



Department: School of Chemical Engineering
Professional field: Chemical Engineering and Technology
E-mail: longdh@ecust.edu.cn

Profile

Education

2009: PhD, East China University of Science and Technology

2004: BS, Huaqiao University.

Academic Experience

2016-present: Professor, East China University of Science and Technology

2011-2016: Associate Professor, East China University of Science and Technology 2009-2011:

Postdoc, Kyushu University, Japan

Research Field

Focus on the structure control, macroscale structure construction and application performance of porous materials, and pay attention to the batch preparation and engineering technology of materials. Major research areas include:

- (1) Principles and components of Energy Storage (ultracapacitors, lithium-ion battery, Lithium Sulphur Batteries)
- (2) Principle of adsorption and catalysis in environmental treatment
- (3) Low density thermal protective materials and their applications in aerospace

Research results and selected published papers

1. 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 Robust Cathode for Advanced Lithium-Sulfur Battery. *Journal of Materials Chemistry A*, 2018, 6(14): 5899-5909.
2. 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, 130:782-791.
3. Haiping Su, Chengyin Fu, Yifan Zhao, Donghui Long(*), Licheng Ling, Bryan M. Wong, Jun Lu (*), Juchen Guo(*). Polycation Binders-an Effective approach towards Lithium Polysulfides Sequestration in Li-S Battery. *ACS Energy Letters*, 2017, 2(11): 2591-2597.
4. 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. *Angewandte Chemie*, 2017, 129(36):10780.
5. 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,
6. 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%. *Journal of Physical Chemistry Letters*, 2017, 8(3):559-564.
7. Yanju Wei, Yingqing Tao, Zhenkai Kong, 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: 171-179.
8. 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, 28:495-505.
9. 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(29): 5368-5375.
15. Lingping Kong, Xiaodong Cao, Jitong Wang, Wenming Qiao, Licheng Ling, Donghui Long(*). Revisiting Li⁺ intercalation into various crystalline phases of Nb₂O₅, anchored on graphene sheets as pseudocapacitive electrodes. *Journal of Power Sources*, 2016, 309:42-49.
16. Jun Du, Zhonglin Du, Jin-Song Hu, Zhenxiao Pan, Qing Shen, Jiankun Sun, Donghui Long, Hui Dong, Litao Sun, Xinhua Zhong(*), Li-Jun Wan. Zn-Cu-In-Se quantum dot solar cells with a certified power conversion efficiency of 11.6%. *Journal of the American Chemical Society*, 2016, 138 (12): 4201-4209.
17. 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(10): 3230-3239.
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: 608-615.
19. Lingping Kong, Chuanfang Zhang, Jitong Wang, Wenming Qiao, Licheng Ling, Donghui Long (*). Free-standing T-Nb₂O₅/graphene composite papers with ultrahigh gravimetric/volumetric capacitance for li-ion intercalation pseudocapacitor. *ACS Nano*, 2015, 9(11): 11200-11208.
20. Fugen Sun, Yanju Wei, Jianzhuang Chen, Donghui Long(*), Licheng Ling, Yongsheng Li, Jianlin Shi(*). Melamine-assisted one-pot synthesis of hierarchical nitrogen-doped carbon@MoS₂ nanowalled core-shell microspheres and their enhanced Li-storage performances. *Nanoscale*, 2015, 7