

The effect of flux materials on Ba₂SiO₄:Eu phosphor prepared by spray pyrolysis for continuous sampling

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Green emitting Ba₂SiO₄:Eu phosphor particles were synthesized by spray pyrolysis for continuous sampling. Flux materials of chloride type were introduced to enhance PL intensity of Ba₂SiO₄:Eu phosphor in spray pyrolysis. The effect of flux materials of chloride type on the crystallinity, morphology and PL intensity of Ba₂SiO₄:Eu phosphor was investigated. PL intensity of Ba₂SiO₄:Eu phosphor was enhanced by adding flux materials. The dependency of crystallite sizes of Ba₂SiO₄:Eu phosphor on the amount of flux materials was in agreement with that of PL intensities of that of Ba₂SiO₄:Eu phosphor. Therefore, the crystallite size is the most important factor in the PL intensity of Ba₂SiO₄:Eu phosphor and the enlargement of crystallite size is promised to enhance the PL intensity of Ba₂SiO₄:Eu phosphor.