

Review of: "Flow Batteries From 1879 To 2022 And Beyond"

Quan Xu¹

¹ China University of Petroleum

Potential competing interests: No potential competing interests to declare.

This review comprehensively introduced the development process, shortcomings and improvements of zinc-halogen batteries as well as all vanadium redox flow battery and other varieties of redox flow batteries. Each stage in the development of these batteries is related to a policy or significant event that was covered. Additionally, various aspects of the benefits and drawbacks of both lithium-ion battery and all-vanadium redox flow battery are compared. However, there are something not suitable and a minor revision is needed.

1. In this review, the detail of relationship between electrode fiber diameter and RFB efficiency was discussed in the third part. However, this section is not summarized in the abstract. Please revise the abstract to verify that everything has been adequately described.

2. This paper only introduced the earliest use of the terms "redox battery", "flow battery", and "redox flow battery". If possible, please explain any other discrepancy in these three terms.

3. In the fourth section, lithium-ion battery and all-vanadium redox flow battery were compared. However, following then, the introduction of the theory and development of all-iron redox flow battery seemed unrelated to the aforementioned content. Some sentences are suggested to clarify the association.