**Photoluminescence Study of CaYAl3O7 with Rare Earth Ce3+ Activated Phosphor**

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**Abstract.**

Now a days phosphor white light emission are widely used in scientific and commercial lighting devices . The luminescence properties and performance for white light depends different combination of host and activators which exhibit the color and efficiency. Therefore to improve the luminescence properties of blue emitted Ce3+activated CaYAl3O7  phosphor prepared by combustion method. A series of different concentrations of Ce3+ from 0.05 mol% to 5Mol% and investigate the Photoluminescence properties of the prepared phosphors Under the 356nm excitation wavelength the Ce3+ activated phosphors exhibited emission peaks at 389 nm, 420 nm, 600 nm(1-3). Also it is found that the emission intensity increases when increasing the dopant ion and concentration quenching observed after 3mol%.The analysis of results indicated that the prepared phosphor CaYAl3O7 :Ce 3+could be consider as a blue phosphor for WLEDs.

References

1. Xiang Li Wu, XiayouJi, Zhengliang wang etal. Journal of Alloys and Compounds 855(2021)157520
2. Kapil Dev,Anupam Selot,, G.B. Nair,V.L. Barai.,F.Z. Haque, F. Z., M.Aynyas, S.J.Dhoble, (2019). Journal of Luminescence 206, 380-385.

3 G. B. Nair, H. C.Swart, , S. J.Dhoble, (2020). Progrss in Materials Science, 109, 100622.