysis A: Chemical 322 (2010) 98

Palladium nanoparticles supported on modified crosslinked polyacrylamide containing phosphinite ligand: A novel and efficient heterogeneous catalyst for carbon–carbon cross-coupling reactions

Novel palladium catalyst based on modified crosslinked polyacrylamide containing phosphinite ligand was synthesized and characterized. It exhibited excellent activity and stability in Mizoroki–Heck and Suzuki–Miyaura cross-coupling reactions with different aryl halides.



Maria C. Ávila, Nora A. Comelli, E. Rodríguez-Castellón, A. Jiménez-López, R. Carrizo Flores, E.N. Ponzi, M.I. Ponzi

Journal of Molecular Catalysis A: Chemical 322 (2010) 106

Study of solid acid catalysis for the hydration of α-pinene

The hydration of α-pinene with solid acid catalysts was carried out using catalysts impregnated with trichloroacetic acid on different supports, including silica, titania and zirconia. The catalyst supported on titania only produced hydrocarbons, while the catalyst supported on zirconia produced alcohols and hydrocarbons with a selectivity of 75% for total alcohols.

