

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.

The manuscript entitled "**Synthesis, Characterization and Ameliorative Effect of Iron Oxide Nanoparticles on Saline-Stressed Zea Mays**" was reviewed. This work and the as-obtained results are interesting. Authors are requested to clarify some doubts in the manuscript and make the corrections.

- Whether the authors worked on Fe NP or FeO NP? In the entire manuscript, it should be checked and replaced with the correct material.
- On what basis was the leaves SW selected to synthesize the materials?
- In the experimental section, the solution was heated, filtered, and dried. Then the crude extract was stored at 4°C. How the crude extract was prepared and why it was stored at such a temperature? It is confusing while reading. Please make it easily readable.
- In the Instrumentation section (2.3), you have mentioned the potential size in the Scherr Formula. Please check.
- Check the oxidation state of FeO. At room temperature, Fe₂O₃ is more stable. Please check.
- **The oxidation state can be calculated from the EDAX. Please refer to the following paper and include it as a reference**

<https://doi.org/10.1016/j.electacta.2023.143712>

<https://doi.org/10.1007/s10854-023-10049-x>

<https://doi.org/10.1016/j.ric.2022.100346>

- The particle size calculated from the TEM and SEM should be checked.
- The d-spacing value may be in Å. Please check the contents in Table 1. D-value, I/I₀ should also be checked.
- Is the FTIR spectrum for iron oxide nanoparticles or does it include any other components? Please confirm.
- In the UV-Visible analysis, you have stated that the reference is contracted with some changes. But you have to check whether your material is Fe or iron oxide.