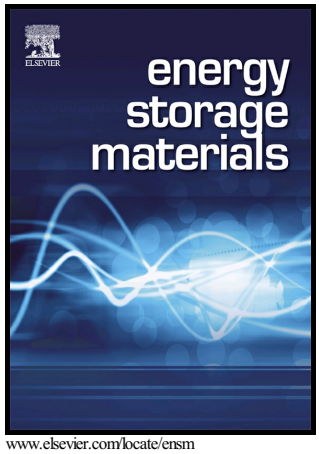
Research progresses on materials and electrode design towards key challenges of Li-air batteries

Sixie Yang, Ping He, Haoshen Zhou



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Research progresses on materials and electrode design towards key challenges of Li-air batteries

Sixie Yang[a], Ping He[a,*], Haoshen Zhou[a,b,*]

[a]Center of Energy Storage Materials & Technology, College of Engineering and Applied Sciences, National Laboratory of Solid State Microstructures, and Collaborative Innovation Center of Advanced Microstructures, Nanjing University, Nanjing, China

[b]Energy Technology Research Institute, National Institute of Advanced Industrial Science and Technology (AIST), Umezono 1-1-1, Tsukuba, Japan

pinghe@nju.edu.cn

hszhou@nju.edu.cn

Abstract:

Li-O_2 battery possesses simple structure and high specific energy, and thus is one of the promising battery systems for future application in energy storage. In order to overcome the performance deficiencies and realize the practical utilization of Li-O_2 battery, substantial efforts and significant progress has been made in recent years. In this review, we will mainly focus on the key problems that may result in the performance deficiency of Li-O_2 battery and survey the studies reported in the literature that provide solutions to these problems. The development trend and prospect of Li-O_2 battery are also discussed.

Keywords:

Li-air battery, Li metal anode, Catalyst, Air electrode, Electrolyte