

Synthesis and luminescence properties of YVO₄ doped Rare-earth ions (Dy, Sm, Eu).

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Emitting materials such as YVO₄ doped rare earth ions have taken special attention due to their wide application in lamps and displays. Recently it has been shown that nanosized YVO₄:RE phosphors have a significant promise in high definition in plasma display panel (PDP) and field emitting display (FED). In this work we used combustion method to prepare YVO₄:RE phosphors and the luminescence, optical and morphological properties were investigated. The luminescence color for application of phosphor is an important factor. Hence the CIE coordinates of YVO₄:RE were measured (figure 1).

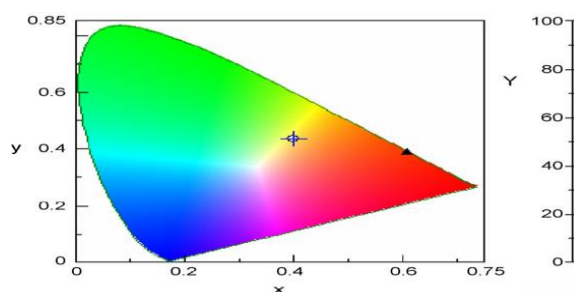


Figure 1: CIE of YVO₄:Dy (yellow) and YVO₄:Sm (orange).



Figure 2: Application of YVO₄ phosphors