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

Alireza Nezamzadeh-Ejhieh[1]

1 Islamic Azad University, Shahreza Branch

Potential competing interests: No potential competing interests to declare.

Dear Dr Gabri,

Peer Review Team, Qeios,

Thank you for your attention. I revised the manuscript referenced as:Synthesis, Characterization and Ameliorative Effect of Iron Oxide Nanoparticles on Saline-Stressed Zea Mays. The results are good for publication in your journal. I suggest publication of the work after revision considering the following comments. I also emphasize the need to use the comments from other referees to inform your decision, and my comments relate to FeO features and characterization data.

1. I suggest adding the findings of the work to the abstract, especially quantitative results.

2. Begin keywords with a capital letter and arrange them alphabetically.

3. In the introduction, I suggest bolding various features of iron oxides/sulfides by reading Chem. Phys. Lett. 752 (2020) 137587, Materials Chemistry and Physics 305 (2023) 127918, J. Photochem. Photobiol. A: Chem. 15 (2018) 1-10, Mater. Sci. Semicond. Proces. 27 (2014) 833–840, Des. Water Treat., 57 (2016) 16483–16494.

4. To polish the 4th paragraph of the introduction, about various applications of nanomaterials, I suggest reading Mater. Sci. Semicond. Proces. 31 (2015) 684–692, Desal. Water Treat. 57 (2016) 10802–10814, J. Taiwan Institute Chem. Eng. 104 (2019) 130-138, Iran. J. Catal. 11(2) (2021) 181-189, C. R. Chimie 17 (2014) 49–61.

5. Please check the experimental section carefully, mentioning all conditions applied so it will be usable by readers; all adopted procedures should be cited to their refs.

6. In the FTIR section, avoid mentioning decimals for wavenumbers, and read the following works about Fe-O bands to polish this section. Physica B 599 (2020) 412422, Chemosphere 107 (2014) 136–144.

7. What important conclusion was drawn from the UV Vis spectrum in Fig. 2?

8. A detailed discussion on various crystallite phases of FeO (J. Ind. Eng. Chem. 21 (2015) 668–676, Chem. Phys. 550 (2021) 111305) has been presented in the suggested works; please read to enhance the discussion on XRD data.

I also suggest estimating the crystallite size by the Williamson-Hall equation and comparing it with the Scherrer formula. If no data are present, I suggest mentioning this broadening effect. J Molecular Liq 322 (2021) 114563, Iran. J. Catal. 11(3) (2021) 247-259.

9. On page 14, about scavenging agents, I feel that reading the following works will help you to extend the discussion in this section.

10. Please complete the conditions in the figures' captions. Each caption should be suitable and sounding for the corresponding figure.

11. Please deeply check the English language level and correct some spelling and grammatical errors.

Best regards,