

## The advanced structure of high sulfur-loading electrode for Lithium-Sulfur Batteries

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In the search for next-generation energy-storage materials, the lithium-sulfur battery has drawn much attention due to its immensely high theoretical specific capacity of 1675 mAh g<sup>-1</sup> and energy density of 2600 Wh kg<sup>-1</sup>. Its added benefit of being a low-cost, copiously available, and environmentally benign material has also prioritized the Li-S battery as an auspicious candidate.

We present here an advanced cathode that is able to accommodate high-sulfur-loading for maintaining high energy density by addressing the problems of Li-S batteries. The modified high sulfur-loading electrode (MHSE) does exactly this with its advanced yet simple construction and achieves an enormously high-sulfur-loading of 10 mg cm<sup>-2</sup> through the usage of elemental sulfur.