Short Communication

Facile Hydrothermal Synthesis of Sulphur/Boron-doped Reduced Graphene Oxide Composite Cathodes for High-Performance Li/S Batteries

Yuan Tian¹, Chenglong Deng¹, Zhenghao Sun¹, Yan Zhao^{1*}, Taizhe Tan², Fuxing Yin^{1*}, Xin Wang^{3*}

¹ School of Materials Science & Engineering, Research Institute for Energy Equipment Materials, Tianjin Key Laboratory of Materials Laminating Fabrication and Interface Control Technology, Hebei University of Technology, Tianjin 300130, China

² Synergy Innovation Institute of GDUT, Heyuan, Guangdong Province, China

³ South China Academy of Advanced Optoelectronics, South China Normal University, Guangzhou 510006, China

*E-mail: yanzhao1984@hebut.edu.cn; yinfuxing@hebut.edu.cn; wangxin@scnu.edu.cn

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A sulphur/boron-doped reduced graphene oxide (S/B-rGO) composite was prepared using a facile hydrothermal method. The two-dimensional stacked nanosheet structure of the S/B-rGO composite provides an effective electron-conduction path and traps soluble polysulphide intermediates via the introduction of boron doping. The electrochemical performance delivers a relatively high reversible discharge capacity of 521.9 mAh g⁻¹ after 100 cycles at 0.1 C with a boron-doped reduced graphene oxide composite lithium/sulphur battery.

Keywords: lithium/sulphur battery, sulphur/boron-doped reduced graphene oxide (S/B-rGO) composite, cathode material, hydrothermal synthesis.

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