

## Contents

**Vol. 229, Nos. 1–2**

Preparation and catalytic property of the solid base supported on the mixed zirconium phosphate phosphonate for Knoevenagel condensation R.Q. Zeng (Chengdu, PR China and Chongqing, PR China), X.K. Fu, C.B. Gong (Chongqing, PR China), Y. Sui (Chengdu, PR China and Chongqing, PR China), X.B. Ma and X.B. Yang (Chongqing, PR China) . . . . .	1
Palladium nanoparticles in poly(ethyleneglycol): the efficient and recyclable catalyst for Heck reaction C. Luo, Y. Zhang and Y. Wang (Hangzhou, China) . . . . .	7
Oxidation of alcohols with H <sub>2</sub> O <sub>2</sub> catalyzed by bis-quaternary phosphonium peroxotungstates (or peroxomolybdates) under halide- and organic solvent-free condition X.-y. Shi and J.-f. Wei (Xi'an, PR China) . . . . .	13
Enantioselective hydrogenation of $\alpha$ -hydroxyketones over cinchona-modified Pt: influence of reactant and modifier structure O.J. Sonderegger, G.M.-W. Ho, T. Bürgi and A. Baiker (Zürich, Switzerland) . . . . .	19
CO oxidation and NO reduction over supported Pt-Rh and Pd-Rh nanocatalysts: a comparative study A. De Sarkar and B.C. Khanra (Calcutta, India) . . . . .	25
Esterification of succinic anhydride to di-( <i>p</i> -cresyl) succinate over M <sup>n+</sup> -montmorillonite clay catalysts C. Ravindra Reddy, P. Iyengar, G. Nagendrappa and B.S. Jai Prakash (Bangalore, India) . . . . .	31
A new catalytic system for copolymerization of styrene with CO:PdCl <sub>2</sub> /bipy/M(CF <sub>3</sub> SO <sub>3</sub> ) <sub>n</sub> L. Lin, H. Xiang-Liang and L. Guang-Xing (Wuhan, PR China) . . . . .	39
A chiral disulfide derived from ( <i>R</i> )-cysteine in the enantioselective addition of diethylzinc to aldehydes: loading effect and asymmetric amplification A.L. Braga, D.S. Lüdtke (Santa Maria, Brazil), L.A. Wessjohann (Halle, Germany), M.W. Paixão and P.H. Schneider (Santa Maria, Brazil) . . . . .	47
Effect of nickel precursors on the performance of Ni/AlMCM-41 catalysts for <i>n</i> -dodecane hydroconversion K. Fang, J. Ren and Y. Sun (Taiyuan, PR China) . . . . .	51
Ethylene polymerisation with hafnocene difencholate/MAO system: a comparison with other hafnocenes A.V. Grafov (Kiev, Ukraine), D.E.B. Lopes (Rio de Janeiro, Brazil), I.A. Grafova (Kiev, Ukraine), M.L. Dias and M.F.V. Marques (Rio de Janeiro, Brazil) . . . . .	59
Beta zeolite: an efficient and eco-friendly catalyst for the nitration of <i>o</i> -xylene with high regio-selectivity in liquid phase M.L. Kantam, B.M. Choudary, N.S. Kumar and K.V. Ramprasad (Hyderabad, India) . . . . .	67
Epoxidation of allyl choride with molecular oxygen and 2-ethyl-anthrahydroquinone catalyzed by TS-1 Q. Wang, Z. Mi, Y. Wang and L. Wang (Tianjin, PR China) . . . . .	71
An ab initio study of ethane conversion reactions on zeolites using the complete basis set composite energy method X. Zheng and P. Blowers (Tucson, AZ, USA) . . . . .	77
Photo-catalysis of ethane and carbon dioxide to produce hydrocarbon oxygenates over ZnO-TiO <sub>2</sub> /SiO <sub>2</sub> catalyst X.-T. Wang, S.-H. Zhong and X.-F. Xiao (Tianjin, PR China) . . . . .	87
Photocatalytic degradation of pesticide pyridaben on TiO <sub>2</sub> particles X. Zhu, C. Yuan, Y. Bao, J. Yang and Y. Wu (Nanjing, PR China) . . . . .	95
Heck coupling by Pd deposited onto organic-inorganic hybrid supports A. Papp, K. Miklós, P. Forgo and Á. Molnár (Szeged, Hungary) . . . . .	107
Palladium supported catalysts for the selective hydrogenation of sunflower oil B. Nohair, C. Espécel, G. Lafaye, P. Marécot, L.C. Hoang and J. Barbier (Poitiers Cedex, France) . . . . .	117
Activity-acidity relationship for alkane cracking over zeolites: <i>n</i> -hexane cracking over HZSM-5 P. Borges, R. Ramos Pinto, M.A.N.D.A. Lemos, F. Lemos (Lisboa, Portugal), J.C. Védrine (Paris, France), E.G. Derouane (Faro, Portugal) and F. Ramôa Ribeiro (Lisboa, Portugal) . . . . .	127
Polymeric membranes: the role this support plays in the reactivity of the different generations of metallocporphyrins M.C.A.F. Gotardo, A.A. Guedes (Ribeirão Preto, Brazil), M.A. Schiavon, N.M. José, I.V.P. Yoshida (Campinas, Brazil) and M.D. Assis (Ribeirão Preto, Brazil) . . . . .	137
Aerogel processing of MTi <sub>2</sub> O <sub>5</sub> (M=Mg, Mn, Fe, Co, Zn, Sn) compositions using single source precursors: synthesis, characterization and photocatalytic behavior P.N. Kapoor (Delhi, India), S. Uma, S. Rodriguez and K.J. Klabunde (Manhattan, KS, USA) . . . . .	145
Direct transformation of terminal <i>vic</i> -diols to primary alcohols and alkanes through hydrogenation catalyzed by [cis-Ru(6,6'-Cl <sub>2</sub> -bipy) <sub>2</sub> (OH <sub>2</sub> ) <sub>2</sub> ](CF <sub>3</sub> SO <sub>3</sub> ) <sub>2</sub> in acidic medium Z. Xie and M. Schlaf (Guelph, Canada) . . . . .	151
Nanoscale microreactor-encapsulation 14-membered nickel(II) hexamethyl tetraaza: synthesis, characterization and catalytic activity M. Salavati-Niasari (Kashan, Iran) . . . . .	159

