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ISSN 0253-9837

CN 21-1195/O6

CODEN THHPD3

催化学报

Chinese Journal of Catalysis

主编 林励吾

Editor-in-Chief LIN Liwu

2013

Vol. 34 No. 7



ISSN 0253-9837

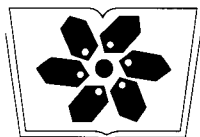


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Transaction of the Catalysis Society of China



中国科学院科学出版基金资助出版

催化学报

(CUIHUA XUEBAO)

CHINESE JOURNAL OF CATALYSIS

月刊 SCI 收录 2013 年 7 月 第 34 卷 第 7 期



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李庆远, 季生福, 胡金勇, 蒋赛

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1469 作者索引

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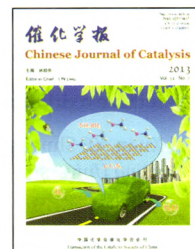
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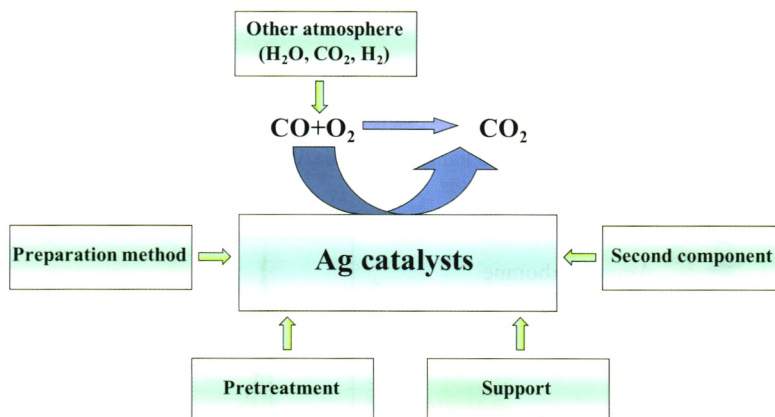
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Review

Chin. J. Catal., 2013, 34: 1277–1290 doi: 10.1016/S1872-2067(12)60610-X

Progress in carbon monoxide oxidation over nanosized Ag catalysts

ZHANG Xiaodong, QU Zhenping*, YU Fangli, WANG Yi
Dalian University of Technology



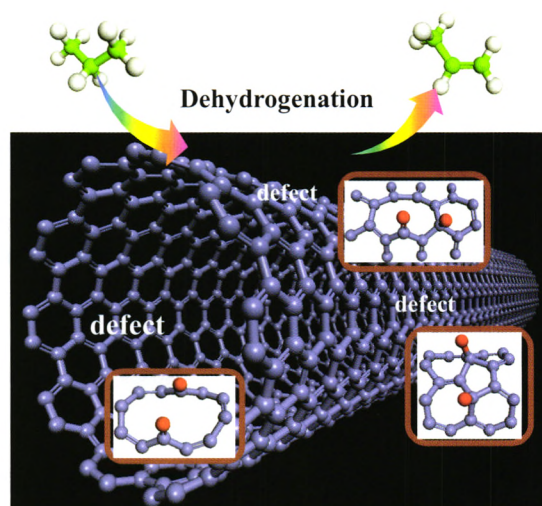
Recent developments of Ag catalysts for CO oxidation mainly focus on the structures of Ag catalysts (particle size, species states, etc.) and their catalytic activities.

Communications

Chin. J. Catal., 2013, 34: 1291–1296 doi: 10.1016/S1872-2067(12)60627-5

Tuning the catalytic performance of carbon nanotubes by tuning the conjugation between the π orbitals of carbon nanotubes and the active oxygenic functional groups

DU Yujue, LI Zhenhua*, FAN Kangnian*
Fudan University

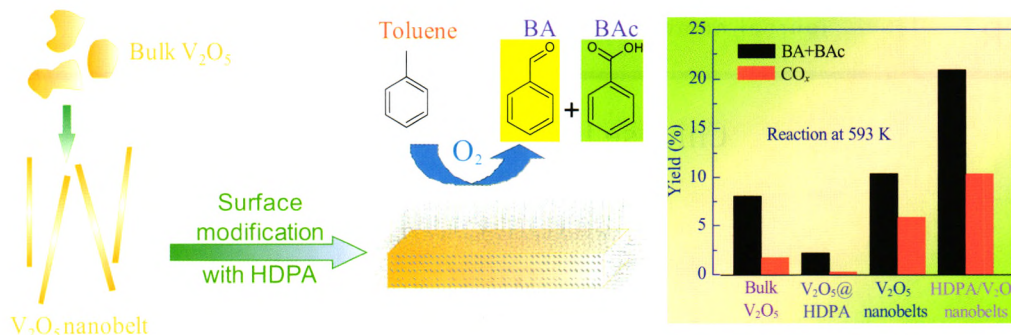


The conjugation between CNT π orbitals and the orbitals of functional groups plays a key role in balancing the activity of the two C–H activation steps in the propane dehydrogenation reaction.

