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.

Review Report

In this work, the investigators (authors) synthesized the iron oxide nanoparticles using an aqueous leaf extract of Diodella sarmentosa, characterized them, and then studied their ameliorative effects on saline-stressed Zea mays. Overall, the manuscript is well written and organized. However, there are a few minor issues that the authors should address.

1. In the manuscript, there are typographical errors in several places. For example, on page 6, the author wrote H2O2. It should be H_2O_2. On page 7, the notations of degrees are not proper, and the notations of ions are not proper (Na+ should be Na^+).
2. Shift the figure of FTIR spectra from supplementary documents to the main manuscript as it is an important characteristic.
3. In figure 2, on the vertical axis, replace 0,5, 1,5 …… by 0.5, 1.5 ….
4. Mention the method of determination and the unit of D and d in the manuscript.

The value of D varies from 0.88 to 7.84. The author has taken the average D. Is it suitable or not? If suitable, then why?

1. In the citation, write et al and year (2020) uniformly. Somewhere it is written in italic, and somewhere it is not italic. Also, the year is in the bracket, and somewhere it is not in the bracket.
2. In some references, DOI is written. Make it uniform.
3. Some references are not found in the body part of the manuscript.

These are:

Isayenkov SV, Maathuis FJM. 2019. Plant salinity stress: many unanswered questions remain. Frontiers in Plant Science 10: 80.

Lushchak VI, and Storey KB (2021). Oxidative stress concept updated: Definitions, classifications, and regulatory pathways implicated. EXCLI J. 2021 May 26; 20:956-967. doi: 10.17179/excli2021-3596. PMID: 34267608; PMCID: PMC8278216.

Mukherjee, S.P. and Choudhuri, M.A. (1983) Implication of Water Stress—Induced Changes in the Levels of Endogenous

Ascorbic Acid and Hydrogen Peroxide in Vigna Seedling. Physiologia Plantarum, 58, 166-170.

Sami, F., Siddiqui, H., and Hayat, S., (2020). Impact of silver nanoparticles on plant physiology: a critical review. In: Hayat, S., Pichtel, J., Faizan, M., Fariduddin, Q. (Eds.), Sustainable Agriculture Reviews 41. Sustainable Agriculture Reviews, vol 41. Springer, Cham. https://doi.org/10.1007/978-3-030-33996-8_6.

United Nations. (2019). World Population Prospects: The 2019 Revision. New York: United Nations. Van Zelm, E., Zhang, Y., and Testerink, C., (2020). Salt tolerance mechanisms of plants. Annu Rev Plant Biol.: 71:403- 433. doi: 10.1146/annurev-arplant-050718-100005.

Include these references in the body part of the manuscript.