

Review of: "Synthesis of Nickel Nanoparticles Using Ionic Liquid-Based Extract from *Amaranthus viridis* and Their Antibacterial Activity"

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Potential competing interests: No potential competing interests to declare.

Authors presented "Synthesis of Nickel Nanoparticles Using Ionic Liquid-Based Extract from *Amaranthus viridis* and Their Antibacterial Activity", however, it would have been better to add more biological applications.

Authors should include and explain the below comments in the revised manuscript:

1. Abstract should be rewritten and should summarize the reason for the work, the most significant results, and the conclusions.
2. In the introduction part, include the importance of green synthesized metal and metal oxide NPs for antioxidant, antibacterial, and photocatalytic activities, for example, AuNPs ([doi: 10.5604/12321966.1141374](https://doi.org/10.5604/12321966.1141374)), AgNPs, (<https://doi.org/10.1002/slct.202203658>) PdNPs (<https://doi.org/10.1007/s10876-016-0984-0>), etc.
3. Synthesis part; authors should mention *Amaranthus viridis*, why? And many reports are published using these leaves' extract?
4. Plant material means what? Which material, leaves, roots, stem, or etc.? Should mention the part of plant materials.
5. A schematic diagram or graphical abstract should be included.
6. Include the mechanism of action for antimicrobial applications with figures.
7. Figure 1 and Figure 2 should have clear vision.
8. In SEM, there are no clear images, like morphology, shape, size?
9. Compare the current work with previously reported Synthesis of NiNPs by green method and compare all activities in a separate table.
10. Figure 7 should be clear with a black background
11. Antibacterial activity should be compared and included (<http://www.ijpbs.net/vol-3/issue-1/bio/P-49.pdf>) with a table.
12. Conclusions should be rewritten.
13. Major English edition is required for the whole manuscript.