Title: A novel iron phosphate/oxygen hybrid cathode with high power output for the aprotic lithium-oxygen battery

Authors: Ding Zhu, Wei Li, Ting Wang, Shijia Mu, Zhendong Ding, Kaifang Zhang, Yungui Chen

PII: S0025-5408(17)32508-4
DOI: http://dx.doi.org/doi:10.1016/j.materresbull.2017.08.026
Reference: MRB 9504

To appear in: *MRB*

Received date: 29-6-2017
Revised date: 10-8-2017
Accepted date: 10-8-2017

Please cite this article as: Ding Zhu, Wei Li, Ting Wang, Shijia Mu, Zhendong Ding, Kaifang Zhang, Yungui Chen, A novel iron phosphate/oxygen hybrid cathode with high power output for the aprotic lithium-oxygen battery, Materials Research Bulletinhttp://dx.doi.org/10.1016/j.materresbull.2017.08.026

A novel iron phosphate/oxygen hybrid cathode with high power output for the aprotic lithium-oxygen battery

Ding Zhu[a,*], Wei Li[b], Ting Wang[b], Shijia Mu[b], Zhendong Ding[b], Kaifang Zhang[b], Yungui Chen[a, b]

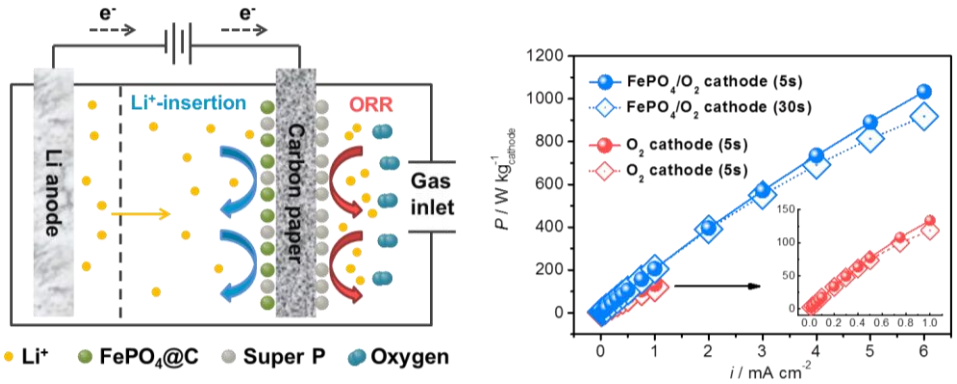
[a] *Institute of New Energy and Low-Carbon Technology, Sichuan University, Chengdu 610207, PR China*

[b] *College of Materials Science and Engineering, Sichuan University, Chengdu 610065, PR China*

*Corresponding author: Tel.: +86 28 62138375; Fax: +86 28 62138375

E-mail: zhuding@scu.edu.cn (D. Zhu)

Graphical abstract



Highlights

This study affords a new strategy to improve the power output of Li-O_2 cell.

$FePO_4$@C nanorods with exposed {010} facets are prepared and applied in O_2 cathode.

Hybrid cathode retains high energy output via ORR.

Hybrid cathode attains 8-fold increased power output via Li^+-insertion of $FePO_4$.