

Peer Review

Review of: "A Brief Review of the Optoelectronic Properties of Delafossite Materials for Solar Cell Applications"

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In this review, the authors describe the synthesis methods, the electronic and optical properties of delafossite materials, and their potential applications in solar cells. From a general point of view, the manuscript is well organized and of interest. The following comments should be considered by the authors :

- Abstract : I suggest to the authors to define delafossite materials (ABO_2 or ABN_2) to help the readers.
- Quantum dot sensitized solar cells should also be mentioned (*Nanomaterials* 2023, 13, 2889 ; *Materials Science for Energy Technologies* 2023, 6, 533–546).
- Table 1, third generation cells : define or correct « concentrated ».
- Page 6 : « sol-gel method synthesized a film.... » should be corrected to « Sol-gel method allows the production of a film directly.... ».
- Each abbreviation should be defined the first time it is used.
- Paragraph 5 : to help the readers, it would be of interest to add a representative UV-visible absorption spectrum of delafossite materials.
- Paragraph 6 and the conclusion : the advantages of delafossite materials for solar cell applications should be highlighted. Perspectives and outlooks should be added.

Declarations

Potential competing interests: No potential competing interests to declare.