

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.

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

This paper has good data, but as a full paper, the data is not enough to prove successful Ni NPs. I suggest at least comparing with pristine samples so that we can see the improvement of this study. The author should combine the results scientifically with clear labeling and relate each result. Here are some comments about this paper:

1. In this work, add the Table comparison from previous work so that we can see clearly the novelty, improvement, and advantages of this study.
2. For the results and discussion, rearrange the arrangement of the data. TGA, XRD, FESEM, EDX, UV Vis, FTIR, and lastly, antibacterial activity.
3. In 3.1, the author just explains the parameters but does not discuss the results. Explanation is needed in this part.
4. In the XRD results, include the picture of the standard diffraction pattern with no 04-0835 to prove the purity of the sample and the existence of Ni. Stack the coordinates of every peak. Include the formula of the Debye-Scherrer equation in the methodology and in the results and discussion.
5. In 3.4, the author states the wrong range of the temperature. There are 3 parts of mass loss, but only two are included in the explanation. From the TGA results, what is the annealing parameter used in this experiment? More explanation is needed.
6. In 3.5, the author mentions Figure 5(A), but there is no labeling in Figure 5. The morphology of the sample is not clear, and the % composition of the elements is not included in the explanation.