

Accepted Manuscript

Title: Fabrication of ultrafine manganese oxide-decorated carbon nanofibers for high-performance electrochemical capacitors

Author: Ying Yang Sungsik Lee Dennis E. Brown Hairui Zhao Xinsong Li Daqiang Jiang Shijie Hao Yongxiang Zhao Daoyong Cong Xin Zhang Yang Ren



PII: S0013-4686(16)31329-9
DOI: <http://dx.doi.org/doi:10.1016/j.electacta.2016.06.012>
Reference: EA 27451

To appear in: *Electrochimica Acta*

Received date: 15-3-2016
Revised date: 31-5-2016
Accepted date: 2-6-2016

Please cite this article as: Ying Yang, Sungsik Lee, Dennis E. Brown, Hairui Zhao, Xinsong Li, Daqiang Jiang, Shijie Hao, Yongxiang Zhao, Daoyong Cong, Xin Zhang, Yang Ren, Fabrication of ultrafine manganese oxide-decorated carbon nanofibers for high-performance electrochemical capacitors, *Electrochimica Acta* <http://dx.doi.org/10.1016/j.electacta.2016.06.012>

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 proof before it is published in its final 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.

<AT>Fabrication of ultrafine manganese oxide-decorated carbon nanofibers for high-performance electrochemical capacitors

<AU>Ying Yang^{a,*} catalyticsscience@163.com, Sungsik Lee^b, Dennis E. Brown^c, Hairui Zhao^a, Xinsong Li^a, Daqiang Jiang^a, Shijie Hao^a, Yongxiang Zhao^a, Daoyong Cong^d, Xin Zhang^{a,*}, Yang Ren^b

<AU>

<AFF>^aState Key Laboratory of Heavy Oil Processing, China University of Petroleum, Changping, Beijing 102249, China

<AFF>^bX-ray Science Division, Argonne National Laboratory, 9700 S. Cass Ave., Argonne, Illinois 60439, USA

<AFF>^cDepartment of Physics, Northern Illinois University, De Kalb, Illinois 60115, USA

<AFF>^dState Key Laboratory for Advanced Metals and Materials, University of Science and Technology Beijing, No. 30 Xueyuan Rd, Haidian District, Beijing 100083, China

<PA>Dr. Ying Yang Postal address: No.18, Fuxue Road, Changping District, Beijing,

P.R. China. Postcode: 102249; Tel./fax: +86-10-89734979.

<ABS-Head><ABS-HEAD>Graphical abstract

<ABS-P>

<ABS-P><xps:span class="xps_Image">fx1</xps:span><ABS-P>Morphology

controlled synthesis of Mn, Zn-containing metal organic framework fibers was carried out by varying the assembly time. Such a fiber precursor was converted to a new type of ultrafine manganese oxide-decorated carbon nanofiber upon pyrolyzed. This synthesis integrates excellent accessibility, high porosity, tight contact and superior conductivity in the final products, and thus exhibits a remarkable capacitance of up to 18290 F g⁻¹ per active mass of the manganese(IV) oxide, high stability of cycling up to 5000 times,

Download English Version:

<https://daneshyari.com/en/article/6606418>

Download Persian Version:

<https://daneshyari.com/article/6606418>

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