

Review of: "Experimental Behavior of Solar Still Using Mixed Oxides Mn-Fe/Silicon Resin Composite as Selective Solar Absorber"

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Potential competing interests: No potential competing interests to declare.

Dear Prof. Dr. Gabriele Marinello,

In this work, the experimental behavior of a solar still using a mixed oxide Mn-Fe/silicone resin composite as a selective solar absorber was investigated. I have found the subject of the manuscript interesting for readers because of its usage in the field of solar distillation. However, it needs some corrections before it can be accepted for publication in Qeios.

Major corrections to Authors:

- 1) There is an intense diffraction peak at approximately 31° , which has not been identified by the authors. I suggest the authors define it.
- 2) In Fig. 3, the y-axis label "Absorptance (%)" should be corrected to "Absorbance (%)". Please also correct it inside the manuscript.
- 3) As can be seen in Fig. 3, absorbance starts with a very high value (around 95%) in the visible range between 400 nm and 700 nm. I have also found that absorption is very high for the powders of mixed oxides Mn-Fe in adhesive silicone at different concentrations. The sum of absorbance (A), transmittance (T), and reflection (R) should be equal to 1.
$$A+T+R=1$$

I think it will be better if the authors include the transmittance and reflection spectra of the related samples.
- 4) Could the x-axis labels in Figs. 2, 3, and 4 represent wavenumbers (cm^{-1})? Please check carefully.
- 5) In Figs. 7(a) and (b), please write the units of the y-axis labels (temperature (?) and irradiance(?)).
- 6) Please give the related formula for calculating the thermal efficiency of 27% and explain in the manuscript how the authors determined it.
- 7) The sample obtained with the 2.3% Mn-Fe oxides reached an absorbance of 91.82%. But I have found that this value is very high. Please discuss in the manuscript why it is so high. If possible, please also provide references showing high absorbance, as in this work.

8) References are not up-to-date. Please keep them updated.