

fluorescence (EDX) spectra showed presence of Zn, S, Al & Ni and their wt%.

4. Conclusion

We have successfully synthesized the ZnS, ZnS: Al and ZnS:Ni nanoparticles by chemical route. The structure and optical characterization of the films were done with the help of XRD, TEM, SEM, SAED, UV-VIS spectrophotometer. PL, XRD, SEM and TEM studies reveal formation of nanoparticles. XRF study reveals the presence of Zn & S and doping agents Ni & Al in the films. UV spectra reveals that the absorption band was blue shifted from the bulk. Photoluminescence investigation reveals the high crystalline nature of the ZnS nano particles. The reduction of particle size with variation of pH in ZnS nano particles has been observed. The result indicates that particle sizes are symmetric in nature and are of spherical in shape.

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