Short Communication

N-doped MoS₂ Nano-Flowers as High-Performance Anode Electrode for Excellent Lithium Storage

Shuhua Li^{1,2,*}, Dawei Qu¹, Peng Wang², Yongjia Wang², Fei Xie²

¹ State Key Laboratory of Automotive Simulation and Control, Jilin University, Changchun 130025, China

² Department of Vehicle Engineering, Hefei University of Technology, Hefei 230009, China

*E-mail: shuhualijl@sohu.com

doi: 10.20964/2019.08.35

Received: 15 March 2019 / Accepted: 14 May 2019 / Published: 30 June 2019

N-doped MoS₂ nano-flowers are successfully synthesized and used as the anode materials for the lithium-ion batteries. The electronic conductivity of the MoS₂ anode materials could be effectively improved by the nitrogen doping process. Compared with the pristine MoS₂ anode electrodes, the N-doped MoS₂ anode electrodes exhibit specific capacity value of 786 mAh g⁻¹ after 100 cycles at the high current density of 0.5 C, demonstrating excellent cycle stability. This stable cycle performance is ascribed to the superior electronic conductivity of the N-doped MoS₂ anode, which could provide pathways for the transport of the electronics.

Keywords: MoS₂ anode; N-doped; Cycle stability; Specific capacity.

[FULL TEXT](#)

© 2019 The Authors. Published by ESG (www.electrochemsci.org). This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution license (<http://creativecommons.org/licenses/by/4.0/>).