



氯化钠对锂离子电池石墨负极的修饰改性(英文)

Modification of Graphite Anode for Li-ion Batteries by Sodium Chloride

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中文关键词: 锂离子电池; 石墨; 氯化钠; 负极

英文关键词: lithium ion battery; graphite; NaCl; anode

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中文摘要:

英文摘要:

The electrochemical performance of a graphite electrode for rechargeable lithium-ion batteries was improved by pretreatment of graphite powders with NaCl aqueous solutions. The procedure of the pretreatment was simple and easy. Graphite powders were dispersed in the aqueous solutions of sodium chloride, followed by stirring, heating and drying. The irreversible capacity at the initial cycle was suppressed by the modification. The sample modified with 1% NaCl had the best electrochemical performances with a reversible capacity of $364.8 \text{ mAh} \cdot \text{g}^{-1}$, an irreversible capacity of $47.4 \text{ mAh} \cdot \text{g}^{-1}$, and an initial coulombic efficiency of 88.5%. The cycling stability of the Li/C cells with modified graphite as anodes was improved. The capacity retention ratio at the 30 th cycle was up to 91.97%.

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