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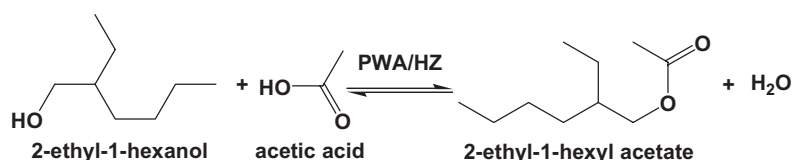
Articles

T. Rajkumar, G. Ranga Rao

Journal of Molecular Catalysis A: Chemical 295 (2008) 1

Porous hydrous zirconia supported 12-tungstophosphoric acid catalysts for liquid-phase esterification of 2-ethyl-1-hexanol

Porous hydrous zirconia (HZ) supported phosphotungstic acid (PWA) catalysts have been investigated. The interaction of PWA with HZ is mainly through Zr–OH groups while on $Ce_xZr_{1-x}O_2$ the Keggin molecular ions are fixed to M^+ ions directly. 35 wt% PWA/HZ catalysts show growth of ~7 nm size PWA crystallites and give good conversion of 2-ethyl-1-hexanol and selectivity towards 2-ethyl-1-hexyl acetate.

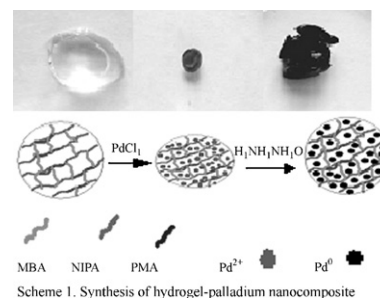


K. Samba Sivudu, N. Mallikarjuna Reddy, M. Nagendra Prasad, K. Mohana Raju, Y. Murali Mohan, J.S. Yadav, G. Sabitha, D. Shailaja

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Highly efficient and reusable hydrogel-supported nano-palladium catalyst: Evaluation for Suzuki–Miyaura reaction in water

A facile and simple approach was followed to synthesize poly(*N*-isopropylacrylamide-*co*-potassium methacrylate) hydrogel–palladium nanocomposites (Pd@GEL). Among the composite gels with variable PMA contents, Pd@GEL5 (PMA 1.6 mmol) exhibited best gel integrity, and optimum Pd and water uptakes. It was tested for the catalytic performance in Suzuki–Miyaura reaction. The catalyst was reusable 5–6 times without loss in its activity.

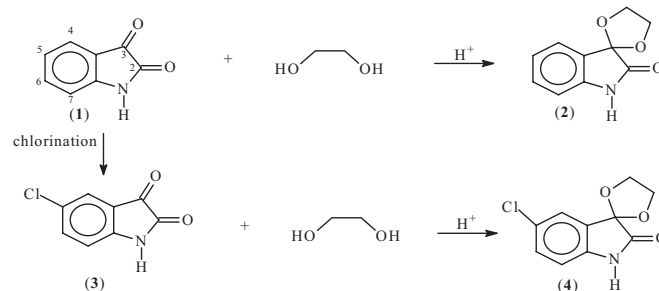


Edeilza Lopes dos Santos, Walter Alves Gomes Jr, Núbia Moura. Ribeiro, Heloysa Martins Carvalho Andrade

Journal of Molecular Catalysis A: Chemical 295 (2008) 18

Ecofriendly ketalization of isatin using heteropoly-compounds as catalysts

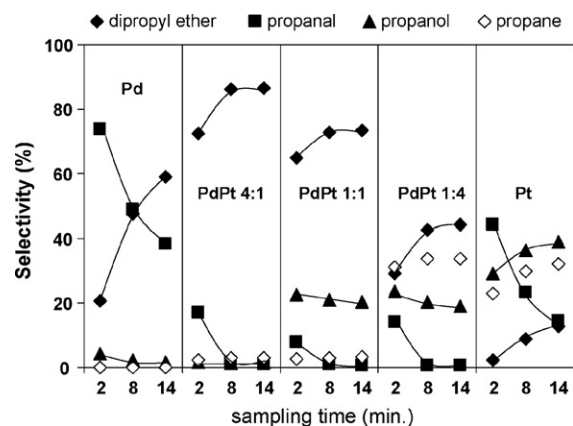
A fast, selective and solvent-less preparation of isatin ketals was carried out using Keggin heteropolycompounds catalysts, namely, $H_3PW_{12}O_{40}$, $H_3PW_{12}O_{40}/SiO_2$ and $Cs_{2.2}H_{0.8}PW_{12}O_{40}$, with high yields and 100% selectivity. The $Cs_{2.2}HPW$ catalyst may be repeatedly used but a progressive activity loss was assigned to residual organic materials that could not be removed after several dichloromethane washings.



