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Nitrogen-doped carbon decorated Cu₂NiSnS₄ microflowers**as superior anode materials for long-life lithium-ion batteries**

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Abstract: Nitrogen-doped carbon (NC) decorated Cu₂NiSnS₄ (CNTS) microflower composites (NC@CNTS) were fabricated through a facile solvothermal and pyrrole polymerization with further annealing treatment. The NC@CNTS composites possessed a three-dimension (3D) microflower-like hierarchical structure. The unique microflower structure of NC@CNTS composites exhibited remarkable electrochemical performance as electrode materials for long life lithium ion batteries. The as-prepared composites had a stable and reversible capacity that reached 943 mAh·g⁻¹ after 160 cycles at a current rate of 0.1 A·g⁻¹. It showed satisfactory cycle stability and rate capability even at 2 A·g⁻¹, and specific capacity stabilized at 288 mA·g⁻¹ after 1000 cycles. The present facile and cost-effective strategy can be applied

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