Selective oxidation of isobutane over $H_xFe_{0.12}Mo_{11}VPA_{0.3}O_y$ heteropoly compound catalyst Q. Deng (Xiangtan, PR China), S. Jiang (Xiangtan, PR China and Tianjin, PR China), T. Cai, Z. Peng and Z. Fang (Xiangtan, PR China)	165
Tris(3,5-dimethylpyrazole)copper(II) nitrate: as an oxidation catalyst S. Sharma, N. Barooah and J.B. Baruah (Guwahati, India)	171
Nitrogen- and phosphorus-coordinated nickel(II) complexes as catalysts for the oligomerization of ethylene M.E. Bluhm, C. Folli, O. Walter and M. Döring (Karlsruhe, Germany)	177
A catalytic oxidation of sugar by vanadium(IV) R. Larsson and B. Folkesson (Lund, Sweden)	183
Catalytic polymerisation of ethylene with tris(pyrazolyl)borate complexes of late transition metals R. Santi, A.M. Romano, A. Sommazzi, M. Grande (Novara, Italy), C. Bianchini and G. Mantovani (Sesto Fiorentino, Italy)	191
Direct synthesis, characterization and catalytic application of SBA-15 containing heteropolyacid $H_3PW_{12}O_{40}$ L. Yang, Y. Qi (Harbin, China), X. Yuan, J. Shen (Fushun, China) and J. Kim (Suwon)	199
Liquid phase epoxidation of allylic compounds with hydrogen peroxide over titanium silicalite catalysts A. Wróblewska (Szczecin, Poland)	207
Ru(III)-catalysed oxidation of some N-heterocycles by chloramine-T in hydrochloric acid medium: a kinetic and mechanistic study Puttaswamy, R.V. Jagadeesh, N. Vaz, A. Radhakrishna (Bangalore, India)	211
Synthesis of polyaniline–bismocelite composite and its function as recoverable and reusable catalyst S. Palaniappan, C. Saravanan and V.J. Rao (Hyderabad, India)	221
Friedel-Crafts benzylation of benzene using Zn and Cd ions exchanged clay composites O.S. Ahmed and D.K. Dutta (Assam, India)	227
Gas-phase photo-oxidations of organic compounds over different forms of zirconia C. Wu, X. Zhao, Y. Ren, Y. Yue, W. Hua, Y. Cao, Y. Tang and Z. Gao (Shanghai, PR China)	233
Oxyfunctionalization of limonene using vanadium complex anchored on functionalized SBA-15 T. Joseph and S.B. Halligudi (Pune, India)	241
Electrochemical reduction of $CO_2$ mediated by poly-M-aminophthalocyanines (M=Co, Ni, Fe): poly-Co-tetraaminophthalocyanine, a selective catalyst M. Isaacs, F. Armijo, G. Ramírez, E. Trollund (Santiago, Chile), S.R. Biaggio (São Carlos, Brazil), J. Costamagna and M.J. Aguirre (Santiago, Chile)	249
Synthesis of novel multi-site phase-transfer catalyst and its application in the reaction of 4,4'-bis(chloromethyl)-1,1'-biphenyl with 1-butanol M.-L. Wang (Taichung, Taiwan), Z.-F. Lee and F.-S. Wang (Chiayi, Taiwan)	259
Comments on a facile conversion of epoxides to halohydrins with elemental halogen using isonicotinic hydrazide (isoniazide) as a new catalyst—a reinvestigation M. Soroka and W. Goldeman (Wrocław, Poland)	271
Author index	277
Subject index	281
Volume contents	287