Iron Redox Flow Battery

Our iron flow batteries work by circulating liquid electrolytes -- made of iron, salt, and water -- to charge and discharge electrons, providing up to 12 hours of ...

As exemplified by the all-soluble all-iron flow battery, combining redox pairs of the same redox-active element with different coordination chemistries could extend the spectrum of RFBs.

The aqueous iron (Fe) redox flow battery here captures energy in the form of electrons (e-) from renewable energy sources and stores it by ...

Stable and affordable redox-active materials are essential for the commercialization of AIRFBs, yet the battery stability must be significantly ...

Aqueous all-iron redox flow batteries (RFBs) represent a promising technology for large-scale and long-term energy storage due to their extremely low cost and inherent safety.

Iron/iron redox flow batteries (IRFBs) are emerging as a cost-effective alternative to traditional energy storage systems. This study investigates the impact of key ...

By offering insights into these emerging directions, this review aims to support the continued research and development of iron-based flow batteries for large-scale energy storage ...

Here, we design a stable aqueous organic iron-cerium redox flow battery based on the inexpensive metal iron and the abundant rare earth metal cerium, enabled by the universal ...