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Synthesis and characterization of europium activated lanthanum oxysulphide by sol- combustion method

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Abstract content
   (Max 300 words)

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Sol-combustion synthesis was used to obtain nanocrystalline La2O2S:Eu red-emitting phosphors. X-ray diffraction (XRD) was employed to determine that the powders in the as-synthesized samples were crystalline. Upon increasing the La/S molar ratios, the crystallinity in the nanosized particles increased, which resulted in a higher photoluminescence emission intensity of these phosphors. Fourier-transform infrared spectrometry analysis showed that there is a negligible difference in the absorbed impurities with various molar ratios. Hence, it was concluded that the La/S molar ratio plays an important role in the luminescence intensity of these phosphors.

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