Short Communication

S@NiS Hollow Spheres as Cathode Materials for Lithium-Sulfur Batteries

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Severe capacity fading substantially hinders the employment of lithium-sulfur batteries in the electric vehicles. This is primarily due to the shuttle effect of the polysulfide in the electrolyte. Therefore, the most efficient method to improve the cycle stability of the lithium-sulfur batteries is inhibiting the shuttle effect of the polysulfide in the electrolyte. To deal with this problem, S@NiS hollow sphere composites are synthesized and employed as cathode materials in lithium-sulfur batteries. This unique hollow structure could serve as a storage device for the soluble polysulfides. As a result, the electrochemical performance of the lithium-sulfur battery is greatly enhanced by using S@NiS hollow spheres composites.

Keywords: S@NiS, hollow spheres, composites, Li-S battery

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