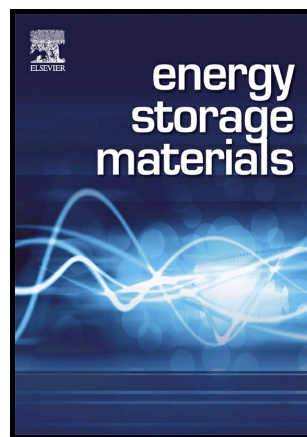


Author's Accepted Manuscript

S-doped Carbon@TiO₂ to Store Li⁺/Na⁺ with High Capacity and Long Life-Time

Changmiao Chen, Yincai Yang, Shuangshuang Ding, Zengxi Wei, Xuan Tang, Pengchao Li, Taihong Wang, Guozhong Cao, Ming Zhang



PII: S2405-8297(17)30671-2
DOI: <https://doi.org/10.1016/j.ensm.2018.01.015>
Reference: ENSM299

To appear in: *Energy Storage Materials*

Received date: 7 December 2017
Revised date: 23 January 2018
Accepted date: 27 January 2018

Cite this article as: Changmiao Chen, Yincai Yang, Shuangshuang Ding, Zengxi Wei, Xuan Tang, Pengchao Li, Taihong Wang, Guozhong Cao and Ming Zhang, S-doped Carbon@TiO₂ to Store Li⁺/Na⁺ with High Capacity and Long Life-Time, *Energy Storage Materials*, <https://doi.org/10.1016/j.ensm.2018.01.015>

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.

S-doped Carbon@TiO₂ to Store Li⁺/Na⁺ with High Capacity and Long Life-Time

Changmiao Chen^a, Yincai Yang^b, Shuangshuang Ding^a, Zengxi Wei^a, Xuan Tang^c, Pengchao Li^a, Taihong Wang^b, Guozhong Cao^{d,*}, and Ming Zhang^{a,*}

^a Key Laboratory for Micro/Nano Optoelectronic Devices of Ministry of Education, School of Physics and Electronics, Hunan University, Changsha 410082, China.

^b State Key Laboratory for Chemo/Biosensing and Chemometrics, College of Chemistry and Chemical Engineering, Hunan University, Changsha 410082, China.

^c Clean Energy Automotive Engineering Center, Tongji University, Shanghai 201804, China.

^d Department of Materials Science & Engineering, University of Washington, Seattle, Washington, 98195, USA.

* Corresponding Author: gzcao@uw.edu (G.Z. Cao); zhangming@hnu.edu.cn (M. Zhang)

Abstract

Sodium-ion batteries as the possible replacements of lithium-ion batteries have drawn much attention recently. Although graphite have been the anodes of commercial lithium-ion batteries, it is difficult to reversibly intercalate Na⁺ of large diameter in graphite with high capacity. In this study, S-doped carbon@TiO₂ core-shell composites are designed and prepared via a facile hydrothermal route. The composites as anodes showed high reversible capacities of 768 and 480 mAh g⁻¹ (higher than the theoretical values of both graphite and

Download English Version:

<https://daneshyari.com/en/article/7962616>

Download Persian Version:

<https://daneshyari.com/article/7962616>

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