

## Preparation and luminescence properties of $\text{SrSi}_2\text{O}_2\text{N}_2$ phosphor particle by spray pyrolysis

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The white LED technologies by combining the blue LED with yellow or green and red phosphor are rapidly growing and generating many new lighting industries. Recently, the realization of UV-LED based white light LED becomes a challengeable research area because it can be applied to displays as well as indoor lighting. Therefore, the development of phosphor which can convert blue or UV light into longer wavelength radiation is important. Oxonitridosilicates represent a class of solid compounds, which have attractive material properties such as hardness, strength, and chemical stability. Thus, there were many studies on oxonitridosilicates (Ln-Si-O-N) as a host matrix for phosphor application. For example,  $\text{SrSi}_2\text{O}_2\text{N}_2$  host doped with  $\text{Eu}^{2+}$  is reported to have good green emission under the excitation of near-UV and blue light. Conventionally, oxynitride has been prepared by partial substitution of oxygen by nitrogen using solid-state reaction. In this work,  $\text{Eu}^{2+}$ -doped  $\text{SrSi}_2\text{O}_2\text{N}_2$  phosphor was prepared by spray pyrolysis and the luminescent characteristics were reported.