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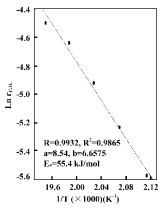
Kinetic Study on Butadiene Epoxidation over Ba, Cs and Cl Promoted Ag/Al_2O_3 Catalyst

SONG Huan-ling, CHEN Ge-xin,
LUO Shu-wen, YAO Cai-lan,
LI Shu-ben

J. Mol. Catal. (China) **2007**, 21(1), 1 ~ 7

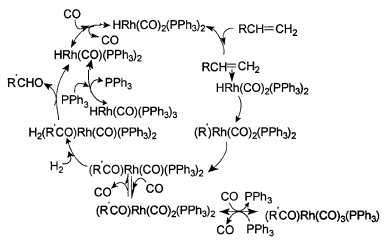


Reaction kinetics of butadiene epoxidation over Ba, Cs and Cl Promoted Ag/Al_2O_3 Catalyst was examined. The apparent activation energies and rate expressions for both epoxidation and complete combustion reactions were determined.

Hydroformylation of Butene with Rhodium Complexes Catalysts

YU Chao-ying, ZHAO Pei-qing, CHEN Ge-xin,
XIA Chun-gu, YAO Cai-lan, WANG Jin-mei,
ZHANG Jin-hua, ZHAO Zhi-yuan, CHEN Yi

J. Mol. Catal. (China) **2007**, 21(1), 8 ~ 12

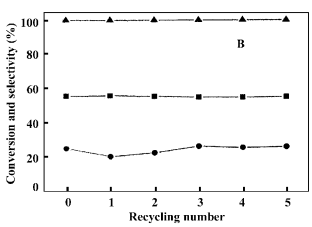


It was observed that the rates of hydroformylation reaction were different with different rhodium complexes and different butenes.

A Study of Asymmetric Hydroformylation in Ionic Liquid Biphasic System

DENG Chang-xi, YANG Yong,
YUAN You-zhu

J. Mol. Catal. (China) **2007**, 21(1), 13 ~ 18

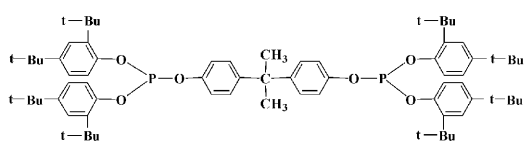


A biphasic catalysts system composed of ionic liquid and water-soluble chiral rhodium complex of sulfonated (*R*)-BINAP for asymmetric hydroformylation of vinyl acetate could be reused at least six times without reducing activity, enetioselectivity and regioselectivity.

Synthesis of a New Bisphosphite Ligand and its Application in the Hydroformylation of 1-Hexene

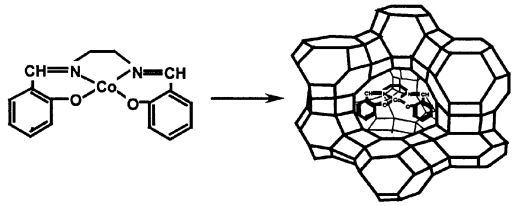
XIA Ya-na, SONG He-yuan,
CHEN Jing, TONG Jin,
LIU Jian-hua

J. Mol. Catal. (China) **2007**, 21(1), 19 ~ 25



A new bisphosphite ligand were prepared from 2,2′-Di (4-hydroxyphenyl) propane and 2, 4-Di-tert-butylphenol in two steps. The catalytic system composed by the new ligand and Rh(acac)$(CO)_2$ showed high catalytic activity for hydroformylation of 1-hexene.

