

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

Muhammad Shahbaz Rafique¹

¹ University of South Florida, United States

Potential competing interests: No potential competing interests to declare.

Reviewer comments and questions

In the current research study, a plant extract was employed in a green synthesis method to produce Ni nanoparticles. Subsequently, the synthesized nanomaterial was utilized to assess the antibacterial activity against three distinct bacteria.

Comment 1

The abstract discusses the experiment, its procedure, and the characterization tools used. However, it lacks an explanation of the authors' achievements and the novelty of the paper. It is recommended to revise the abstract to include the background, experiment, achievements, and potential benefits.

Comment 2

The overall quality of the paper's writing is unsatisfactory. There are numerous grammatical errors, and the structure of the sentences is either incorrect or lacks coherence. It is imperative to enhance the overall written English quality of the paper.

Comment 3

All figures must be properly labeled. Please use the reference from the following paper on how to label.

Title: Preparation and structural investigations of the composite containing lead oxide and graphite as reinforcements and its adsorptive and photocatalytic dye-degradation activity

Doi: <https://doi.org/10.1016/j.diamond.2023.110170>

Comment 4

In section 3.6, the authors referred to the size of 23.5 nm, but they did not provide an explanation of how this data was obtained. Is 23.5 nm the average diameter?

Comment 5

Please answer the following questions.

1. What methods are employed for the characterization of the nickel nanoparticles in this study? Please provide a comparative analysis of this method in relation to others. What makes this method better?
2. What could be the potential applications of the nickel nanoparticles synthesized from *Amaranthus viridis*?
1. What are the potential environmental impacts associated with the use of ionic liquids in the synthesis process or the disposal of nanoparticles after their use?