

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 this study, FeONPs were synthesized using leaf extract of *Dioscorea sarmientosa* (SW) Bacigalupo EI & Cabral ex Borhidi) at 80°C. The leaf extract served as reducing agent for the extraction of iron nanoparticles from iron (iii) chloride hexahydrate ($\text{FeCl}_3 \cdot 6\text{H}_2\text{O}$). The synthesized spherical and amorphous iron nanoparticles with the size ranging from 2.22 to 27.83 nm, were confirmed at the maximum light absorption peak of 380 nm to have about 2.5 eV energy. Foliar application of the FeONPs on the saline stressed Zea mays ameliorated the adverse effects of salinity on plants by increasing the chlorophyll and carotenoid contents of the plant, and enhancing enzymatic activity of SOD and CAD (antioxidant enzymes). The overall result suggests that iron oxide nanoparticles may be a beneficial agent to enhance plant tolerance to salinity. The article studies the effects of metal nano-treatment on the growth and development of corn plants in saline conditions with rich references, using many modern measurement methods to characterize Chemistry of nanomaterials in experiments such as FTIR, XRD, TEM and SEM, UV-Vis, Assessment of Antioxidant Enzyme Activity. I think this article should be published in a magazine in the near future. Best regards!!!!