Chin. J. Catal., 2013, 34: 1297–1302 doi: 10.1016/S1872-2067(12)60619-6

Selective oxidation of toluene by surface-modified vanadium oxide nanobelts

LI Xuan, YE Shuang, ZHAO Jianbo, LI Lei, PENG Luming, DING Weiping*
Nanjing University



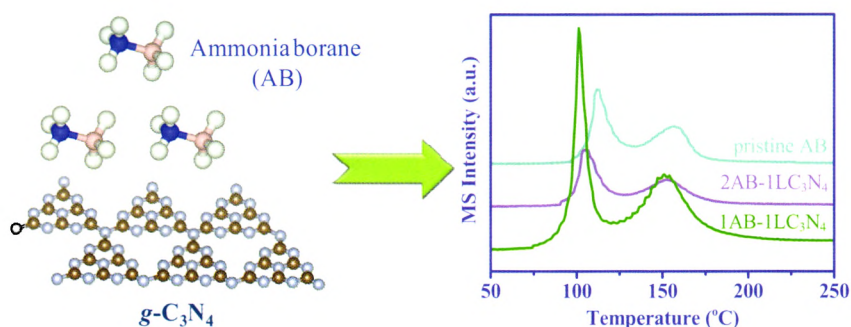
Vanadium oxide nanobelts are more active, but less selective, in toluene oxidation than bulk vanadium oxide is. Significant modification of the selective oxidation of toluene on vanadium oxide nanobelts is achieved by doping with hexadecylphosphonic acid.

Articles

Chin. J. Catal., 2013, 34: 1303–1311 doi: 10.1016/S1872-2067(12)60566-X

Effects of graphitic carbon nitride on the dehydrogenation of ammonia borane

ZHANG Jing, HE Teng*, LIU Bin, LIU Lin, ZHAO Zelun, HU Daqiang, JU Xiaohua, WU Guotao, CHEN Ping*
Dalian Institute of Chemical Physics, Chinese Academy of Sciences

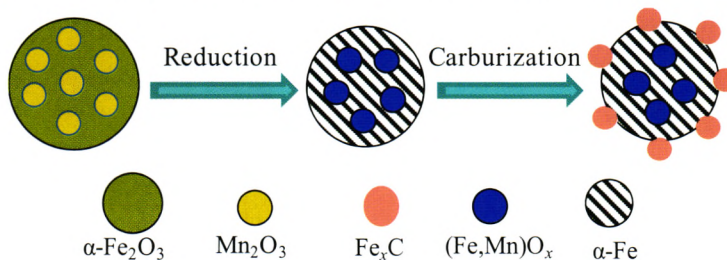


The dehydrogenation temperature of C₃N₄-modified ammonia borane was reduced to lower region with depression of byproduct and induction period compared with pristine ammonia borane.

Chin. J. Catal., 2013, 34: 1312–1325 doi: 10.1016/S1872-2067(12)60562-2

Controlling the phase transformations and performance of iron-based catalysts in the Fischer-Tropsch synthesis

GAO Fangfang, WANG Hong, QING Ming, YANG Yong*, LI Yongwang
Institute of Coal Chemistry, Chinese Academy of Sciences; University of Chinese Academy of Sciences; Synfuels China Co. Ltd

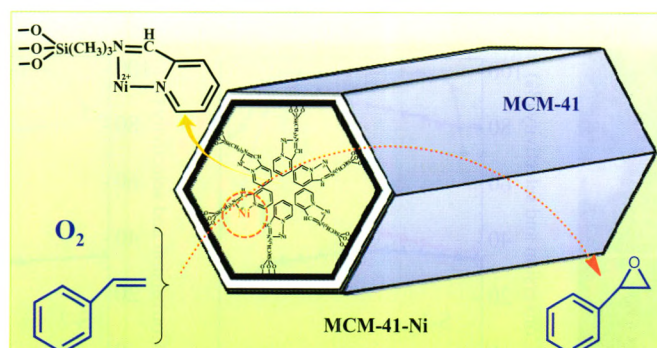


The control of the phase transformations of iron-based catalysts can be achieved by effectively controlling the reduction and carburization conditions.

Chin. J. Catal., 2013, 34: 1326–1332 doi: 10.1016/S1872-2067(12)60568-3

Nickel(II) complex anchored on MCM-41 for the epoxidation of styrene by oxygen

YANG Gang*, CHEN Xing, WANG Xiaoli, XING Weihong, XU Nanping
Nanjing University of Technology

