Short Communicaton

One-step Synthesis of Low-cost and High Active Li_2MnO_3 Cathode Materials

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Nanostructured (10~50 nm) cathode material Li_2MnO_3 was simply prepared via facile one-step hydrothermal process without any further treatment by controlling reaction parameters, including the reaction time, proportion of processor, and the reagent concentration. The obtained Li_2MnO_3 products were well crystallized by a monoclinic structure with a space group of $C2/m$ phase. The materials exhibit a lower activation potential when being cycled, and delivered electrochemical performance between 4.3V and 2.0 V at room temperature, with a capacity of $243 \text{ mAh}\cdot\text{g}^{-1}$. The structural information of the prepared materials advances the understanding of corresponding electrochemical properties.

Keywords: Li_2MnO_3 , Cathode Materials, Hydrothermal, Lithium-ion Batteries.

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