

# 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.

Dear Editor-in-Chief,

Hope you have a great day.

I am writing to inform you that the manuscript "Investigation of the Dielectric Behaviour of Propylene Glycol (100) Dispersed With Graphene Nano Powder to Determine the Optimal Conditions Using Response Surface Methodology" needs minor revision before acceptance.

The dielectric behavior of a propylene glycol-graphene nanopowder nanofluid was investigated by the response surface methodology (RSM). Some issues are seen in this manuscript, as follows:

- The problems and objectives of the study should be well described.
- The extended forms of the tests should be given in the abstract.
- Examples of other properties of this nanofluid should be given along with appropriate references in the introduction section.
- It should include a well description of the chemical interactions between the components of this nanofluid. For this purpose, use the following article and reference it in your article.

"A combination of experimental and theoretical approaches on SSBR/BR compounds reinforced by hybrid nano-silica/carbon black: Mechanical and rheological properties, Polymer Composites" <https://doi.org/10.1002/pc.27682>.

"Poly(propylene fumarate)/Polyethylene Glycol-Modified Graphene Oxide Nanocomposites for Tissue Engineering, ACS Applied Materials & Interfaces" <https://doi.org/10.1021/acsami.6b05635>.

"Effect of TESPT on viscoelastic and mechanical properties with the morphology of SSBR/BR hybrid nanocomposites, Polymer Composites" <https://doi.org/10.1002/app.53863>.

- Other articles have been done to study the behavior of composites containing reinforcing particles with other models, which should be included in the introduction of the article.

“Optimization of mechanical properties of polypropylene/talc/graphene composites using response surface methodology, Polymer Testing” <https://doi.org/10.1016/j.polymertesting.2016.06.012>.

“Modeling of nonlinear hyper-viscoelastic and stress softening behaviors of acrylonitrile butadiene rubber/polyvinyl chloride nanocomposites reinforced by nanoclay and graphene, Polymer Composites” <https://doi.org/10.1002/pc.25849>.

“Study comparing the tribological behavior of propylene glycol and water dispersed with graphene nanopowder, Scientific Reports” <https://doi.org/10.1038/s41598-023-29349-7>.

“Multiscale modeling of hyperviscoelastic behavior of particulate rubber composites based on hybrid silica/carbon black filler system, Polymer Composites” <https://doi.org/10.1002/pc.28066>.

- The main idea of this article should be well expressed at the end of the introduction.
- More information about the main material should be added to the manuscript in the Materials section.
- The companies, and also the manufacturing countries of all the equipment used, should be stated.
- All test conditions should be detailed.
- Provide more information about the RSM experiment.
- Add images of nanoparticle dispersion in nanofluid to the article, or you can use the following articles to interpret nanoparticle dispersion.

“Study comparing the tribological behavior of propylene glycol and water dispersed with graphene nanopowder, nature” <https://doi.org/10.1038/s41598-023-29349-7>.

“Effects of two types of nanoparticles on the cure, rheological, and mechanical properties of rubber nanocomposites based on the NBR/PVC blends, Journal of Applied Polymer Science” <https://doi.org/10.1002/app.47550>.

- The references should be modified according to the format of the journal.
- The resolution of all photos must be considered in accordance with the guidelines of the journal.