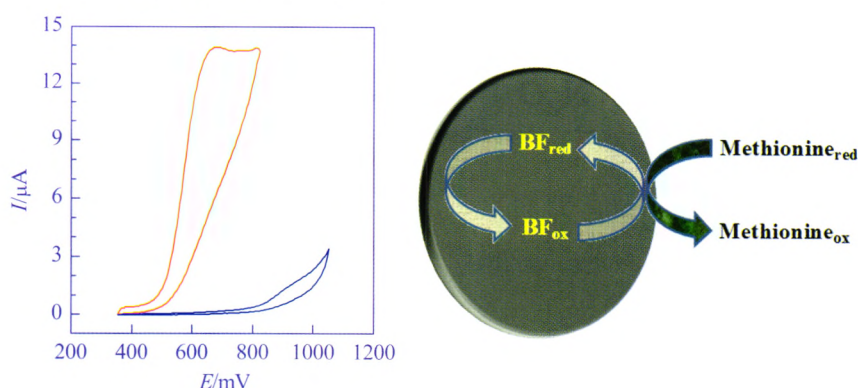


A nickel(II) Schiff base complex functionalized MCM-41 catalyst was used to catalyze epoxidation of styrene using green oxidant molecular oxygen as oxidant with styrene conversion of 95.2% and epoxide selectivity of 66.7%.

Chin. J. Catal., 2013, 34: 1333–1338 doi: 10.1016/S1872-2067(12)60582-8

Electrocatalytic measurement of methionine concentration with a carbon nanotube paste electrode modified with benzoylferrocene

Hadi BEITOLLAHI*, Alireza MOHADESI, Farzaneh GHORBANI, Hassan KARIMI MALEH, Mehdi BAGHAYERI, Rahman HOSSEINZADEH
Graduate University of Advanced Technology, Iran; Payame Noor University, Iran;
Hakim Sabzevari University, Iran; University of Mazandaran, Iran



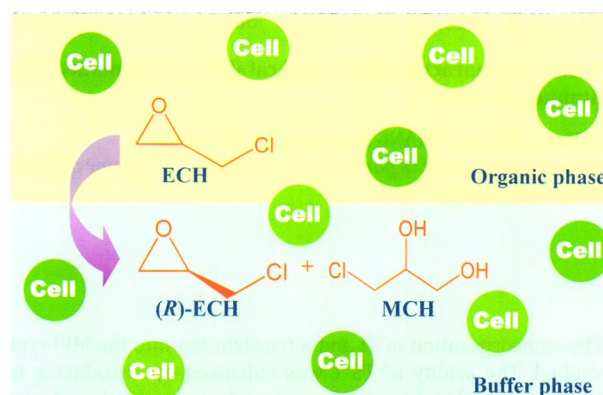
A sensor was fabricated for the measurement of methionine concentration that reduced the oxidation potential of methionine as compared to the unmodified electrode.

Chin. J. Catal., 2013, 34: 1339–1347 doi: 10.1016/S1872-2067(12)60576-2

Enzymatic resolution of epichlorohydrin catalyzed by whole cells in an organic solvent/buffer biphasic system

ZOU Shuping, YAN Haiwei, HU Zhongce, ZHENG Yuguo*
Zhejiang University of Technology

An isooctane/buffer biphasic system is useful for dissolving the substrate epichlorohydrin (ECH) and suppressing its non-enzymatic hydrolysis. This biphasic system could prove useful for improving the concentration of substrate and yield of (R)-ECH.

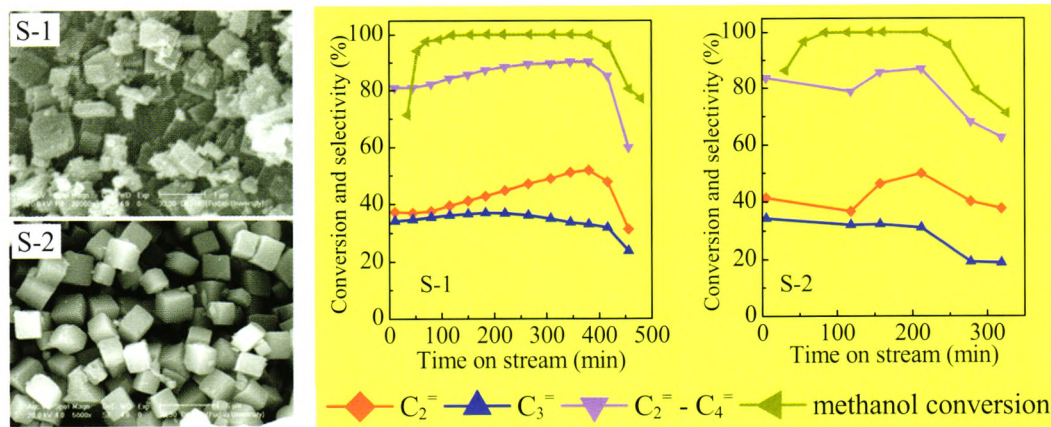


Chin. J. Catal., 2013, 34: 1348–1356 doi: 10.1016/S1872-2067(12)60575-0

Effect of SAPO-34 molecular sieve morphology on methanol to olefins performance

WU Lei, LIU Ziyu *, XIA Lin, QIU Minghuang, LIU Xu, ZHU Haojia, SUN Yuhan *

Shanghai Advanced Research Institute, Chinese Academy of Sciences; University of Chinese Academy of Sciences;
Institute of Coal Chemistry, Chinese Academy of Sciences



