



ChemTech

## International Journal of ChemTech Research

CODEN(USA): IJCRGG, ISSN: 0974-4290, ISSN(Online):2455-9555  
Vol.10 No.2, pp 917-922,2017

### Effect of Synthetic Method and Dopant on Zinc Sulfide Quantum Dots

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**Abstract:** Nanomaterials synthesis and its application in the field of electronics have increased vastly in the last two decades. There are various methods of synthesis and processing employed in industries to exploit to their production values in its cheapest way. Zinc sulfide is a prominent member of II-IV semiconductor with a verity of applicable properties. A dopant such transition metals have enhanced the optical and electrical properties of the nanoparticles. In the meanwhile, the synthetic ways also act on the properties of nanomaterials. In this method paper, zinc sulfide was synthesized with two different methods using two different dopants. The methods for synthesis were a hydrothermal process and simple wet chemical processes. The dopants selected were manganese and nickel. Each process and dopants increased the ability of materials which were quantified by the means of optic electrical properties and morphology. These properties were analyzed by UV-visible spectroscopy and XRD and FESEM.

**Keywords:** zinc sulfide; dopant; nickel; manganese; semiconductors.

Vadiraj K T *et al*/International Journal of ChemTech Research, 2017,10(2): 917-922.

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