Short Communication

Hollow NiCo₂O₄ Nanofibers Prepared by Electrospinning as an Effective Sulfur Host for High-Performance Lithium-Sulfur Batteries

Bin Cai, Yuning Meng, MengEn Zhu, Peng Peng*

Department of Chemistry & Chemical Engineering, Zhoukou Normal University, Zhoukou, 466001, Henan, P. R. China

*E-mail: ynmeng@aliyun.com

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Many achievements have been obtained for the lithium-sulfur battery by using various superior host materials for the element sulfur. However, the sulfur loading in the previous works is under 2 mg cm⁻². As we all know, the high energy density could be improved only when the sulfur loading exceeds 3 mg cm⁻². Therefore, it is urgent for the researchers to develop high-loading sulfur electrode materials for the lithium-sulfur batteries. In our work, the hollow NiCo₂O₄ nanofibers are prepared and used host materials for the sulfur. The sulfur loading of the as-prepared S/NiCo₂O₄ electrode is 4 mg cm⁻² with superior cycle stability.

Keywords: High-loading electrode, Li-S battery, Cycle performance, Specific capacity

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