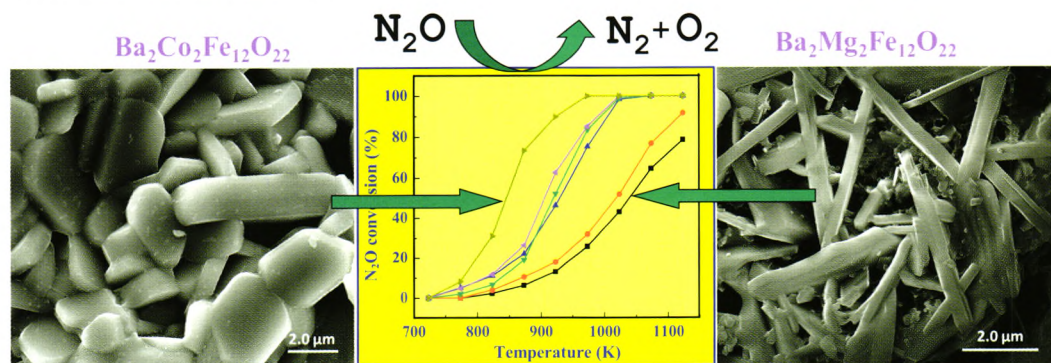
Methanol to olefins performance on SAPO-34 depends on the molecular sieve morphology. The sheet-like SAPO-34 (sample S-1) exhibits a longer lifetime and higher olefin selectivity than the cubic material (sample S-2) because of the shorter diffusion path of the former.

Chin. J. Catal., 2013, 34: 1357–1362 doi: 10.1016/S1872-2067(12)60587-7

Catalytic decomposition of N₂O on cobalt substituted barium hexaferriates

Barkat UL-AIN, Safer AHMED, HUANG Yanqiang *

Dalian Institute of Chemical Physics, Chinese Academy of Sciences, China; Quaid-i-Azam University Islamabad, Pakistan



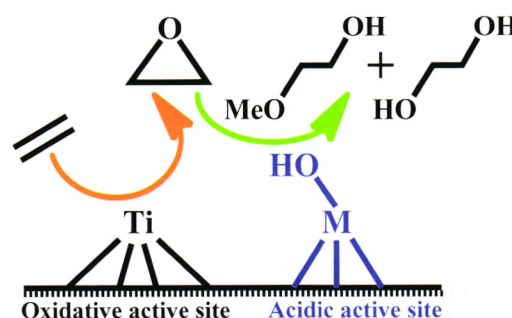
Co substituted barium hexaferriates displayed good activity for N₂O decomposition. Complete substitution of Mg for Co lowered the complete conversion temperature from 1123 K to 973 K.

Chin. J. Catal., 2013, 34: 1363–1372 doi: 10.1016/S1872-2067(12)60589-0

Synthesis, characterization, and catalytic performance of bifunctional titanium silicalite-1

LI Hao, LEI Qian, ZHANG Xiaoming *, SUO Jishuan

Chengdu Institute of Organic Chemistry, Chinese Academy of Sciences;
Yangtze University



The coinorporation of Ti and a trivalent ion into the MFI-type zeolite was studied. The acidity of TS-1 was enhanced by introducing trivalent ions. M-TS-1 showed higher activity in the selective oxidation of ethylene.

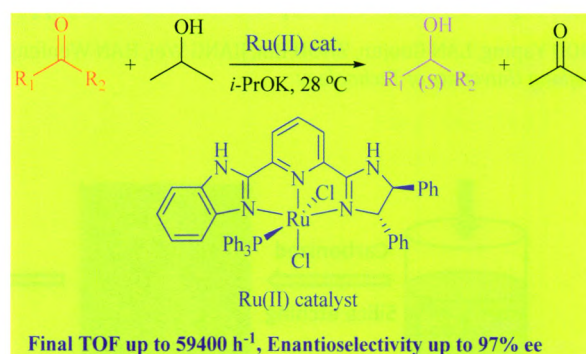
Chin. J. Catal., 2013, 34: 1373–1377 doi: 10.1016/S1872-2067(12)60583-X

Ru(II) pyridyl-based NNN complex catalysts for (asymmetric) transfer hydrogenation of ketones at room temperature

DU Wangming, WANG Qingfu, YU Zhengkun*

Dalian Institute of Chemical Physics, Chinese Academy of Sciences

Ru(II) complexes bearing pyridyl-based benzimidazolyl-imidazolynyl tridentate NNN ligands exhibited excellent catalytic activity and selectivity in the asymmetric transfer hydrogenation of ketones at room temperature.

