Review of: "Specific absorption rate reduction for sub-6 frequency range using polarization dependent metamaterial with high effective medium ratio"

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Potential competing interests: The author(s) declared that no potential competing interests exist.

The authors present a multi-layered square-shaped metamaterial structure for the electromagnetic absorption reduction in wireless mobile devices, which exhibits multi-band resonance frequencies accurately at 1.200, 1.458, 1.560, 1.896, 2.268, 2.683 2.940, 3.580 and 5.872 GHz. There are several raised questions need to be further clarified and explained.

1. The English in the paper should be carefully revised, the manuscript lacks logic.
2. The authors display a lot of old works such as Refs. [8-18], and too little descriptions for recent works. This does not reflect the innovation of this paper, the introduction should be reorganized.
3. There are many contents of popularization of science in the manuscript, such as “This type of substrate material has a low dielectric loss and can describe as excellent mechanical properties versus temperature. Therefore, the Rogers RO3006 is ideal for reliable stripline and multi-layer board design construction with a range of dielectric constant.” “Generally, CST software is utilized in electromagnetic problem solving with accurate outcomes.”. “Although 5G is on its way, many countries are still using the 4G network. Therefore, this primary interest led to the examination of electromagnetic absorption reduction values at the selected frequency range.” These are not suitable to appear in scientific research paper.
4. The authors should do more principle and mechanism analysis, rather than just describe the results, such as the magnetic field and electric field diagram.
5. Only the fourth and fifth resonance frequencies were validated in experiment, this seems to be insufficient, and the fifth resonance peak is very biased, it should be further analyzed.
6. “Besides unique electromagnetic properties, unconventional material provides additional benefits likely, good elasticity, strength, or heat conduction.” However, the authors did not analyze the relevant performance. Where did this conclusion come from?