
Redox flow batteries (RFBs) have been limited by low energy density and high cost. Here, we employ highly-soluble, inexpensive and reversible polysulfide and iodide species to ...

By adding iodine (I) to a solid-state lithium sulfur (Li-S) battery (SSLSB), scientists yielded vastly improved conductivity and a low melting point that promotes self-repair of ...

A group of scientists led by China"s Wenzhou University and Guangxi University have proposed a novel approach to improve the ...

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In summary, we investigate a H 2 -I 2 redox flow battery, combining the potential of fast iodide/iodine kinetics with its high solubility and the high OCV (1.37 V) in an alkaline ...

The dual PS-LiI catholyte not only increases the volumetric capacity and stability, but also removes the resistive and high-cost ion ...

Among various electrochemical storage technologies, polysulfide-based redox flow batteries (PSRFBs) have emerged as an up-and-coming candidate due to their high energy ...

Herein, an aqueous sulfur-iodine chemistry that can be deployed in aqueous battery systems by employing water-in-bisalt (WiBS) electrolyte, sulfur composite anode, and ...

Aqueous polysulfide/iodide redox flow batteries (SIRFBs) have been identified as a promising solution for scalable energy storage, exhibiting high energy density and cost ...

The dual PS-LiI catholyte not only increases the volumetric capacity and stability, but also removes the resistive and high-cost ion-selective membrane for low-cost, high-energy ...

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Highly concentrated polysulfide- (PS) and iodide-based (I3-/I-) redox couples are promising active materials for redox flow battery applications owing to their high volumetric ...

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