Review of: "Synthesis, Characterization and Ameliorative Effect of Iron Oxide Nanoparticles on Saline-Stressed Zea Mays"

Dr. Suresh Kumar[1]

1 Maharishi Markandeshwar University, Mullana

Potential competing interests: No potential competing interests to declare.

Manuscript No: **Qeios_75AS4Y** Qeios ID: 9JHO96

Manuscript Title: Synthesis, Characterization and Ameliorative Effect of Iron Oxide Nanoparticles on Saline-Stressed Zea Mays

Comments To the Editor: Please find the comments on the manuscript after reviewing:

Manuscript **Qeios_75AS4Y**, under review, contains good work on plant-mediated iron oxide nanoparticles and their effect on saline-stressed Zea Mays growth. This manuscript is recommended for publication with minor changes.

Response: **Recommended for publication with minor changes**

Comments to Authors:

1. Highlighted text (yellow color) in the manuscript needs technical/grammatical modification.
2. Also, check the manuscript for grammatical and language modifications.
3. Many technical errors (SI units, decimal places, chemical names, headings/subheadings, abbreviations, etc.) are highlighted (yellow color); rectify them.
4. Introduction section is lengthy and out of focus, so concise it.
5. **Instrumental analysis of the nanoparticles:** This section is too lengthy and contains unnecessary information about the instruments, so concise it.
6. **Section 3;** must be **Results and discussion**
7. **3.2. Uv-vis analysis**
8. Sizes calculated from TEM/SEM analysis are not technically correct, so either present their histograms or rectify them.
9. Authors must comment and specify why their samples are deficient in oxygen content as quantified by EDX analysis.
10. **3.5. XRD analysis**

- **Since few low intensity multiple peaks are detected in XRD spectra, and the authors claims in Table 1, hence FeONPs are not amorphous… check & modify this statement.**

Here, authors must cite the following papers for XRD and UV-Vis results:

- V. Sharma, J.K. Sharma, M.K. Bera, et al. Chloramphenicol and gentamycin-encapsulated iron oxide nanoparticles as a nanocarrier for antibacterial efficacy via targeted drug delivery. Nano Biomedicine and Engineering, 2023, 15(2): 170–178**.**
- Suresh Kumar, Vandana Sharma, Jatindra Kumar Pradhan, Sanjay Kumar Sharma, Prem Singh, and Jatinder Kumar Sharma, Structural, Optical and Antibacterial Response of CaO Nanoparticles Synthesized via Direct Precipitation Technique. *Nano Biomed. Eng.*, 2021, 13(2): 172-178

- 11. **Check Table 1; units are not mentioned for physical quantities; d-spacing will be in**
- **12. Tables 2 & 3 need rectifications**
- **13 Fig. 9 (b & c) are not clear like Fig 9 (a).**
- **14. Conclusion needs rectifications**
- **15. Supplementary figures captions are mis-spelled**
- **16. See the attached manuscript with highlighted text that needs modifications**