

# Review of: "Synthesis of Nickel Nanoparticles Using Ionic Liquid-Based Extract from *Amaranthus viridis* and Their Antibacterial Activity"

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Potential competing interests: No potential competing interests to declare.

The study explores the synthesis of **nickel nanoparticles (Ni NPs)** using bioactive components extracted from *Amaranthus viridis* with the help of a green extraction technique using **1-ethyl-3-methyl imidazolium acetate [C3MIM]Ac** (an ionic liquid) and microwave-assisted extraction. The study could benefit from a more detailed discussion of the role of the bioactive compounds from *Amaranthus viridis* in the reduction and stabilization of nickel nanoparticles. Identifying the specific phytochemicals involved and their interaction with nickel ions would deepen the understanding of the synthesis mechanism. It would be interesting to investigate the recyclability of the IL used after the synthesis process, as this is one of the key advantages of ionic liquids in green chemistry.