Short Communication

One-pot Hydrothermal Synthesis of MoS₂ Porous Nanospheres and Their Electrochemical Properties

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In this paper, we have successfully prepared MoS₂ porous nanospheres by one-step hydrothermal method and further applied to the anode materials for LIBs. MoS₂ porous nanospheres show high lithium storage property and good cycling performance. The discharge capacity and charge capacity of MoS₂ nanospheres are up to 439 mAh/g and 440 mAh/g, respectively, after 500 cycles at the current density of 1 A/g. Large specific surface area and porous structure of MoS₂ nanospheres can improve the reversible capacity and cycle stability of LIBs, and they will show great potential to replace graphite anode materials.

Keywords: MoS₂, nanospheres, anode materials, lithium ion batteries

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