MODERNIZATION SOLAR

FeCN flow battery

Overview

2,5-Dihyroxy-1,4-Benzoquinone (BQ-OH) and ferrocyanide (FeCN) are used as redox couple for alkaline aqueous redox flow battery (ARFB) due to the high solubility of BQ-OH in potassium hydroxide (KOH) electrolyte and low cost.What is S/Fe redox flow battery (RFB)?

An alkaline S/Fe redox flow battery with long cycle life over 3153 h. The capacity decay rate of S/Fe redox flow battery as low as 0.0166 % per cycle. The S/Fe redox flow battery (RFB) with abundant sulfide and iron as redox-active species shows promising applications for energy storage.

What is a redox flow battery?

Cite this: ACS Appl. Mater. Interfaces 2024, XXXX, XXX, XXX-XXX Redox flow batteries (RFBs) are membrane-separated rechargeable flow cells with redox electrolytes, offering the potential for large-scale energy storage and supporting renewable energy grids. Yet, creating a cost-effective, high-performance RFB system is challenging.

What is the capacity decay rate of S/Fe redox flow battery?

The capacity decay rate of S/Fe redox flow battery as low as 0.0166 % per cycle. The S/Fe redox flow battery (RFB) with abundant sulfide and iron as redox-active species shows promising applications for energy storage. It exhibits advantages including low cost, high safety, and flexible operation.

What is the solubility limit of [Fe(CN) 6] in alkaline electrolyte?

The breakthrough of the solubility limit of [Fe (CN) 6] 4- to 1.52 M in alkaline electrolyte. An alkaline S/Fe redox flow battery with high volumetric capacity. An alkaline S/Fe redox flow battery with long cycle life over 3153 h. The capacity decay rate of S/Fe redox flow battery as low as 0.0166 % per cycle.

FeCN flow battery

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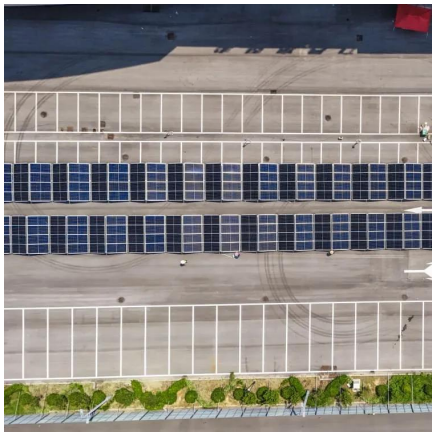

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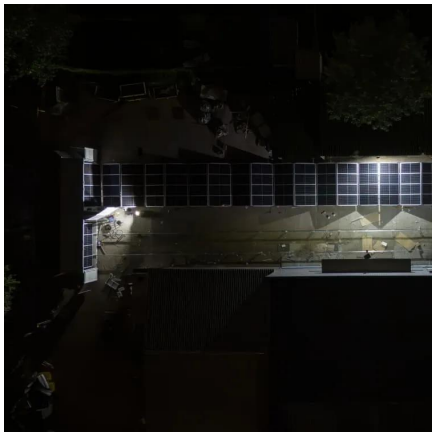

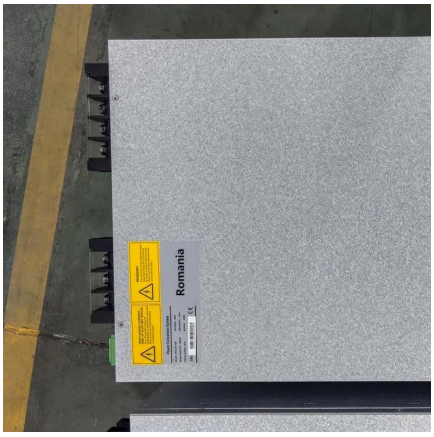

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