

Past and Present Research Systems of Green Chemistry

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Facile and eco-friendly method for the synthesis of magnesium oxide nanoparticles and their antioxidant properties

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Green synthesis of nano-dimensional metal oxide particles are of great importance due to their medicinal and sensing properties. Metal oxide nanostructures have attracted considerable spouting research in many potential limelight fields of biotechnology, chemistry, physics and environmental biotechnology due to their dependent properties of size and shape. In this attempt, the authors synthesized the Magnesium Oxide (MgO) nanoparticles using ethanolic extract of *Clitoria ternatea* as reducing and capping material. The plasmon resonance of grown nanoparticles by varying different optimal conditions (temperature, amount of extract and pH values) of nanoparticles was investigated by UV-Vis spectroscopy. The size, shape, surface morphology and elemental composition of bio-transformed MgO nanoparticles were characterized by different analytical techniques such as FT-IR, SEM, EDX, PL intensity and XRD analysis. The anti-oxidant activity of biologically synthesized MgO was evaluated by DPPH free radical scavenging activity and reducing power assay. The results showed the 60% inhibition which clearly indicates the antioxidant activity of green synthesized MgO nanoparticles.

Biography

N John Sushma completed PhD at the age of 28 years from Sri Venkateswara University, Tirupati. She has published more than 40 papers in reputed journals and has presented her research work in various international and national conferences. She has presented a paper in international conference on "Prevention of Dementia" by Alzheimer's association held at Washington DC, USA in 2007. She got "National Environmentalist" award. She is currently involved in the Nanobiotechnology, Biochemical Pharmacology and Herbal Drug Development against metal toxicity.

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