N. Györfy, Z. Paál*Journal of Molecular Catalysis A: Chemical* 295 (2008) 24

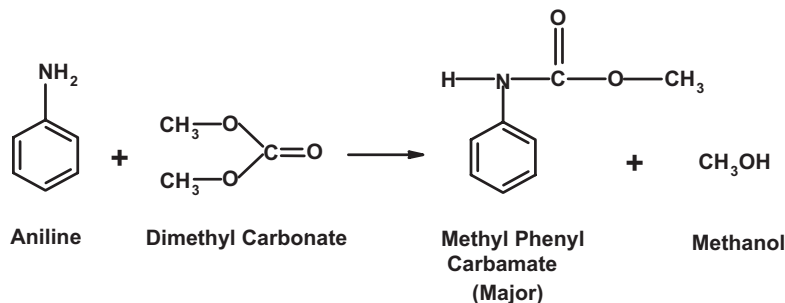
Acrolein hydrogenation on PdPt powder catalysts prepared by colloid synthesis

Acrolein was hydrogenated over unsupported Pd, Pt and PdPt bimetallic catalysts with different Pd:Pt atomic ratios. Palladium and platinum behaved differently in secondary reactions. The selectivity patterns of bimetallic catalysts were different from the monometallic ones. As the surface Pt concentration increased in the sample, the Pt-like character was more and more prevailing, producing more and more propanol, rather than dipropyl ether.

**Nishita Lucas, Amol P. Amrute, K. Palraj, G.V. Shanbhag, Ajayan Vinu, S.B. Halligudi***Journal of Molecular Catalysis A: Chemical* 295 (2008) 29

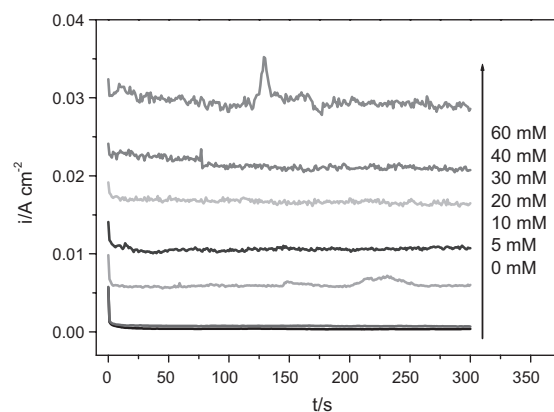
Non-phosgene route for the synthesis of methyl phenyl carbamate using ordered AISBA-15 catalyst

Methyl phenyl carbamate (MPC) has been synthesized by a non-phosgene route under liquid phase conditions from dimethyl carbonate and aniline by using mesoporous AISBA-15 catalyst. AISBA-15 (Si/Al = 10) exhibited highest catalytic activity in the synthesis of MPC and under selected conditions aniline conversion of 99% and MPC selectivity of 71% were achieved at 100 °C in 3 h.

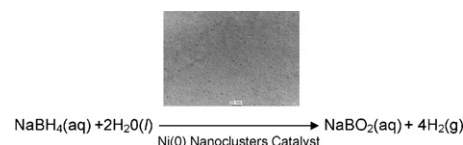
**Qingfeng Yi, Lei Li, Wenqiang Yu, Zhihua Zhou, Guorong Xu***Journal of Molecular Catalysis A: Chemical* 295 (2008) 34

A novel titanium-supported Ag/Ti electrode for the electro-oxidation of hydrazine

The titanium-supported Ag/Ti electrode, prepared by a one-step hydrothermal method, presents high and stable anodic current densities for the hydrazine oxidation as shown in chronoamperometric responses at the potential step of 0.1 V in 1 M NaOH solution with various concentrations of hydrazine.

**Önder Metin, Saim Özkar***Journal of Molecular Catalysis A: Chemical* 295 (2008) 39Synthesis and characterization of poly(*N*-vinyl-2-pyrrolidone)-stabilized water-soluble nickel(0) nanoclusters as catalyst for hydrogen generation from the hydrolysis of sodium borohydride

Water-soluble PVP-stabilized nickel(0) nanoclusters in particle size of 3.6 ± 1.6 nm were highly active catalyst providing 8700 turnovers of hydrogen generation from the hydrolysis of sodium borohydride. The isolated solid material are redispersible in water and yet catalytically active. The catalytic hydrolysis is first order in nickel and zero order in substrate concentration.

