



ŁOTWA SYSTEM

# Advantages of antimony batteries in energy storage





## Overview

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Is antimony a good material?

Pure antimony material, although energy density and power density are not as good as other materials. Its simple synthesis process can bring some economic benefits. The composite modification means can realize more considerable electrochemical performance enhancement [5, 58].

Is antimony sulfide a good anode material?

Owing to its high theoretical specific capacity, effective working voltage, and abundant raw materials, antimony sulfide (Sb<sub>2</sub>S<sub>3</sub>) was regarded as one promising anode material for electrochemical energy conversion and storage, especially regarding alkali-ion (Li<sup>+</sup>, Na<sup>+</sup>, and K<sup>+</sup>) batteries.

Can antimony materials be used in commercial production?

The composite modification means can realize more considerable electrochemical performance enhancement [5, 58]. Therefore, choosing pure antimony material may be one of the first choices for commercial production. In the sequel, we present applications of Sb-based anode materials and their derivatives and discuss their practical feasibility.

Are amorphous antimony-based materials possible?

However, it is possible to broaden the idea and develop more novel antimony-based materials, such as amorphous antimony-based metals, antimony quantum dots, antimony-rich materials, and single antimony atom potassium storage. Amorphous materials are of interest to researchers because of their high buffering capacity.



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