

# Synthesis and Characterization Studies of Pure MgO by Sol-Gel Method

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**Abstract:** Magnesium oxide nanoparticles were synthesized by Sol-gel Method. The synthesized nanoparticles were characterized by Powder XRD, UV-VIS, SEM and EDAX. The XRD studies of the sample confirmed the formation of cubic structure and the particle size and lattice constants were analyzed. SEM results show Spherical shape for MgO. A broad absorbance band from UV-Vis spectra is located at around 2.32eV. EDAX is used to analyze the functional groups of synthesized nanoparticles. This is the simple synthesis method and they are used in optical and gas sensor applications, telecommunication cables, conductor wires, connector wires and automotive switches.

**Keywords:** Mg(NO<sub>3</sub>)<sub>2</sub>; C<sub>2</sub>H<sub>5</sub>OH, XRD, UV, SEM, EDAX

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