

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.

A statistical-comparative study looked at the rheological properties of a nanofluid containing propylene glycol, graphene, and MWCNT. This study investigated various models. The goal is to identify the optimal prediction model and solution. In my opinion, the subject of this research is interesting, but the manuscript itself exhibits some flaws that make it unpublishable in its present form. Here are some of my concerns:

1. The experimental procedure for the AC breakdown voltage test is clearly outlined in the manuscript. Additionally, it's important to mention the standard followed to measure the AC breakdown voltage.
2. Use the correct phrase for "propylene glycol-graphene+MWCNT."
3. Using abbreviations or acronyms in writing, include the full form on the first appearance, followed by the abbreviation or acronym in parentheses. After that, you can continue with the text using the abbreviation or acronym. Apply this to the entire manuscript.
 - (i) Abstract: 2FI and C.V
 - (ii) Page 2: MWCNT
4. Make the introduction more comprehensive and avoid unnecessary details or jargon that could confuse the reader. The research problem and objectives are not clearly defined.
5. There are several typographical errors that could be improved throughout the manuscript.
 - (i) R², 2 should be superscripted.
 - (ii) CH₃CH(OH) CH₂OH, 3 and 2 should be subscripted.
6. Section 2.1's title, Electrical conductivity, is abbreviated as EC but is not used throughout; better remove it.
7. The clarity of expression in each paragraph is commendable. However, the excessive brevity of some paragraphs may disrupt the overall flow of the text. I suggest merging paragraphs where appropriate to improve coherence and maintain a smoother transition.
8. Figures should be displayed after they are mentioned in the text. For example, Figure 1 appeared before it was mentioned in the text. Please double-check the positioning of all figures and tables to ensure they correspond to the textual references.
9. Make subjective statements non-subjective in the entire manuscript; you can rephrase them to remove the direct

address to the reader. Example: "You'll get the data you need."

10. The Results section lacks comprehensiveness and does not include any references. To provide a more thorough explanation, incorporate insights from the literature (Reference: 10.1109/TDEI.2023.3274089), which explains thermal conductivity mechanisms.

11. The abstract mentions "two models." In conclusion, "three models" are mentioned. Please correct.