Effect of LiCl flux on the Eu doped silicate phosphor particles prepared by spray pyrolysis

강희상[1,2], 강윤찬[3], 박승빈[1,*]
[1]한국과학기술원 생명화학공학과; [2]초미세화학공정센터;
[3]건국대학교 화학공학과
(SeungBinPark@kaist.ac.kr*)

The Ba0.988SrSiO4:Eu2+ 0.012 phosphor particles with high brightness, fine size and regular morphology were prepared by the spray pyrolysis from the spray solution with LiCl flux. LiCl flux added into the spray solution lowered the optimum post-treatment temperature to obtain the Ba0.988SrSiO4:Eu2+ 0.012 phosphor particles with high brightness. The maximum photoluminescence intensity, which was achieved when the LiCl content added into the spray solution was 5 wt.% of the Ba0.988SrSiO4:Eu2+ 0.012 phosphor, was 335 % of the phosphor particles prepared from the spray solution without LiCl flux. The Ba0.988SrSiO4:Eu2+ 0.012 phosphor particles prepared from the spray solution with LiCl flux had high brightness, fine size and regular morphology at post-treatment temperature of 1100 °C.