



个人简介:

姓名: 黄宏亮 出生年月: 1985.10

技术职务: 副研究员 专业及学历: 博士

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工作及教育经历:

2017/11-至今, 天津工业大学, 化学与化工学院, 副研究员

2016/07-2017/11, 北京化工大学, 化学工程学院, 讲师

2014/07-2016/07, 北京化工大学, 博士后

2009/09-2014/06, 北京化工大学, 化学工程与技术, 硕博连读

2005/09-2009/06, 北京化工大学, 化学工程与工艺, 本科

研究方向:

1. 面向化工中气体存储和分离应用, 采用计算化学方法研究金属-有机骨架材料对气体吸附分离的微观机理, 并建立构效关系, 为化工新材料设计提供理论指导。
2. 针对化工领域实际需求, 设计合成新型金属-有机骨架材料, 并研究其在 CO₂ 捕获、能源气体储存、废水处理、油品净化、膜分离等化工过程领域的应用。

荣誉称号:

1. 天津工业大学“杰出青年人才支持计划”

获奖与社会兼职:

1. 面向难分离体系的新型多孔材料的设计方法和制备, 中国石油与化学工业联合会, 科技进步一等奖, 2018, 排名第四
2. 担任 *J. Am. Chem. Soc.*, *J. Mater. Chem. A*, *Coord. Chem. Rev.*, *Chem. Eng. J.* 等多个SCI期刊审稿人。

主持及参加的科研项目：

1. 面向化工中大分子吸附分离的多级孔金属-有机骨架材料设计与合成研究. 国家自然科学基金. 20 万. 2017-2019. 在研
2. 天津工业大学杰出青年人才支持计划. 天津工业大学(人才基金). 30 万. 2018-2019. 在研
3. 黄宏亮, 金属-有机骨架合成及用于水中重金属离子脱除性能的基础研究, 北京化工大学(中央高校基本科研业务费项目), 2 万. 2015-2016 年. 结题

代表性学术论文：

1. Hongliang Huang, Jian-Rong Li, Keke Wang, Tongtong Han, Minman Tong, Liangsha Li, Yabo Xie, Qingyuan Yang, Dahuan. Liu, Chongli Zhong.. An in situ self-assembly template strategy for the preparation of hierarchical-pore metal-organic frameworks. *Nat. Commun.* 2015.6 8847.
2. Yaguang Peng, Hongliang Huang*, Yuxi Zhang, Chufan Kang, Shuangming Chen, Li Song, Dahuan Liu, Chongli. Zhong*. A versatile MOF-based trap for heavy metal ion capture and dispersion. *Nat. Commun.* 2018, 9,187.
3. Dawei Cao#, Hongliang Huang#, Youshi Lan, Xiaojun Chen, Qingyuan Yang, Dahuan Liu, Yu Gong, Chengjian Xiao, Chongli Zhong* and Shuming Peng*. *J. Mater. Chem. A*, 2018, 6, 19954–19959
4. Hongliang Huang, Wenjuan Zhang, Fan Yang, Bin Wang, Qingyuan Yang, Yabo Xie, Chongli Zhong, Jian-Rong Li. Enhancing CO₂ adsorption and separation ability of Zr(IV)-based metal-organic frameworks through ligand functionalization under the guidance of the quantitative structure-property relationship model. *Chem. Eng. J.* 2016, 289, 247-253
5. Keke Wang, Caifeng Li, Yuxin Liang, Tongtong Han, Hongliang Huang*, Qingyuan Yang, Dahuan Liu, Chongli Zhong. Rational construction of defects in a metal-organic framework for highly efficient adsorption and separation of dyes. *Chem. Eng. J.* 2016, 289, 486-493.
6. Keke Wang, Hongliang Huang*, Dahuan Liu, Chang Wang, Jinping Li, Chongli Zhong*. Covalent Triazine-Based Frameworks with Ultramicropores and High Nitrogen Contents for Highly Selective CO₂ Capture. *Environ. Sci. Technol.*, 2016, 50, 4869-4876
7. Yaguang Peng, Hongliang Huang*, Dahuan Liu, and Chongli Zhong*. Radioactive Barium Ion Trap Based on Metal–Organic Framework for Efficient and Irreversible Removal of Barium from

Nuclear Wastewater. *ACS Appl. Mater. Interfaces*, 2016, 8, 8527-8535.