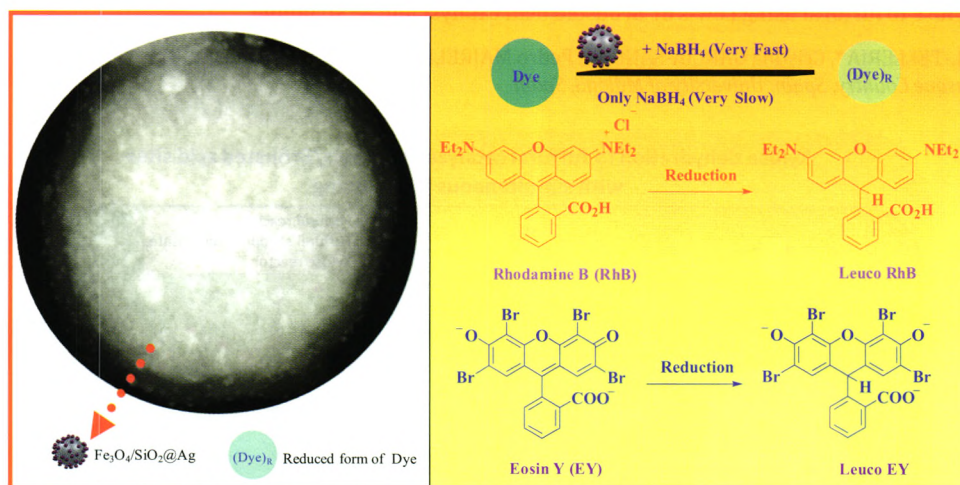


Chin. J. Catal., 2013, 34: 1378–1385 doi: 10.1016/S1872-2067(12)60605-6

Recyclable $\text{Fe}_3\text{O}_4@\text{SiO}_2\text{-Ag}$ magnetic nanospheres for the rapid decolorizing of dye pollutants

SUN Lijuan, HE Jiang*, AN Songsong, ZHANG Junwei, ZHENG Jinmin, REN Dong

Lanzhou University



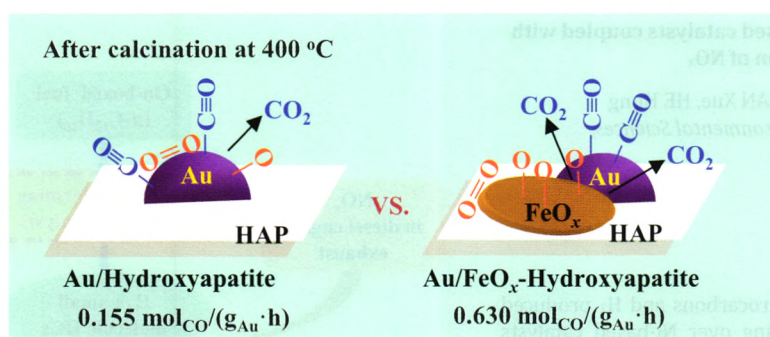
Show STEM image of $\text{Fe}_3\text{O}_4@\text{SiO}_2\text{-Ag}$ nanospheres and their catalytic mechanism for reduction of rhodamine B and eosin Y in the presence of NaBH_4 . The catalytic activity depends on the Ag nanoparticles on the surface of $\text{Fe}_3\text{O}_4@\text{SiO}_2$ nanoparticles.

Chin. J. Catal., 2013, 34: 1386–1394 doi: 10.1016/S1872-2067(12)60590-7

The roles of hydroxyapatite and FeO_x in a $\text{Au}/\text{FeO}_x\text{-hydroxyapatite}$ catalyst for CO oxidation

ZHAO Kunfeng, QIAO Botao, ZHANG Yanjie, WANG Junhu*

Dalian Institute of Chemical Physics, Chinese Academy of Sciences; University of Chinese Academy of Sciences



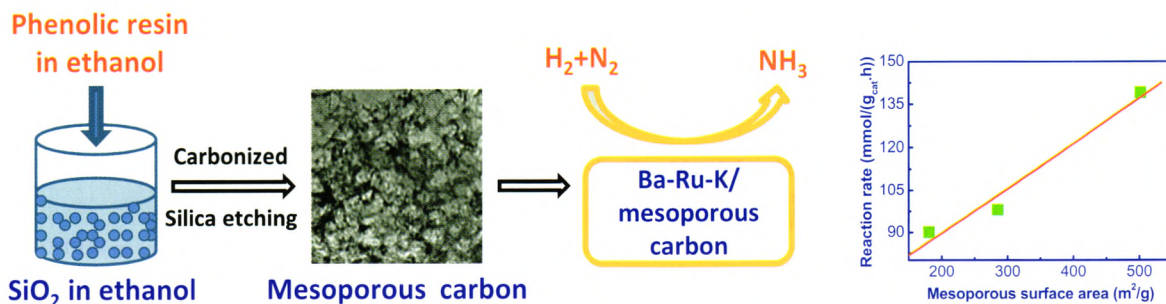
The hydroxyapatite stabilizes gold and FeO_x nanoparticles by a strong interaction with these, while FeO_x promotes the catalytic activity by changing the nature of the reaction mechanism and the intermediates.

