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.

This manuscript talks about the synthesis of Fe NPs or FeO NNPs for the study of the ameliorative effect of the NPs on saline-stressed Zea mays. Even if the manuscript has good sides, there are lots of issues that should be addressed and improved to be published in the Qeios journal.

Would you merge and minimise the 1st and 2nd introduction paragraphs, please?

The fifth paragraph of the introduction talks about the harmfulness of NPs, which seems to be tested but not confirmed.

The sixth paragraph seems theoretical; would you reduce it, please?

The final paragraphs should be a brief summary of the results and conclusions.

Would you merge and minimise the paragraphs under 2.3, please?

There are several typographical errors, such as spaces between numbers and units, writing “ml” instead of "mL," and the use of improper mathematical equations in the methodology part.

The manuscript sometimes talks about Fe-NPs and other times about FeO-NPs. Which one is exactly the synthesised material for your work?

The Tauc method should be calculated and presented for the UV-vis analysis, which assists in determining the band gap of the synthesised materials.

I’m not observing NPs with a size of 2.22 nm as discussed in the texts; the NPs seem to have a size greater than 30 nm. It would also be better to change the decimal number to a whole number.

Would you include the HRTEM and SAED ring in addition to TEM for further d-spacing analysis, which tells you whether it is Fe-NPs or FeO NPs?

By the way, if it is FeO NPs, which type will they become? Is that hematite (Fe2O3), magnetite (Fe3O4), or others?

Change the “particle size” in the XRD interpretation to average crystallite size. Would you discuss the 2 theta crystallite planes in the text? You need to discuss more about the XRD pattern analysis.

Would you revise the typographical and grammatical errors in the macroscopic measurement sections, please?

The conclusion should be updated; besides, 80 oC, 380 m, and 2.5 keV should be modified to 80^{O}C, 380 nm, and 2.5 keV, respectively.

The FTIR spectrum should be redrawn using Origin software, or the clarity should be increased.