

Aqueous organic redox flow batteries are promising candidates for large-scale energy storage. However, the design of stable and inexpensive electrolytes is challenging.

The present invention provides a new chemistry-based electrochemical cell for a flow cell for large scale electrical energy storage, for example, on a grid scale. Electrical energy is chemically...

This review article provides a comprehensive overview of recent progress in this area, with a specific focus on redox potential, solubility, and stability, and offers valuable insights into the ...

We have demonstrated the performance of an aqueous redox flow battery composed of a negative electrode consisting of a redox couple between anthraquinone di-sulfonate and its corresponding ...

The present results appear highly promising for the use of quinones and quinone-like compounds in flow battery applications. Future work will involve tailoring quinones to achieve ideal properties for our ...

They are a class of metal-free organic compounds that consist of earth-abundant elements providing potentially low-cost redox flow batteries (RFBs) with synthetic tunability.

Redox flow batteries (RFBs) rely on the development of cheap, highly soluble, and high-energy-density electrolytes. Several candidate quinones have already been investigated in the literature as two ...

Quino Energy has developed a process that converts quinone raw materials - dyestuff chemicals - directly into high-performance, long lifetime quinones using the flow battery system itself as the ...

We recently published initial results on the performance of a quinone-bromide flow battery that appears particularly well suited to cost-effective storage of large amounts of electrical energy, e.g. from ...

Herein, we systematically investigate a family of quinones as bio-inspired electroactive molecules for non-aqueous redox flow batteries via a combination of experimental and computational ...

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