8. Yaguang Peng, Yuxi Zhang, Hongliang Huang*, Chongli Zhong. Flexibility induced high-performance MOF-based adsorbent for nitroimidazole antibiotics capture. *Chem. Eng. J.* 2018, 333, 678-685
9. Xinli Gao, Huifang Zhao, Xudong Zhao,* Yuanyang Wang, Zhuqing Gao and Hongliang Huang*. A fluorescent metal-organic framework containing hydroxyl groups for selective and sensitive detection of bismuth ion in aqueous solutions. *Sensors and Actuators B Chemical*. 2018, 266, 323-328
10. Jian Li, Siqi Lu, Hongliang Huang*, Dahuan Liu, Zhongbin Zhuang, Chongli Zhong*. ZIF-67 as Continuous Self-Sacrifice Template Derived NiCo₂O₄/Co,NCNTs Nanocages as Efficient Bifunctional Electrocatalysts for Rechargeable Zn–Air Batteries *ACS Sustainable Chem. Eng.* 2018, 6, 10021–10029
11. Xudong Zhao, Yanan Wei, Huifang Zhao, Zhuqing Gao*, Yuezhong Zhang, Lifei Zhi, Yuanyang Wang, Hongliang Huang*. Functionalized Metal-Organic Frameworks for Effective Removal of Rocephin in Aqueous Solutions. *Journal of Colloid and Interface Science*. 2018, 514, 234–239
12. Xiaofeng Zheng, Qunqun Ruan, Qin Jiang, Keke Wang, Qinghui Wang, Yuanzhe Tang Hongliang Huang*, Chongli Zhong. Integrated adsorption and catalytic degradation of safranin T by a porous covalent triazine-based framework. *Journal of Colloid and Interface Science*. 2018, 532, 1–11
13. Yuxi Zhang, Qunqun Ruan, Yaguang Peng, Guopeng Han, Hongliang Huang*, Chongli Zhong. Synthesis of hierarchical-pore metal-organic framework on liter scale for large organic pollutants capture in wastewater. *Journal of Colloid and Interface Science* 2018, 525, 39–47
14. Xudong Zhao, Huifang Zhao, Wenjing Dai, Yanan Wei, Yuanyang Wang, Yuezhong Zhang, Lifei Zhi, Hongliang Huang*, Zhuqing Gao*. A metal-organic framework with large 1-D channels and rich OH sites for high-efficiency chloramphenicol removal from water. *Journal of Colloid and Interface Science* 2018, 526, 28-34.
15. Hongliang Huang, Wenjuan Zhang, Dahuan Liu, Bei Liu, Guangjin Chen, Chongli Zhong. Effect of temperature on gas adsorption and separation in ZIF-8: A combined experimental and molecular simulation study *Chem. Eng. Sci.* 2011, 66 6297-6305. SCI

16. Hongliang Huang, Wenjuan Zhang, Dahuan Liu, and Chongli Zhong. Understanding the Effect of Trace Amount of Water on CO₂ Capture in Natural Gas Upgrading in Metal-Organic Frameworks: A Molecular Simulation Study. *Ind. Eng. Chem. Res.*, 2012, 51, 10031-10038
17. Keke Wang#, Hongliang Huang#, Wenjuan Xue, Dahuan Liu, Xudong Zhao, Yuanlong Xiao, Zhengjie Li, Qingyuan Yang, Luyan Wang and Chongli Zhong. An ultrastable Zr metal-organic framework with a thiophene-type ligand containing methyl groups. *CrystEngComm*, 2015, 17, 3586-3590
18. Chufan Kang, Yaguang Peng, Yuanzhe Tang, Hongliang Huang*, and Chongli Zhong. Sulfate-Rich Metal-Organic Framework for High Efficiency and Selective Removal of Barium from Nuclear Wastewater. *Ind. Eng. Chem. Res.*, 2017, 56, 13866-13873
19. Xudong Zhao, Keke Wang, Zhuqing Gao*, Huihui Gao, Zhixia Xie, Xiaoyu Du, Hongliang Huang*. Reversing the dye adsorption and separation performance of metal-organic frameworks via introduction of -SO₃H groups. *Ind. Eng. Chem. Res.*, 2017, 56, 4496-4501
20. Qin Jiang, Hongliang Huang*, Yuanzhe Tang, Yuxi Zhang, and Chongli Zhong*. Highly Porous Covalent Triazine Frameworks for Reversible Iodine Capture and Efficient Removal of Dye. *Ind. Eng. Chem. Res.*, 2018, 57, 15114-15121
21. Guopeng Han, Keke Wang, Yaguang Peng, Yuxi Zhang, Hongliang Huang*, and Chongli Zhong*. Enhancing Higher Hydrocarbons Capture for Natural Gas Upgrading by Tuning Van der Waals Interactions in fcu-Type Zr-MOFs. *Ind. Eng. Chem. Res.*, 2017, 56, 14633-14641
22. Xudong Zhao, Yuezhong Zhang, Jiamei Han, Huimin Jing, Zhuqing Gao*, Hongliang Huang*, Yuanyang Wang, Chongli Zhong. Design of "turn-on" fluorescence sensor for L-Cysteine based on the instability of metal-organic frameworks. *Microporous Mesoporous Mater.*, 2018, 268, 88-92
23. Keke Wang, Yuanzhe Tang, Qing Jiang, Youshi Lan, Hongliang Huang*, Dahuan Liu, Chongli Zhong*. A thiophene-containing covalent triazine-based framework with ultramicropore for CO₂ capture. *J. Energy Chem.* 2017, 26, 902-908

代表性专利:

1. 仲崇立, 王可可, 黄宏亮, 一种具有优异 CO₂ 吸附与分离性能的超微孔共价三嗪骨架材料以及制备方法, ZL201510634254.3
2. 仲崇立, 彭亚光, 黄宏亮, 一种金属-有机骨架功能化材料的应用, 申请号: 201510598750.8

3. 黄宏亮, 衣鹏达, 仲崇立, 一种金属-有机骨架功能化荧光材料和制备方法及其应用, 申请号: 201610552605.0
4. 仲崇立, 李彩凤, 黄宏亮, 刘大欢, 具有双共轭效应的金属有机骨架材料的制备及其应用, 申请号: 201610596726.5
5. 仲崇立, 王可可, 黄宏亮, 一种用于二氧化碳吸附与分离的骨架材料及其制备方法, 申请号: 201610791832.9.
6. 黄宏亮, 彭亚光, 仲崇立, 一种新型金属-有机骨架材料及其制备方法及用途, 申请号: 201710344882.7
7. 刘大欢, 谷建蕾, 黄宏亮, 仲崇立, 一种改性金属有机骨架材料的制备方法及制得的材料, 申请号: 201710406995.5
8. 仲崇立, 韩国鹏, 黄宏亮, 刘大欢, 超微孔金属-有机骨架材料在氢的同位素分离中的应用, 申请号: 201810542079.9