Preparation of Zeolite Encapsulated Cobalt Schiff Base and Catalytic Activity in Cyclohexane Oxidation by Oxygen



YUAN Xia, LUO He-an, LI Fang

J. Mol. Catal. (China) **2007**,21(1), 26 ~ 31

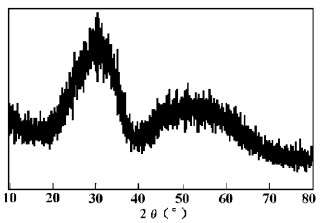
N,N'-bis (salicylidene) ethylenediiminocobalt (Cosalen) has been encapsulated into the supercage of microporous NaY zeolite by the flexible ligand method, which was characterized by FT-IR, UV-Vis, XRD, TG/DTA and BET Surface areas and pore volume analysis. The resulted Cosalen-NaY was used as catalyst for the oxidation of cyclohexane using oxygen as oxidant.

Synthesis, Characterization and Catalytic Activity of Resin-based Diiron (III) Catalysts: Model for Methane Monooxygenase

LUO Ya-ling, ZHANG Lei, ZONG Min-hua

J. Mol. Catal. (China) **2007**,21(1), 32 ~ 37

Synthesis of dodecylbenzene with benzene and 1-dodecene catalyzed by SO_4^{2-}/ZrO_2-TiO_2

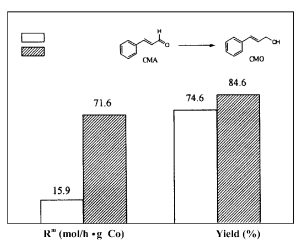


WANG Zhi-cai, SUN Kang, LIU Jiu-ling

J. Mol. Catal. (China) **2007**,21(1), 38 ~ 42

A novel solid acid of SO_4^{2-}/ZrO_2-TiO_2, which used to catalyse the alkylation between benzene and 1-dodecene, was prepared and characterized. It showed excellent conversion of 1-dodecene, and selectivity of LAB and 2-LAB. The catalytic properties of novel solid acid were discussed.

Study on the Selective Hydrogenation of Cinnamaldehyde over the Co-B/SBA-15 Amorphous Catalyst



YANG Hai-xia, LI Hui, LI He-xing

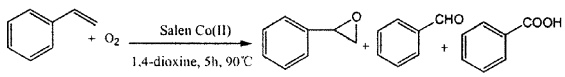
J. Mol. Catal. (China) **2007**,21(1), 43 ~ 47

During the selective hydrogenation of cinnamaldehyde, Co-B/SBA-15 exhibited higher activity and yield to cinnamyl alcohol than Co-B/SiO_2.

Catalytic Epoxidation of Styrene by Salen Cobalt (II) complexes

ZHANG Ping, YANG Mei,
LU Xiao-ping

J. Mol. Catal. (China) **2007**,21(1), 48 ~ 53

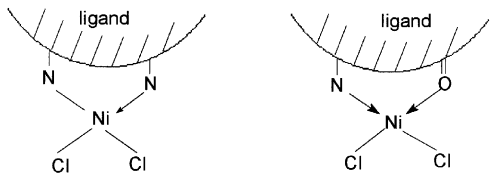


A series of Salen Co (II) complexes were prepared and used as catalysts for the epoxidation of styrene with molecular oxygen in absent of Co-reluctant. Catalyst activities, solvent effect and other reaction conditions have been studied. Possible reaction mechanism steps were outlined.

Study on Multiphase Polymer Nickel Complex Catalyzed Methanol Carbonylation

LIU Ling, XU Bao-Hua, CAO Hong-Bing,
QIAN Qing-Li, LI Feng-Bo, YAN Fang,
YUAN Guo-Qing

J. Mol. Catal. (China) **2007**,21(1), 54 ~ 57



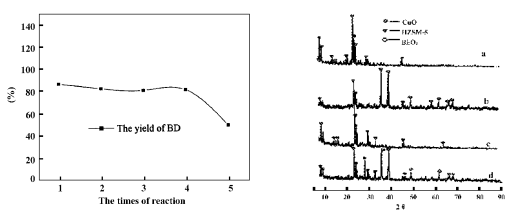
Structure of the complex I Structure of the complex II

Cross-link spherical copolymer of 2-vinyl pyridine and glycol acrylate was prepared, and complex of the above copolymer with nickel chloride was formed. The complex can be used as catalyst for methanol carbonylation, and the performance of the catalyst is a function of the content of glycol acrylate in the copolymer and the content of nickel in the complex.