Chin. J. Catal., 2013, 34: 1395–1401 doi: 10.1016/S1872-2067(12)60596-8

Effect of pore structure of mesoporous carbon on its supported Ru catalysts for ammonia synthesis

ZHOU Yaping, LAN Guojun, ZHOU Bin, JIANG Wei, HAN Wenfeng, LIU Huazhang, LI Ying*

Zhejiang University of Technology



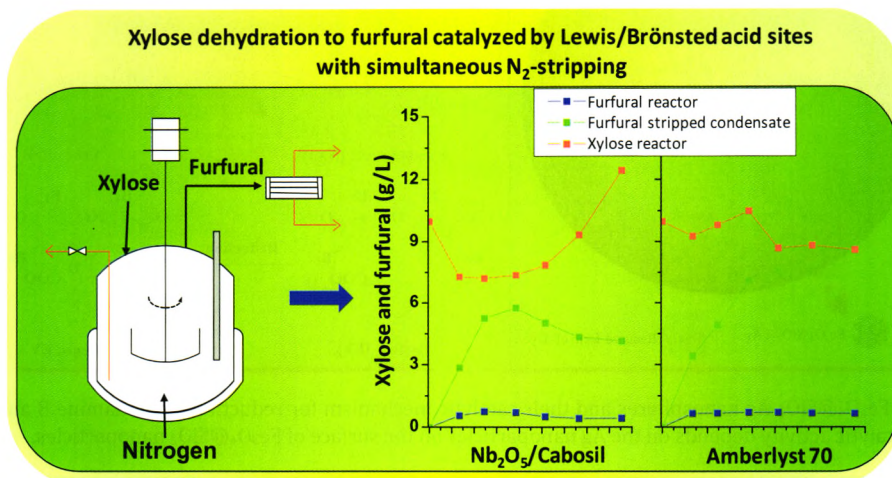
The pore structure of the Ba-Ru-K catalyst supported on mesoporous carbon was controlled by changing the particle size of SiO_2 and the SiO_2/C ratio. The catalyst activity for ammonia synthesis increased with an increased mesoporous surface area.

Chin. J. Catal., 2013, 34: 1402–1406 doi: 10.1016/S1872-2067(12)60599-3

Dehydration of xylose to furfural using Lewis or Brønsted acid catalyst and N_2 stripping

Iker AGIRREZABAL-TELLERIA*, Cristina GARCÍA-SANCHO, Pedro MAIRELES-TORRES, Pedro Luis ARIAS

University of the Basque Country, Spain; University of Málaga, Spain



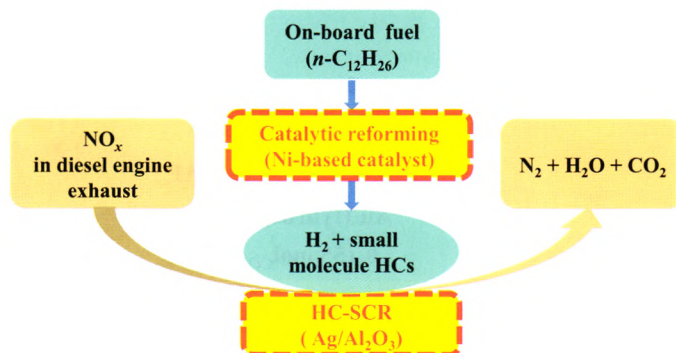
The present work studied the change of the xylose dehydration mechanism and furfural yield using Lewis ($Nb_2O_5/Cabosil$) or Brønsted (Amberlyst 70) acid catalysts in combination with simultaneous discontinuous N_2 -stripping.

Chin. J. Catal., 2013, 34: 1407–1417 doi: 10.1016/S1872-2067(12)60598-1

Fuel reforming over Ni-based catalysts coupled with selective catalytic reduction of NO_x

ZHAO Jiaojiao, YU Yunbo*, HAN Xue, HE Hong

Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences

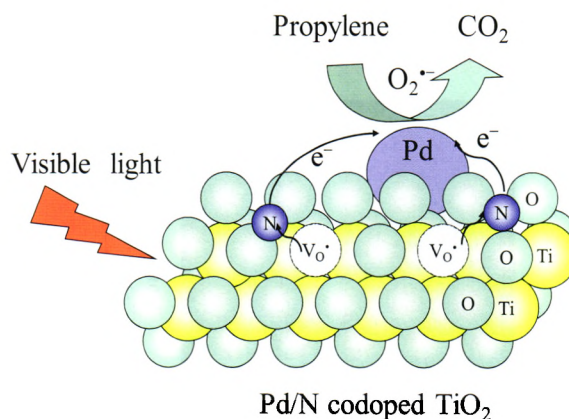


Small molecular weight hydrocarbons and H_2 produced from on-board fuel reforming over Ni-based catalysts were used as reductants in the selective catalytic reduction of NO_x over Ag/Al_2O_3 catalysts at typical diesel exhaust temperatures.

