Novel Manganese Adipate Nanoparticles as Stable Anode Materials for Lithium-ion Batteries

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It is important to seek inexpensive and environmentally friendly electrode materials for energy storage and conversion. Manganese adipate coordination polymer nanoparticles are first found to be an anode material for lithium-ion batteries. The second discharge capacity of the anode is as high as 439 mAh g⁻¹ at a current density of 200 mA g⁻¹. A reversible capacity of 454.8 mAh g⁻¹ remained after 100 cycles. In addition, a reversible reaction mechanism was proposed.

Keywords: Coordination polymer; Lithium-ion battery; Dicarboxylic acid

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