

Eco- Friendly Applications in Presence of Biosynthesized Metal Nanoparticles

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Abstract: Green chemistry has proven to be an effective way to synthesize metal nanoparticles. Nanoparticles are very important for the development of sustainable technology for the future, for humans and the environment. The synthesis of nanoparticles from plants is a green chemical approach that combines nanotechnology and plant biotechnology. The plant extract is used for the bio-reduction of metal ion to produce nanoparticles. Plant metabolites have been shown to play an important role in reducing metal ions to nanoparticles and aiding their subsequent stability. Conventional methods for synthesis of nanoparticles uses harmful chemicals, generate serious attention to the development of ecological processes. Therefore, green synthesis uses extracts from biological sources from plant sources, which are superior to conventional methods. Over the past decade, it has been shown that many biological systems, including plant extract such as Steams, leaves, latex, flower, seeds can convert inorganic metal ion into metal nanoparticles. The many plants and plant parts have been used successfully in the synthesis of several green Metal nanoparticles such as Ag, Cu, Fe, Au, Pd Nanoparticles have been confirmed by various instrumental techniques. NPs are widely used in areas such as magnetic devices, photocatalysts, microelectronic devices, anti-corrosion coatings, biomedical and electrocatalysts. Here we report the biosynthesis of FeNPs and their catalytic activity was tested for degradation kinetics for Malachite green dye (MG).

Keywords: Nanotechnology, Biosynthesis, Metal Nanoparticles, Characterization, Catalytic applications

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