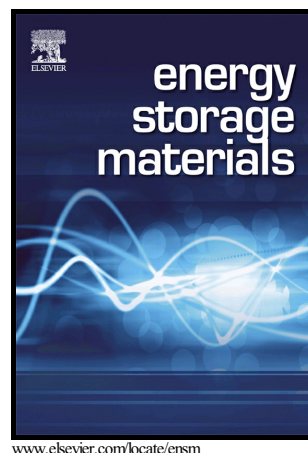


Author's Accepted Manuscript

Sustainable, Inexpensive, Naturally Multi-functionalized Biomass Carbon for both Li Metal Anode and Sulfur Cathode

Chengbin Jin, Ouwei Sheng, Wenkui Zhang, Jianmin Luo, Huadong Yuan, Tao Yang, Hui Huang, Yongping Gan, Yang Xia, Chu Liang, Jun Zhang, Xinyong Tao



PII: S2405-8297(18)30201-0
DOI: <https://doi.org/10.1016/j.ensm.2018.04.001>
Reference: ENSM353

To appear in: *Energy Storage Materials*

Received date: 25 February 2018
Revised date: 30 March 2018
Accepted date: 2 April 2018

Cite this article as: Chengbin Jin, Ouwei Sheng, Wenkui Zhang, Jianmin Luo, Huadong Yuan, Tao Yang, Hui Huang, Yongping Gan, Yang Xia, Chu Liang, Jun Zhang and Xinyong Tao, Sustainable, Inexpensive, Naturally Multi-functionalized Biomass Carbon for both Li Metal Anode and Sulfur Cathode, *Energy Storage Materials*, <https://doi.org/10.1016/j.ensm.2018.04.001>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting galley proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Sustainable, Inexpensive, Naturally Multi-functionalized Biomass Carbon for both Li Metal Anode and Sulfur Cathode

Chengbin Jin, Ouwei Sheng, Wenkui Zhang, Jianmin Luo, Huadong Yuan, Tao Yang, Hui
Huang, Yongping Gan, Yang Xia, Chu Liang, Jun Zhang, Xinyong Tao*

*College of Materials Science and Engineering, Zhejiang University of Technology, Hangzhou
310014, People's Republic of China*

* Correspondence should be addressed to tao@zjut.edu.cn

Abstract

Lithium sulfur (Li-S) battery has been regarded as the promising energy storage device. However, this technology faces great challenges from both anode and cathode, which are mainly caused by the nature of materials. Here, we report a kind of multifunctional carbon derived from biomass like rice husk for optimizing both lithium (Li) metal anode and sulfur (S) cathode for Li-S batteries. It has been proved that the surface functionalized rice husk derived carbon could effectively achieve the controllable deposition of Li. Notably, the nucleation overpotential is reduced and the

Download English Version:

<https://daneshyari.com/en/article/7962449>

Download Persian Version:

<https://daneshyari.com/article/7962449>

[Daneshyari.com](https://daneshyari.com)