Study on Preparation of $CuO/Bi_2O_3/ZSM$-5 Catalyst and Catalytic Properties for Synthesis of Butynediol

YANG Ming-xing, ZHANG Xiao-feng,
HUANG Qiu-feng, LIN Shen

J. Mol. Catal. (China) **2007**,21(1), 58 ~ 62

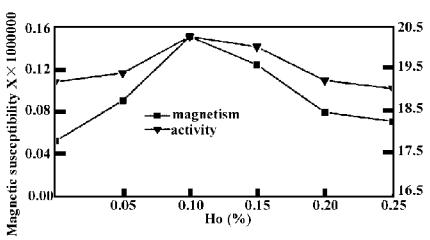


The $CuO/Bi_2O_3/HZSM$-5 catalyst for synthesis of 1, 4-butynediol (BD) by slurry bed was prepared and characterized by XRD, TPR and TG/DTA. The experiment results show that the catalyst has good catalytic activity, selectivity, reusability and thermal stability.

Modification of Holmium on Platinum Reforming Catalysts

ZHANG Ning, SONG Li-li,
LI Feng-yi

J. Mol. Catal. (China) **2007**,21(1), 63 ~ 66

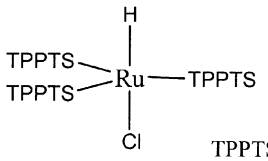


Pt reforming catalyst was modified by holmium. Rare earth Ho can increase the number of active centers of Pt catalyst, which may improve the activity and the stability of the catalyst. There is a correlation between the activity and the magnetic susceptibility of the platinum-holmium catalyst.

A Study of Double Bond Isomerization of 1-Hexene Catalyzed by Water-soluble Ru-H Complex

ZHOU Hui, HE Ren,
YUE Chuan-jun, FENG Xiu-juan

J. Mol. Catal. (China) **2007**,21(1), 67 ~ 70



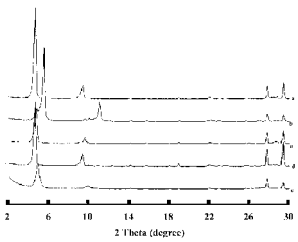
TPPTS : P (m-$C_6H_4SO_3Na$)$_3$

The double bond isomerization reaction of 1-hexene catalyzed by water-soluble RuHCl(TPPTS)$_3$ was studied. The effects of reaction conditions on the conversion of 1-hexene and selectivity of 2-hexene and 3-hexene were investigated. The excellences of water-soluble Ru-H complex catalyst were higher activity and selectivity; no by-products of skeletal isomerization, polymerization and crack; the catalyst could use repeatedly.

Synthesis And Photocatalytic Properties of $HNdNb_2O_7$/(Pt, TiO_2)

XU Li, LIN Jian-ming,
WU Ji-huai, HUANG Miao-liang,
LI Jing

J. Mol. Catal. (China) **2007**,21(1), 71 ~ 74



A new type of layered photocatalytic nanocomposite $HNdNb_2O_7$/(Pt, TiO_2) was prepared. The Samples were identified by X-ray diffraction, UV-3100 ultraviolet-visible (UV-Vis) spectrophotometer, Surface are analysis etc. The photocatalyst indicates the properties of absorptive wavelength red-shift and excellent photocatalytic activities, and stable photocatalytic activities.

