

## The synthesis of $\text{Li}_2\text{SrSiO}_4:\text{Eu}^{2+}$ phosphor particles by spray pyrolysis

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Most of commercial methods producing white LED is to combine blue LED and yellow YAG:Ce<sup>3+</sup> phosphor. This method is presently the most efficient technique. However, this method is rather low color rendering index (CRI) because of its low red luminescence. Recently, oxinitride and silicate phosphors have been reported as new yellow phosphors to replace YAG:Ce<sup>3+</sup> because of high CRI. In this paper, we synthesized orange-yellow emitting  $\text{Li}_2\text{SrSiO}_4:\text{Eu}^{2+}$  phosphor particles by spray pyrolysis and investigated the photoluminescence (PL) properties. The crystal structure and morphology of  $\text{Li}_2\text{Sr}_{1-x}\text{SiO}_4:\text{Eu}^{2+}_x$  were investigated by X-ray diffractometry and scanning electron microscopy, respectively. The PL spectra of  $\text{Li}_2\text{Sr}_{1-x}\text{SiO}_4:\text{Eu}^{2+}_x$  were measured using a spectrofluorophotometer under the excitation of a 450 nm UV produced by a Xe flash lamp.