Review of: "Tsallis Entropy applied to microfluidic channels analysis"

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Potential competing interests: No potential competing interests to declare.

Article Title: "Tsallis Entropy applied to microfluidic channels analysis"

In order to assess the presence of impediments and their impact on the fluid, the author investigated the possibility of using thermodynamics to characterize the fluid flow in a microchannel.

The main observations are listed below:

1. A strong background needs to be set up for the ongoing work. What is exact novelty and why is the work important in the current perspective???
2. The “Abstract” section should contain answers to the following questions: What problem was studied and why is it important? What methods were used? What are the important results? What conclusions can be drawn from the results? What is the novelty of the work and where does it go beyond previous efforts in the literature? Please include specific and quantitative results in your Abstract.
3. More computational details are about this type of solver and validation. It is important to present the validation in accordance with the topic of the article that is presented.
4. While the mathematics is fine, but the authors should explain and provide an additional physical explanation for some of the mathematical equations. Also, Physical interpretation of the results not properly enhanced.
5. The originality of this research should be written more clearly in the introduction.
6. The references of all the equations need to be included.
7. The “Bibliography” section is very poor; please add some recent article in this topic.
8. Please, correct the citation of bibliography in text; for example: Kumbhakar et al. [2].
9. In Figure1, why the blue carve looking not be smoothly like other curves?
10. The following articles may be consulted to enrich the literature survey; different studies in fluid dynamics in different cases. Please, add the following articles:

- Heat and mass transfer for MHD peristaltic flow in a micropolar nanofluid: mathematical model with thermophysical features
- Heat and mass transfer in a peristaltic rotating frame Jeffrey fluid via porous medium with chemical reaction and wall properties
- Dynamic patterns of electroosmosis peristaltic flow of a Bingham fluid model in a complex wavy microchannel

- Peristaltic pump with heat and mass transfer of a fractional second grade fluid through porous medium inside a tube
- Numerical solution for MHD peristaltic transport in an inclined nanofluid symmetric channel with porous medium
- Effects of heat transfer and the endoscope on Jeffrey fluid peristaltic flow in tubes
- Effect of Heat and Mass Transfer and Magnetic Field on Peristaltic Flow of a Fractional Maxwell Fluid in a Tube
- Impact of inclined magnetic field on peristaltic flow of blood fluid in an inclined asymmetric channel in the presence of heat and mass transfer
- Magnetized dissipative Soret effect on nonlinear radiative Maxwell nanofluid flow with porosity, chemical reaction and Joule heating
- Heat transfer in a non-uniform channel on MHD peristaltic flow of a fractional Jeffrey model via porous medium