

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.

Here's a comprehensive review of the manuscript "Experimental Behavior of Solar Still Using Mixed Oxides Mn-Fe/Silicon Resin Composite as Selective Solar Absorber". It deserves publication after considering the following issues.

- There is no highlight.
- The technical language and detailed chemical and physical descriptions might be too complex for readers not familiar with the field, potentially limiting its broader impact.
- In the introduction, the authors should have reviewed exactly the related research and highlighted the novelty of the present research work. Finally, in the conclusion, a comparison between the current research and previous works should be described.
- Materials and methods: All details of materials and instruments should be described in this part. The commercial grade, specifications, company names, and origins of all materials and instruments should be addressed.
- Technical Clarifications: Some sections might benefit from more detailed explanations or simplifications, such as the specifics of material synthesis, to make the paper accessible to a wider audience.
- While the results are well presented, there is limited discussion of the potential limitations or challenges of scaling up this technology or its long-term sustainability.

Expand the discussion section to address the broader implications of the findings, how they might influence future research, and practical applications in real-world scenarios.

- The manuscript could benefit from more comparative data with other similar technologies, which would provide a clearer picture of where this particular design stands in the field of solar still technologies.
- Economic Analysis: Including an analysis of the cost-effectiveness of the solar still design compared to existing solutions could significantly enhance the manuscript's applicability and appeal to stakeholders in applicable industries.
- The following reference may be helpful.

Synthesis of octahedral copper chromite spinel for spectrally selective absorber (SSA) coatings, Progress in Organic Coatings, Volume 132, 2019, Pages 21-28, <https://doi.org/10.1016/j.porgcoat.2019.03.027>.

Overall, the manuscript provides a strong scientific contribution to the field of solar distillation but could be improved by

broadening its appeal and providing a more comprehensive analysis of its practical and economic feasibility.