
There are a number of critical requirements for electrolytes in aqueous redox flow batteries. This paper reviews organic molecules that have been used as the redox-active ...

Recently, aqueous organic redox flow batteries (AORFBs) have garnered attention due to the metal-free composition of organic molecules, offering favorable characteristics like ...

By combining calculations and experiments, we demonstrate that 2,3- O -DBAP exhibits a higher solubility, a lower redox potential (-0.699 V vs SHE), and greater chemical ...

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The molecular design and engineering of representative electrolytes and ion-exchange membranes for pH-neutral aqueous organic redox flow batteries (AORFBs) are ...

In this review, we present the emergence and development of organic redox-active materials for aqueous organic redox flow batteries (AORFBs), in particular, molecular ...

This innovative battery design holds the promise of addressing environmental and safety concerns associated with traditional flow batteries employing acidic or alkaline ...

We summarize the basic information of RFBs, including category, mechanism, and challenges, as well as the benefits and applications of aqueous organics used in AORFBs.

Organic redox-active molecules (ORAMs) are abundant and diverse, offering significant potential for cost-effective and sustainable energy storage, particularly in aqueous ...

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Organic Flow Batteries (OFBs) present a sustainable alternative, using non-metallic, carbon-based molecules dissolved in ...

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