Chin. J. Catal., 2013, 34: 1418–1428 doi: 10.1016/S1872-2067(12)60597-X

Preparation and characterization of Pd/N codoped TiO₂ photocatalysts with high visible light photocatalytic activity

YU Xinlun, WANG Yan, MENG Xiangjiang, YANG Jianjun*
Henan University

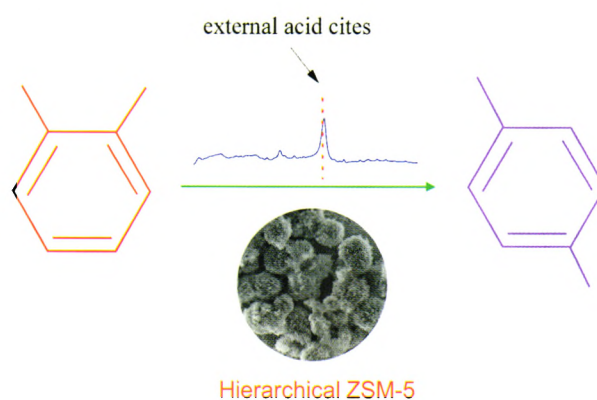


Pd/N codoped TiO₂ photocatalysts showed high efficiency for the visible light photocatalytic oxidation of propylene. The origin of visible light photocatalytic activity was attributed to both Pt and N dopant elements and the formation of single-electron-trapped oxygen vacancies.

Chin. J. Catal., 2013, 34: 1429–1433 doi: 10.1016/S1872-2067(12)60602-0

Hierarchical mesoporous ZSM-5 zeolite with increased external surface acid sites and high catalytic performance in *o*-xylene isomerization

ZHOU Jian, LIU Zhicheng*, LI Liyuan, WANG Yangdong, GAO Huanxin,
YANG Weimin, XIE Zaiku*, TANG Yi
Shanghai Research Institute of Petrochemical Technology, SINOPEC;
Fudan University

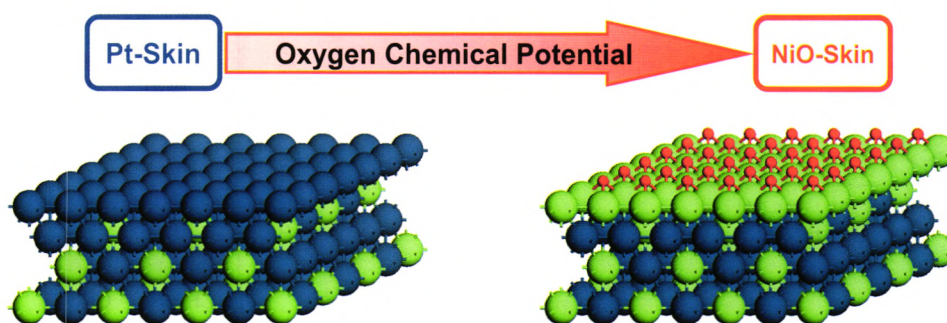


Hierarchical mesoporous ZSM-5 zeolite synthesized by the steam-assisted crystallization method exposes lots of acid sites on the external surface, thereby improving catalytic activity in the isomerization of *o*-xylene.

Chin. J. Catal., 2013, 34: 1434–1442 doi: 10.1016/S1872-2067(12)60604-4

An atomistic thermodynamics study of the structural evolution of the Pt₃Ni(111) surface in an oxygen environment

SUN Dapeng, ZHAO Yonghui, SU Haiyan, LI Weixue*
Dalian Institute of Chemical Physics, Chinese Academy of Sciences



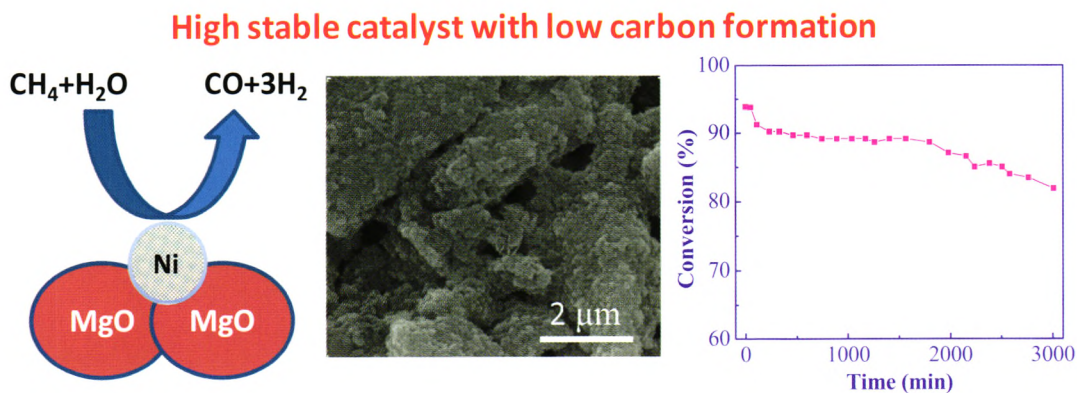
With a gradual increase of oxygen chemical potential, the clean Pt-skin surfaces of Pt₃Ni(111) transit to the oxygen-chemisorbed Ni-skin surfaces without stable oxygen-chemisorbed PtNi surface alloys formed.

