

Neutral zinc-iron flow batteries (ZIFBs) remain attractive due to features of low cost, abundant reserves, and mild operating medium. However, the ZIFBs based on  $\text{Fe}(\text{CN})_6^{3-}/\text{Fe}(\text{CN})_6^{4-}$  ...

We investigated artificial interphases created using a simple electrospray methodology as a strategy for addressing each of these challenges.

Energy capacity, however, is determined by the volume of liquid electrolyte stored in external tanks. This design enables unique scalability: increasing power requires a larger cell stack, ...

As a hybrid flow battery, the areal capacity is a very important parameter for ZBFs, especially considering their development for long-term and large-scale energy storage applications.

Zn-I<sub>2</sub> flow batteries, with a standard voltage of 1.29 V based on the redox potential gap between the Zn<sup>2+</sup>-negolyte (-0.76 vs. SHE) and I<sub>2</sub>-posolyte (0.53 vs. SHE), are gaining attention...

In this review, the focus is on the scientific understanding of the fundamental electrochemistry and functional components of ZBFs, with an emphasis on the technical challenges of reaction ...

By analyzing current research challenges and predicting future development directions, this paper aims to provide a comprehensive perspective for researchers and engineers to promote ...

Herein, we introduce and test different types of anode flow fields in an in-house built cell to study how the flow distribution affects the electrochemical performance of the zinc slurry air flow battery.

In this perspective, we first review the development of battery components, cell stacks, and demonstration systems for zinc-based flow battery technologies from the perspectives of both ...

Zinc-based flow battery technologies are regarded as a promising solution for distributed energy storage. Nevertheless, their upscaling for practical applications is still confronted with ...

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