



Fluorescence Study on Biological Synthesis of Cadmium Sulfide Nanoparticles by *Tinosporacordifolia*: A green perspective

T Varaprasad¹, B Govindh², B. Venkateswara Rao^{3*}

¹PR Govt. College, Kakinada, Andhra pradesh, (India)

²Department of H&S, Raghu Institute of Technology, Visakhapatnam, Andhra Pradesh, (India)

^{3*}Department of Engineering Chemistry, College of Engineering, Andhra University, Visakhapatnam, India-530003.

Abstract: Synthesis of CdS nanoparticles (CdS-NPs) was achieved by a simple green procedure using *Tinospora Cordifolia* leaf extract as stabilizer/reducing agents. CdS-NPs in the size range of 6-12 nm is obtained by the treatment of aqueous Cadmium & Sulfide ions with leaf extracts of *Tinospora Cordifolia*. This eco-friendly approach is simple, amenable for large scale commercial production and technical applications. Further, photoluminescence studies of these CdS-NPs were recorded & suggested that the present particles were suitable for fluorescence emitting probes. These red emitting CdS-NPs exhibited distinct fluorescence properties.

Keywords: Fluorescence, Biological Synthesis, Cadmium Sulfide Nanoparticles, *Tinosporacordifolia*.