

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

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Potential competing interests: No potential competing interests to declare.

In the manuscript entitled "Synthesis, Characterization and Ameliorative Effect of Iron Oxide Nanoparticles on Saline-Stressed *Zea Mays*", the authors present the synthesis, characterization, and use of iron oxide nanoparticles for saline-stressed *Zea Mays*. The authors evaluated two types of iron nanoparticles. The manuscript is well organized, and the amount of references is adequate. The thoroughness of the introduction is detailed; however, repetitive words in the same paragraphs should be omitted.

This reviewer recommends significant revisions. The manuscript could not be accepted for publication in its current form.

1. In the introduction, it would be recommended to add the charge of the mentioned ions.
2. Section 2.4. What does FUTO stand for? It is detailed in the authors' affiliation; however, it should be detailed in the manuscript.
3. Section 2.5. Why was 300mM of NaCl selected? Add a brief explanation of the selection of this value.
4. Section 2.7. What do CAT and SOD stand for? After these acronyms are detailed, so they must be accommodated in the manuscript.
5. Section 3.1. Do not write so many decimal places in wavelength values.
6. Section 3.2. A more detailed analysis of the UV-Vis analysis should be performed.
7. Figure 3. Indicate which one is a) and which one is b).
8. Section 3.4. The EDX analysis does not add much to the results or the manuscript as written. In FTIR, the authors mention that signals of amines, Cl, C, etc., are detected; it would be recommended to corroborate the presence of these species with the EDX technique.
9. It is suggested to always name the samples in the same way, that is, either iron (Fe) nanoparticles or iron oxide (FeO) nanoparticles.
10. Section 3.7. Some essays' results lack an exhaustive analysis. This should be improved.

11. Conclusion. Line 2: It is 80 °C, not 80 0C.

12. Conclusion. As written, the conclusion seems a summary of information already presented. This section should be improved.