



所属学院 化工学院

学科领域 化学工程与技术

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个人简介

2016/9- 至今 华东理工大学，化工学院，教授，博士生导师
2015/3- 至今 华东理工大学，化工学院，副教授，博士生导师
2011/5-2015/3 华东理工大学，化工学院，副教授，硕士生导师
2009/5-2011/3 日本九州大学，先导材料研究所，博士后
2004/9 - 2009/3 华东理工大学，化学工艺，博士

研究方向

致力于多孔材料的结构调控、宏观尺度结构构筑以及其应用性能，关注材料的可批量化制备及工程技术，主要研究方向包括：

- (1) 能源存储（超级电容器、锂离子电池、锂硫电池）原理及器件
- (2) 环境治理过程中的吸附与催化原理
- (3) 低密度热防护材料及其在航天中的应用

研究成果及主要发表文章

1. Mingqi Chen, Zhe Su, Kai Jiang, Yankai Pan, Yayun Zhang, Donghui Long*. Promoting the sulfur immobilization by a hierarchical morphology of hollow carbon nanospheres cluster for high-stability Li-S battery. J Mater Chem A 2019, 10. 1039/c8ta12349g.
2. Zhaoxin Zhu, Hongjun Yao, Jinxin Dong, Zhen Qian, Wei Dong, Donghui Long*. High-mechanical-strength polyimide aerogels crosslinked with 4,4'-oxydianiline-functionalized carbon nanotubes. Carbon 2019, 44, 24.
3. Mingqi Chen, Min Pan, Yanping Chong, Jitong Wang, Donghui Long*. Engineering the outermost surface of mesoporous carbon beads towards the broad-spectrum blood-cleansing application. Carbon 2018, 130, 782.
4. Yanju Wei, Zhenkai Kong, Yankai Pan, Yueqiang Cao, Donghui Long*, Jitong Wang, Wenming Qiao, Licheng Ling. Sulfur film sandwiched between few-layered MoS₂ electrocatalysts and conductive reduced graphene oxide as a robust cathode for advanced lithium-sulfur batteries. J Mater Chem A 2018, 6, 5899.
5. Mengfei Hu, Yuan Yuan, Man Guo, Yankai PAN, Donghui Long*. A substrate-influenced three-dimensional unoriented dispersion pathway for dendrite-free lithium metal anodes. J Mater Chem A 2018, 6, 14910.
6. Lingping Kong, Xiaoteng Liu, Jinjia Wei, Steven Wang, Ben Bin Xu, Donghui Long*, Fei Chen. T-Nb₂O₅ nanoparticle enabled pseudocapacitance with fast Li-ion intercalation. Nanoscale 2018, 10, 14165.
7. Haiping Su, Alejandro A. Barragan, Linxiao Geng, Donghui Long*, Licheng Ling, Krassimir N. Bozhilov, Lorenzo Mangolini, Juchen Guo. Colloidal synthesis of silicon-carbon composite material for lithium-ion batteries. Angew. Chem. 2017, 129, 10920.
8. Shuang Jiao, Jun Du, Zhonglin Du, Donghui Long*, Wuyou Jiang, Zhenxiao Pan, Yan Li, Xinhua Zhong. Nitrogen-doped mesoporous carbons as counter electrodes in quantum dot sensitized solar cells with a conversion efficiency exceeding 12%. J Phy Chem Lett. 2017, 3, 559.
9. Haiping Su, Chenyin Fu, Yifan Zhao, Donghui Long*, Licheng Ling, Bryan M. Wong, Jun Lu, Junchen Guo. Polycation binders: an effective approach toward lithium polysulfide sequestration in Li-S batteries. ACS Energy Letters 2017, 2, 2591.
10. Mei Wang, Yuexing Li, Min Pan, Xianfeng Jia, Di Yin, Donghui Long*, Jitong Wang, Wenming Qiao, Licheng Ling. Shape-customizable macro-/microporous carbon monoliths for structure-to-functionality CO₂ adsorption and novel electrical regeneration. Advanced Materials Technologies 2017, 2, 1700088.
11. Zixiao Zhang, Wuyou Jiang, Donghui Long*, Jitong Wang, Wenming Qiao, Licheng Ling. A general silica-templating synthesis of alkaline mesoporous carbon catalysts for highly efficient H₂S oxidation at room temperature. ACS Applied materials & interfaces 2017, 9, 2477.
12. Yanping Chong, Ke Liu, Yu Liu, Jitong Wang, Wenming Qiao, Licheng Ling, Donghui Long*, Zhishan Bai. Highly efficient removal of bulky tannic acid by millimeter-sized nitrogen-doped mesoporous carbon beads. AIChE Journal 2017, 63, 3016.
13. Yanju Wei, Yingqing Tao, Lei Liu, Jitong Wang, Wenming Qiao, Licheng Ling, Donghui Long*. Unique electrochemical behavior of heterocyclic selenium-sulfur cathode materials in ether-based electrolytes for rechargeable lithium batteries. Energy Storage Materials 2016, 5, 171.
14. Chuanfang John Zhang, Thomas M Higgins, Sang-Hoon Park, Sean E O'Brien, Donghui Long*, Jonathan N Coleman, Valeria Nicolosi. Highly flexible and transparent solid-state supercapacitors based on RuO₂/PEDOT:PSS conductive ultrathin films. Nano Energy 2016, 28, 495.
15. Jianguo Zhou, Zhenlong Sun, Mingqi Chen, Jitong Wang, Wenming Qiao, Donghui Long*, Licheng Ling. Macroscopic and mechanically robust hollow carbon spheres with superior oil adsorption and light-to-heat evaporation properties. Advanced Functional Materials 2016, 26, 5368.
16. Zhonglin Du, Zhenxiao Pan, Francisco Fabregat-Santiago, Ke Zhao, Donghui Long*, Hua Zhang, Yixin Zhao, Xinhua Zhong, Jong-Sung Yu, Juan Bisquert. Carbon counter-electrode-based quantum-dot-sensitized solar cells with certified efficiency exceeding 11%. J Phy Chem Lett. 2016, 7, 3103.
17. Wencheng Li, Huanhuan Zhang, Jitong Wang, Wenming Qiao, Licheng Ling, Donghui Long*. Flexible Ru/Graphene aerogel with switchable surface chemistry: highly efficient catalyst for room-temperature CO oxidation. Advanced Materials Interfaces 2016, 3, 1500711.
18. Zixiao Zhang, Jitong Wang, Wencheng Li, Mei Wang, Wenming Qiao, Donghui Long*, Licheng Ling. Millimeter-sized mesoporous carbon spheres for highly efficient catalytic oxidation of hydrogen sulfide at room temperature. Carbon 2016, 96, 608.
19. Yingqing Tao, Yanju Wei, Yu Liu, Jitong Wang, Wenming Qiao, Licheng Ling, Donghui Long*. Kinetically-enhanced polysulfide redox reactions by Nb₂O₅ nanocrystals for high-rate lithium-sulfur battery. Energy & Environmental Science 2016, 9, 3230.
20. Jitong Wang, Liwen Yao, Cheng Ma, Xuhong Guo, Wenming Qiao, Licheng Ling, Donghui Long*. Organic amine-mediated synthesis of polymer and carbon microspheres: mechanism insight and energy-related applications. ACS Applied materials & interfaces 2016, 8, 4851.