

基本信息

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职务		
职称	教授	
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教育背景

1988.09-1993.06	吉林大学，化学系物理化学专业，理学博士
1985.09-1988.06	吉林大学，化学系物理化学专业，理学硕士
1981.09-1985.06	吉林大学，化学系物理化学专业，理学学士

工作履历

2003.06-至今	北京理工大学，理学院/化学与化工学院，副教授/教授
1999.04-2002.03	日本千叶工业大学，自然系化学教研室，讲师
1988.06-1996.09	吉林大学，化学系，助教/讲师/副教授

研究方向

1.	催化化学（氢气精制、甲烷转化、催化燃烧）
2.	聚合物热降解反应动力学
3.	固体氧化物燃料电池
4.	量子化学计算

承担项目

1.	中石油合作课题：氢气精制催化剂研制，2010-2011年，12万元，主持
2.	国家自然科学基金：钙钛矿型金属氧化物制备，2012-2015年，60万元，主持

研究成果

主持国家自然科学基金项目 3 项、承担企业合作项目 1 项。迄今在国内外学术刊物及会议上发表学术论文 60 篇，其中 SCI 收录 35 篇，获授权专利 2 项。

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| 1. | 氢气精制：CO 选择甲烷化反应催化剂及其工艺过程 |
| 2. | 甲烷转化：甲烷氧化偶联反应中氢气生成量的评价 |
| 3. | 热反应动力学：表观活化能和指前因子计算的误差分析 |

代表性论文

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| 1. | X. Xiao, L. Zhang, Y. Sang, Z. Gao* . Effects of supports and combined process on hydrogen purification over nickel supported catalysts, <i>Journal of Rare Earths</i> 38 (2020) 52-58 |
| 2. | L. Zhang, M. Xiao, Z. Gao* , H. Ma, L. Bao, Z. Li*. CO removal via selective methanation over the catalysts Ni/ZrO ₂ prepared with reduction by the wet H ₂ -rich gas, <i>International Journal of Hydrogen Energy</i> 43 (2018) 15985-15994 |
| 3. | L. Zhang, Z. Gao* , L. Bao, H. Ma*. Influence of the supports ZrO ₂ on selective methanation of CO over the nickel supported catalysts, <i>International Journal of Hydrogen Energy</i> 43 (2018) 9287-9295 |
| 4. | Z. Gao* , L. Wang, H. Ma, Z. Li*. Durability of catalytic performance of the chlorine-doped catalysts Ni(Cl _x)/ZrO ₂ for selective methanation of CO in H ₂ -rich gas, <i>Applied Catalysis A: General</i> 534 (2017) 78-84 |
| 5. | F. Liu, Y. Sang, H. Ma, Z. Li, Z. Gao* . Nickel oxide as an effective catalyst for catalytic combustion of methane, <i>Journal of Natural Gas Science and Engineering</i> 41 (2017) 1-6 |
| 6. | Z. Gao* , L. Cui, H. Ma. Selective methanation of CO in H ₂ -rich gas over Ni/Al ₂ O ₃ catalyst: Effects of preparation method and Ru addition, <i>International Journal of Hydrogen Energy</i> 41 (2016) 5484-5493 |
| 7. | Z. Gao* , Y. Liu, Q. He, H. Ma, Z. Li. Preferential oxidation of CO and its subsequent methanation in H ₂ -rich gas over CuO-NiO/CeO ₂ catalysts, <i>International Journal of Hydrogen Energy</i> 41 (2016) 4646-4659 |
| 8. | Z. Gao* , H. Wang, H. Ma, Z. Li. Preparation and characterization of the non- stoichiometric La-Mn perovskites, <i>Journal of Alloys and Compounds</i> 646 (2015) 73-79 |
| 9. | F. Liu, Z. Li, H. Ma, Z. Gao* . Surface composition and catalytic activity of La-Fe mixed oxides for methane oxidation, <i>Applied Surface Science</i> 351 (2015) 709-714 |
| 10. | Z. Gao* , L. Wei, T. Yan, M. Zhou. Modification of surface layer of magnesium oxide via partial dissolution and re-growth of crystallites, <i>Applied Surface Science</i> 257 (2011) 3412-3416 |

11.	Z. Gao* , R. Wang. Catalytic activity for methane combustion of the perovskite-type $\text{La}_{1-x}\text{Sr}_x\text{CoO}_{3-\delta}$ oxide prepared by the urea decomposition method, <i>Applied Catalysis B: Environmental</i> 98 (2010) 147-153
12.	Z. Gao* , Y. Shi. Suppressed formation of CO_2 and H_2O in the oxidative coupling of methane over $\text{La}_2\text{O}_3/\text{MgO}$ catalyst by surface modification, <i>Journal of Natural Gas Chemistry</i> 19(2) (2010) 173-178
13.	Z. Gao* , J. Zhang, R. Wang. Formation of hydrogen in oxidative coupling of methane over BaCO_3 and MgO catalysts, <i>Journal of Natural Gas Chemistry</i> 17(3) (2008) 238-241
14.	Z. Gao* , M. Kobayashi, H. Wang, K. Onoe, T. Yamaguchi. Methane conversion in thermal diffusion column reactor with carbon rod as pyrogen, <i>Fuel Processing Technology</i> 88 (2007) 996-1001
15.	Z. Gao* , H. Wang, M. Nakada. Iterative method to improve calculation of the pre-exponential factor for dynamic thermogravimetric analysis measurements, <i>Polymer</i> 47 (2006) 1590-1596
16.	Z. Gao* , T. Kaneko, D. Hou, M. Nakada. Kinetics of thermal degradation of poly(methyl methacrylate) studied by the assistance of the fractional conversion at the maximum reaction rate, <i>Polymer Degradation and Stability</i> 84 (2004) 399-403
17.	Z. Gao* , I. Amasaki, T. Kaneko, M. Nakada. Calculation of activation energy from fraction of bonds broken for thermal degradation of polyethylene, <i>Polymer Degradation and Stability</i> 81 (2003) 125-130
18.	Z. Gao* , T. Kaneko, I. Amasaki, M. Nakada. A kinetic study of thermal degradation of polypropylene, <i>Polymer Degradation and Stability</i> 80 (2003) 269-274
19.	Z. Gao* , I. Amasaki, M. Nakada. A description of kinetics of thermal decomposition of calcium oxalate monohydrate by means of the accommodated Rn model, <i>Thermochimica Acta</i> 385 (2002) 95-103
20.	Z. Gao* , M. Nakada, I. Amasaki. A consideration of errors and accuracy in the isoconversional methods, <i>Thermochimica Acta</i> 369 (2001) 137-142
21.	Z. Gao , K. Sekizawa, K. Eguchi*. Power generation characteristics of SOFC with internal CO_2 reforming of methane, <i>Electrochemistry-Tokyo-</i> 67(4) (1999) 336-339
22.	Z. Gao* , Y. Wu. Influences of acid treatments of active carbons on NO reduction over carbon-supported copper oxides, <i>React. Kinet. Catal. Lett.</i> 59(2) (1996) 359-366
23.	Z. Gao* , T. Wu, S. Peng. A new preparative procedure for ultrafine spinel ferrites, <i>J. Mater. Sci. Lett.</i> 13 (1994) 1715-1716

24.	高志明, 李志儒*, 封继康. 酉群组态相互作用方法及其应用, 高等学校化学学报 11(1) (1991) 111-113
25	郭纯孝*, 高志明. 限制性自洽场开壳层 CNDO/2 方法, 物理化学学报 5(4) (1989) 420-426