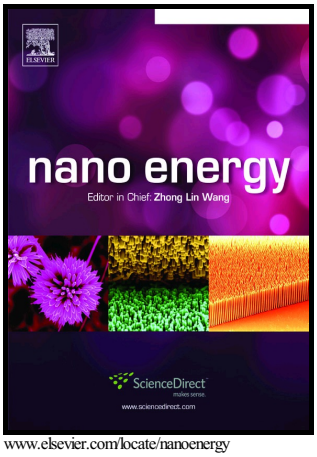

www.elsevier.com/locate/nanoenergy

Morphology-dependent Performance of Nanostructured Ni_3S_2/Ni Anode Electrodes for High Performance Sodium Ion Batteries

Xiaosheng Song, Xifei Li, Zhimin Bai, Bo Yan, Dejun Li, Xueliang Sun

PII: S2211-2855(16)30201-4
DOI: http://dx.doi.org/10.1016/j.nanoen.2016.06.019
Reference: NANOEN1337

To appear in: *Nano Energy*

Received date: 11 April 2016
Revised date: 1 June 2016
Accepted date: 11 June 2016

Cite this article as: Xiaosheng Song, Xifei Li, Zhimin Bai, Bo Yan, Dejun Li and Xueliang Sun, Morphology-dependent Performance of Nanostructured Ni_3S_2/Ni Anode Electrodes for High Performance Sodium Ion Batteries, *Nano Energy* http://dx.doi.org/10.1016/j.nanoen.2016.06.019

Morphology-dependent Performance of Nanostructured Ni_3S_2/Ni Anode Electrodes for High Performance Sodium Ion Batteries

Xiaosheng Song,[a,b,c] Xifei Li,[b,c]* Zhimin Bai,[a]* Bo Yan,[a,b,c] Dejun Li,[b,c]

Xueliang Sun[d,b,c]*

[a]*Beijing Key Laboratory of Materials Utilization of Nonmetallic Minerals and Solid Wastes, National Laboratory of Mineral Materials, School of Materials Science and Technology, China University of Geosciences, Beijing, 100083, China. E-mail: zhimibai@cugb.edu.cn; Tel:* +86-13691115187

[b]*Energy & Materials Engineering Centre, College of Physics and Materials Science, Tianjin Normal University, Tianjin 300387, China. E-mail: xfli2011@hotmail.com; Tel:* +86-22-23766526, *Fax:* +86-22-23766503

[c]*Tianjin International Joint Research Centre of Surface Technology for Energy Storage Materials, Tianjin 300387, China*

[d]*Nanomaterials and Energy Lab, Department of Mechanical and Materials Engineering, University of Western Ontario, London, Ontario N6A 5B9, Canada. E-mail: xsun@eng.uwo.ca*

Abstract

Transition metal sulfides have been treated as promising materials for lithium-ion battery, and recently more and more attention has been paid to its applications in sodium-ion batteries. In our context, three Ni_3S_2 nanostructures directly grown on Ni foam were successfully designed using a facile hydrothermal method. The influences