Chin. J. Catal., 2013, 34: 1443–1448 doi: 10.1016/S1872-2067(12)60606-8

A nanocrystalline MgO support for Ni catalysts for steam reforming of CH₄

Mahmood ANDACHE, Mehran REZAEI *, Mansour KAZEMI MOGHADAM

Islamic Azad University, Iran; University of Kashan, Iran; Iran University of Science and Technology, Iran



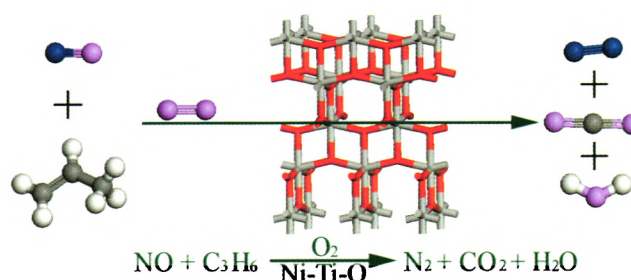
A 7% Ni catalyst supported on mesoporous nanocrystalline MgO showed high catalytic stability and low degree of carbon formation in steam reforming of methane for syngas production.

Chin. J. Catal., 2013, 34: 1449–1455 doi: 10.1016/S1872-2067(12)60614-7

Preparation and characterization of Ni-Ti-O mixed oxide for selective catalytic reduction of NO under lean-burn conditions

YUAN Deling, LI Xinyong *, ZHAO Qidong
Dalian University of Technology

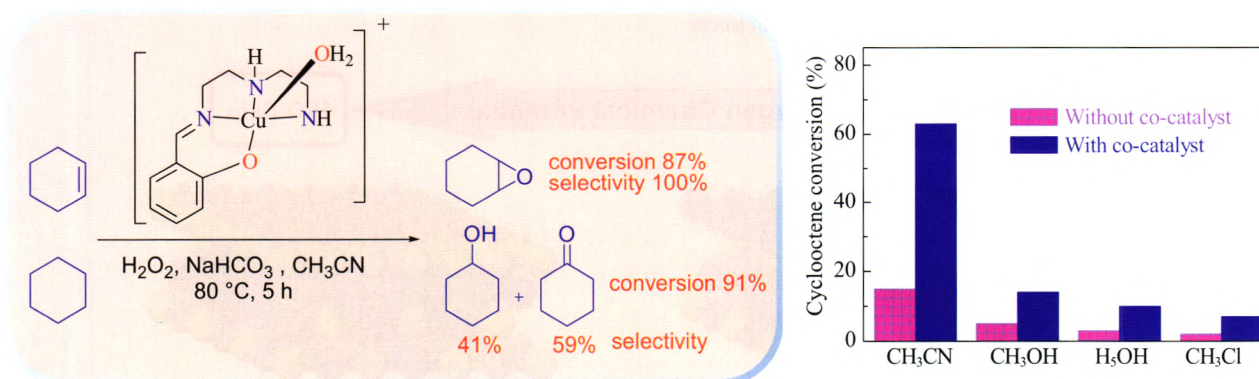
A novel Ni-Ti-O mixed-oxide catalyst was used in the selective catalytic reduction of NO by C₃H₆ under lean-burn conditions; the catalyst demonstrated good activity at 430 °C.



Chin. J. Catal., 2013, 34: 1456–1461 doi: 10.1016/S1872-2067(12)60616-0

Synthesis, structural analysis and evaluation of the catalytic activity of a non-symmetric *N*-(salicylidene)diethylenetriamine complex of copper(II)

Hassan HOSSEINI-MONFARED *, Sohaila ALAVI, Milosz SICZEK
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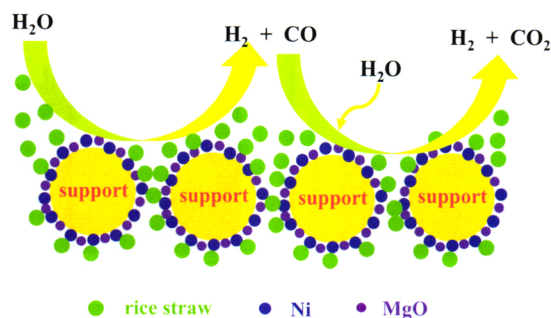


Synthesis and crystal structural analysis of a new copper(II) complex of a non-symmetric Schiff base have been reported. The complex showed high levels of catalytic activity and selectivity towards the oxidation of cycloalkenes and cyclohexane by H₂O₂ and NaHCO₃.

Chin. J. Catal., 2013, 34: 1462–1468 doi: 10.1016/S1872-2067(12)60618-4

Catalytic steam reforming of rice straw biomass to hydrogen-rich syngas over Ni-based catalysts

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Supported Ni-based catalysts

A series of supported Ni-based catalysts were prepared and used for steam reforming of rice straw biomass to hydrogen-rich syngas. A 1.0% MgO-7.5% Ni/ γ -Al₂O₃ catalyst exhibited the highest catalytic activity of the series.