The Synthesis of Rare-earth Hexaaluminate Catalysts Prepared by Reverse Microemulsion Method and Application in Methane Combustion

ZHANG Xiao-hong, HU Rui-sheng, DAI Ying-ying,
NIOU Jian-zhong, GAO Ling

J. Mol. Catal. (China) **2007**,21(1), 75 ~ 78

CLD modification for acidity of ZSM-5 and its effect on the shape-selective catalysis

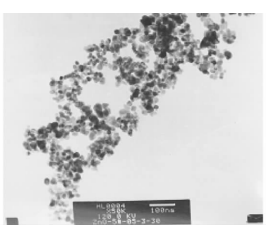
ZHU Zhi-rong, XIE Zai-ku,
CHEN Qing-ling, LI Wei,
YANG Wei-min, LI Can

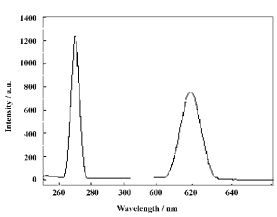
J. Mol. Catal. (China) **2007**,21(1), 79 ~ 81

Preparation of Nanocrystalline ZnO and Studies on Its Photocatalytic Performance

Li Xia, B Zhaorigetu,
Garidi, Yao Hong-xia

J. Mol. Catal. (China) **2007**,21(1), 82 ~ 84



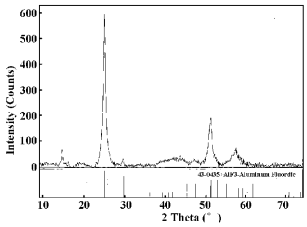


ZnO nanocrystalline was characterized by TG-DTG-DTA, X-ray diffractometry, TEM and Fluorescence Spectrometry methods and used as photocatalyst for degradation of rhodamine B model pollutants.

Preparation and fluorination activity of AlF_3

BAI Zhan-qi, HUANG Ying,
ZHANG Jian-jun, FANG Xiao-qing

J. Mol. Catal. (China) **2007**, 21(1), 85 ~ 86

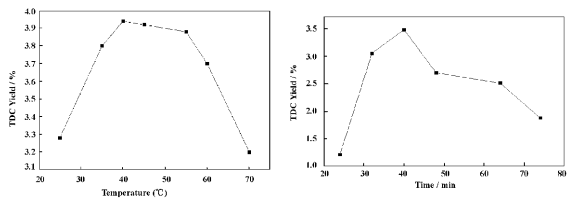


α-$AlF_3 \cdot 3H_20$ were prepared in low temperature using Al and HF. β-AlF_3 was prepared by heating α-$AlF_3 \cdot 3H_20$. The AlF_3 catalyst shows better fluorination activity.

Study on the Synthesis of Toluene Dicarbamate over Biological Enzyme Catalyst

WANG Hai-ou, WANG Yan-ji,
LI Fang, ZHAO Xin-qing

J. Mol. Catal. (China) **2007**, 21(1), 87 ~ 89

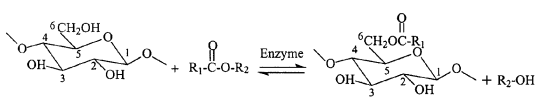


Biological enzyme was used as the catalytic to study the function of enzyme in the synthetic process of Toluene Diisocyanate by Dimethyl Carbonate and Toluene Diamine. So obtained Papain has fairly strong catalytic activity. The most suitable solvent--- Tetrahydrofuran was found, and an optimization to the reaction is made.

Advance in Enzymatic Synthesis of Sugar Ester in Non-aqueous Media

CHEN Zhi-gang, ZONG Min-hua,
LOU Wen-yong

J. Mol. Catal. (China) **2007**, 21(2), 90 ~ 95



Sugar esters, non-ionic biosurfactants, can be utilized in food, pharmaceutical, fermentation and petroleum industries. Compared with chemical methods, enzymatic synthesis of sugar esters is a new approach with the advantages such as high regioselectivity and mild reaction conditions. This review describes some recent progresses in enzymatic synthesis of sugar esters in some non-aqueous media, such as organic solvents, solvent-free system and ionic liquids.
