

Green Biosynthesis of CdS Nanoparticles Using Yeast Cells for Fluorescence Detection of Nucleic Acids and Electrochemical Detection of Hydrogen Peroxide

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In this work, a green method was reported to biosynthesize the CdS nanoparticles, where the yeast *Saccharomyces cerevisiae* was used as the nitrogen source. To characterize the as-prepared CdS NPs, UV-Vis spectroscopy, XRD and SEM were employed. The results indicated that the as-synthesized CdS NPs from *Saccharomyces cerevisiae* exhibited a mean size of 4.7 nm with high purity. The electrochemically detection of hydrogen peroxide and fluorescence-enhanced detection can be achieved by the application of biosynthesis CdS nanoparticles.

Keywords: Biosynthesis; CdS NPs; TEM; Fluorescence detection; *Saccharomyces cerevisiae*; Hydrogen peroxide

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