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## Luminescence properties of $\text{CaO}:\text{Bi}^{3+}$ phosphor

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In recent years, there has been growing importance focused on research in light emitting diodes (LEDs) because of their long operation lifetime, energy-saving feature and high material stability [1, 2]. During the past few years, white LEDs fabricated using a near ultraviolet (n-UV) LED (380–420 nm) coupled with red, green, and blue phosphors have attracted much attention [2]. Accordingly, it is necessary to develop new blue phosphors that could be effectively excited in the near ultraviolet range especially for wavelengths of 400 nm [1]. The spectroscopic properties of the  $\text{Bi}^{3+}$  ion in different hosts have attracted much attention due to its emission wavelength that varies from the ultraviolet to the red region depending on the host matrix [3]. Therefore, with the appropriate matrix, the emission of  $\text{Bi}^{3+}$  ions can be used as a candidate for n-UV for LED applications.  $\text{CaO}:\text{Bi}^{3+}$  phosphor powder was successfully synthesized by the sol-gel combustion method. The structure, morphology and luminescent properties of the phosphor were characterized by X-ray diffraction (XRD), Scanning electron microscope (SEM), photoluminescence (PL) and cathodoluminescence (CL) techniques.

### Are you currently a postgraduate student? (Yes/No)

No

### Please provide the name and email address of your supervisor.

Prof H C Swart  
SwartHC@ufs.ac.za

**Primary author:** Dr MOHMED, Abdelrhman (University of the Free State)

**Co-authors:** Prof. SWART, Hendrik (University of the Free State); Prof. NTWAEABORWA, Odireleng (University of the Free State)

**Presenter:** Dr MOHMED, Abdelrhman (University of the Free State)

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