

# Review of: "Investigation of the Dielectric Behaviour of Propylene Glycol (100) Dispersed With Graphene Nano Powder to Determine the Optimal Conditions Using Response Surface Methodology"

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Potential competing interests: No potential competing interests to declare.

The researchers have presented good statistical results and conducted valuable studies. However, there are a few areas where improvement is needed:

1. The abstract lacks thoroughness, as it does not address the gaps in research, inadequately describes the study design and results. Proper conclusions would enhance the quality and completeness of the abstract.
2. For the introduction section, ensure each sentence has a clear continuation and relates to the study.
3. Page 2 (Paragraph 3): The sentence feels incomplete and lacks follow-through. Ex: "...impacted by many aspects....." Consider providing more detail/examples to support your points.
4. Page 2 (Paragraph 4): "...the electrical conductivity of \_\_\_\_? smaller...", The sentence is incomplete.
5. Page 4 (3.1 Experimental Procedure): Please describe more about the detail of oil use and also the size of the test cell, electrodes, standards used, etc.
6. Page 5 (4. RSM): Provide details on the factors influencing the response variable within the RSM design to enhance understanding. Clarify the rationale behind selecting the "best" model and the criteria used for determining its suitability. Explain the selection of two models?
7. Page 6: "Just run the experiment again and you'll get the data you need". Consider replacing this sentence with more academic terms to maintain professionalism in academic journals.
8. Page 7 (4.1.4. Model quality determination charts): "Figure 5 shows the index....." This sentence requires revision.
9. Figure 4(a), 4(b), 5(a), 5(b) lacks detailed explanation. It would be beneficial to provide some insight/analysis and include some numbers/percentages differences to compare and enhance the understanding of results.
10. It is advisable to position the table & figure closer to the corresponding statements.
11. Page 10 (4.2. Selecting the optimal model): Please elaborate more on the results on the table, especially on R<sup>2</sup> value and p-value.
12. Overall, the conclusion effectively summarizes the key findings of the study. However, it would be beneficial to discuss further the suitability of nanofluids towards application.
13. Consider conducting a thorough proofreading pass to catch any grammatical errors.