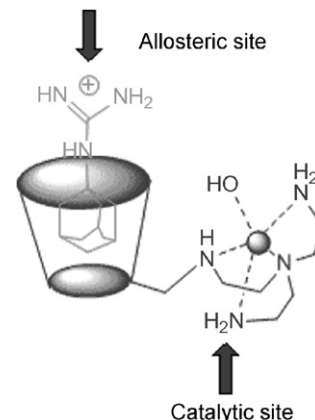


Xiangqiu Li, Kai Liang, Chunyu Wang, Xiaolong Bai, Jiayun Xu, Jiacong Shen, Junqiu Liu

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An allosteric supramolecular hydrolase model: Combination of a guanidinium function with a metal center in cyclodextrin scaffold

An allosteric hydrolase model (**1**) with cooperativity between the metal center and allosteric site has been constructed through supramolecular assembly of an adamantanyl guanidinium and a copper (II) complex of tris(2-aminoethyl)amine modified cyclodextrin (tren-CD). The structure of the supramolecular inclusion has been determined by ^1H NMR and selective NOESY measurement. Furthermore, the allosteric role of the guanidinium group was unambiguously demonstrated by the catalytic behaviors of the allosteric model **1** with kinetics studies.

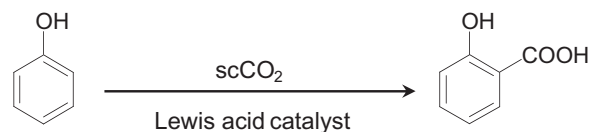


Takayuki Iijima, Tatsuaki Yamaguchi

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Efficient regioselective carboxylation of phenol to salicylic acid with supercritical CO_2 in the presence of aluminium bromide

In the present study, the direct carboxylation of phenol with carbon dioxide smoothly proceeded in the presence of various Lewis acids, especially AlBr_3 , at moderate temperatures under supercritical conditions. This method is a new, mild, efficient, easy, and clean reaction for the preparation of salicylic acid in excellent yields with high regioselectivity into substitution of carboxyl group in ortho situation.

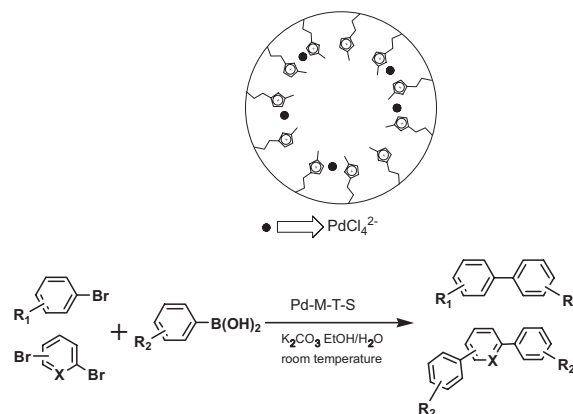


Peng Han, Hongming Zhang, Xuepeng Qiu, Xiangling Ji, Lianxun Gao

Journal of Molecular Catalysis A: Chemical 295 (2008) 57

Palladium within ionic liquid functionalized mesoporous silica SBA-15 and its catalytic application in room-temperature Suzuki coupling reaction

Palladium salts were introduced into the pore channels of the imidazolium salts-functionalized mesoporous silica SBA-15 via electrostatic interaction. The resulting palladium catalysts demonstrated exceptional activity for the room-temperature Suzuki coupling reaction in aqueous-organic mixed solvents and good recycling ability. In addition, agglomeration of palladium catalyst in the Suzuki coupling reaction can be effectively controlled due to the stabilizing effect of the imidazolium salt and confinement of mesoporous walls.



Haifeng Xiong, Yuhua Zhang, Kongyong Liew, Jinlin Li

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Fischer-Tropsch synthesis: The role of pore size for Co/SBA-15 catalysts

When the DRIFTS spectra of 30% Co/SBA-15 with different pore sizes under FTS conditions were collected at 220°C , a broad peak at 1979 cm^{-1} , attributed to bridge-type CO on cobalt metal sites, was observed. With the increase of catalyst pore size, the intensity of this peak increases significantly.

