Review of: "Low-Carbon Hydrogen Economy Perspective and Net Zero-Energy Transition through Proton Exchange Membrane Electrolysis Cells (PEMECs), Anion Exchange Membranes (AEMs) and Wind for Green Hydrogen Generation"

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Potential competing interests: No potential competing interests to declare.

In this mini review, the author has discussed the necessity of green hydrogen based on an environmental perspective and considering increasing energy demand. The author emphasized the production of hydrogen via water electrolysis with the help of anion-conducting solid polymer electrolytes and a novel integrated inorganic membrane electrode assembly (I2 MEA) for anion exchange membrane (AEM) water electrolysis by using inorganic Mg-Al layered double hydroxides (Mg-Al LDHs) as an ionic conductor. The paper further addressed the integration of wind and solar energy for the production of green hydrogen. The economical aspect of green hydrogen is briefly discussed. Different components included in the technology discussed in this paper are explained on the basis of the economical point of view.

Recommendation: Minor revision.

Comments:

1. Graphical abstract is not included.
2. By considering fresh water scarcity and increasing fresh water demand in the present time, the supply of fresh water as a source for hydrogen production would be an emerging problem. Hence, how fresh water is a reliable source? has to be addressed under an economic point of view.
3. Recent articles need to be referred to; a few are as belowhttps://doi.org/10.1039/D3TA04298G ,
4. There is no detailed discussion on maintenance cost and performance of the cell.
5. The quality of figure 9 is poor.
6. A typo error is observed in section 2.
7. In the abstract, there is a mention of theoretical studies, but an adequate amount of information is not presented in the MS.