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FABRICATION OF ZnSe BASED DYE SENSITISED SOLAR CELL AND ITS CHARACTERIZATION

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ABSTRACT

To a make a low cost dye sensitized solar cell zinc selenide nanoparticles were prepared by a cost effective chemical method. The structure of synthesized nanoparticles was characterized by Transmission Electron Microscope and X-ray diffraction. Optical absorption and photoluminescence properties of as grown nanoparticles had been studied. Dye sensitized solar cell based on ZnSe had been fabricated. Anthocyanin a kind of vegetable dye was used as sensitizer in prepared dye sensitized solar cell. The optical properties of anthocyanin were also studied. The current-voltage characteristics of the dye sensitized solar cell had been studied in dark and light condition. The measurement of efficiency and fill factor of the dye sensitized solar device were also performed.

KEYWORDS: Znse Nan oparticles, Structural Properties, Optical Properties, Dye Sensitized Solar Cell