

郭立简介



博士、讲师

E-mail: guoli@wust.edu.cn

电话: 18271463618

教育和工作经历

2017年7月--至今 武汉科技大学，化学与化工学院，讲师

2015年7月--2017年6月 武汉凯迪生物质热化学国家重点实验室，研发工程师

2010年9月--2015年6月 华东理工大学，工业催化研究所，博士

主要研究方向

1. 生物质资源的高值化利用研究
2. 二氧化碳的捕集和转化
3. 新型多相催化材料的设计

主持和参与的部分科研项目

1. 武汉市科技局应用基础前沿项目，2018060401011310，臭氧前体物 NO_x 固定源控制过程研究，2018/07-2020/12，50 万元，在研，参加
2. 第三批湖北省青年英才开发计划，5 万元，2019/12-2022/12，主持，在研

3. 国家自然科学基金面上项目，21373082，功能化离子液体阳离子和阴离子协同调控的金属纳米颗粒：催化加氢和温控分离，2014/01-2017/12，83 万，参加，已结题

主要研究成果

- [1] Chen J*, Peng G, Zheng W, Zhang W, Guo L*, Wu X*. Excellent performance of one-pot synthesized Fe-containing MCM-22 zeolites for the selective catalytic reduction of NO_x with NH₃. *Catal. Sci. Technol.*, 2020, 10 (21): 6583-6598.
- [2] Guo L*, Zhang R, Xiong Y, Chang D, Zhao H, Zhang W, Zheng W, Chen J*, Wu X*. The application of biomass-based catalytic materials in the synthesis of cyclic carbonates from CO₂ and epoxides. *Molecules*, 2020, 25 (16): 3627-3649.
- [3] Guo L*, Dou R, Wu Y, Zhang R, Wang L, Wang Y, Gong Z, Chen J*, Wu X*. From lignin waste to efficient catalyst: illuminating the impact of lignin structure on catalytic activity of cycloaddition reaction. *ACS Sustain. Chem. Eng.*, 2019, 7 (19): 16585-16594.
- [4] Guo L, Zhao X, Zhang R, Chen C, Chen J, Chen A, Liu X, Hou Z*. Mesoporous spherical silica encapsulating Pd nanoparticles prepared by CO₂-induced microemulsion and catalytic application in Suzuki coupling reaction. *J. Supercrit. Fluids*, 2016, 107: 715-722.
- [5] Guo L, Zhang R, Chen C, Chen J, Zhao X, Chen A, Liu X, Xiu Y, Hou Z*. Gold nanoparticles embedded in silica hollow nanospheres induced by compressed CO₂ as an efficient catalyst for selective oxidation. *Phys. Chem. Chem. Phys.*, 2015, 17 (9): 6406-6414.
- [6] Guo L, Zhang R, Zhao X, Gan H, Song B, Chen J, Zhu W, Li H, Hou Z*. Synthesis of wormhole mesoporous silica by compressed carbon dioxide and application in catalytic hydrogenation. *J. Porous Mat.*, 2014, 21 (5): 739-746.

- [7] Chen J*, Peng G, Liang T, Zhang W, Zheng W, Zhao H, Guo L*, Wu X*. Catalytic Performances of Cu/MCM-22 Zeolites with Different Cu Loadings in NH₃-SCR. *Nanomaterials*, 2020, 10 (11): 2170-2189.
- [8] Pan H, Liu Y, Xia Q*, Zhang H, Guo L, Li H*, Jiang L, Yang S*. Synergetic combination of a mesoporous polymeric acid and a base enables highly efficient heterogeneous catalytic one-pot conversion of crude *Jatropha* oil into biodiesel. *Green Chem.*, 2020, 22 (5): 1698-1709.
- [9] Zhang R1, Du Q1, Wang L, Zheng Z, Guo L, Zhang X, Yang X*, Yu H*. Unlocking the response of lignin structure for improved carbon fiber production and mechanical strength. *Green Chem.*, 2019, 21 (18): 4981-4987.
- [10] Wang L1, Zhang R1, Li J, Guo L, Yang H, Ma F*, Yu H*. Comparative study of the fast pyrolysis behavior of ginkgo, poplar, and wheat straw lignin at different temperatures. *Ind. Crop. Prod.*, 2018, 122: 465-472.