# **Retraction Note**



# Retraction Note to: Investigation of structural, luminescence, and anti-bacterial properties of novel $Zn_{1-x}Eu_xAl_{2-y}O_4Sr_y$ phosphor

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# Retraction to:

J Mater Sci: Mater Electron (2022) 33:15858–15878 https://doi.org/10.1007/s10854-022-08486-1

The Editor-in-Chief has retracted this article due to an overlap of content from multiple previously published sources and concerns regarding the data presented in this article. Specifically:

- The data of the micro strain in Table 2 were not correlated with the data in Fig. 2.
- The average volume reported in Table 8 was not correlated with Table 2.

- The SEM images in Fig. 4 are of  $Zn_{0.9655}Ba_{0.0345-}Al_{1.9655}O_4$ : $Eu_{0.0345}$  phosphor and not  $Zn_{0.95}Al_{1.95-}O_4$ : $Eu_{0.05}Sr_{0.05}$  phosphor as claimed in the article.
- In Table 2 the XRD values are similar to the XRD values in Table 3 of a previously published article
  [1].
- The reported peak angles, FWHM, Crystalline sizes and the d-spacing are the same as those that have been presented in a previously published article [2].
- Fig. 7D appears to overlap with Fig. 7D from a previously published article [1].

The original article can be found online at https://doi.org/10.1007/s10854-022-08486-1.

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- In Fig. 8 the FTIR image of Zn<sub>0.95</sub>Eu<sub>0.05</sub>Al<sub>1.95</sub>Sr<sub>0.05</sub>-O<sub>4</sub> phosphor is similar to the FTIR image of Fig. 6 in a previously published article [2].
- In Fig. 9 the Raman spectrum is similar to Fig. 7 of a previously published article [2].
- Fig. 10 appears to be highly similar to Fig. 10 in a previously published article [3].
- Fig. 17B and C appear to overlap with Fig. 15A and D from a previously published article [4].

The Editor-in-Chief has therefore lost confidence in the reliability and integrity of the work presented in this article.

Shubham Nema and Akshkumar Verma agree to this retraction. D. P. Bisen, Ishwar Prasad Sahu, Tapas Ray, Nameeta Brahme, Ashish Verma and Arun Kumar Singh have not responded to any correspondence from the editor about this retraction.

# References

- S.K. Pathak, A. Verma, A. Verma, Structural and photoluminescence properties of Eu<sub>3+</sub> activated ZnAl<sub>2</sub>O<sub>4</sub> orange red phosphor. J. Mater. Sci. 31, 16137–16149 (2020)
- S.K. Pathak, A.K. Verma, A. Verma, I.P. Sahu, Photo and mechano-luminescence properties of novel Zn<sub>1-x</sub>Eu<sub>x</sub>Al<sub>2-y</sub>-Ba<sub>y-</sub>O<sub>4</sub> advance blue phosphor. Physica B 602, 412612 (2020)
- A.K. Verma, A. Verma, G.V. Bramhe, Shifting and enhanced photoluminescence performance of the Sr<sub>1-x</sub>Eu<sub>x</sub>MgAl<sub>10</sub>O<sub>17</sub> phosphor. J. Alloys Compd. 774, 1168–1180 (2019)
- A.K. Verma, A. Verma, Synthesis, characterization, mechanoluminescence, thermoluminescence, and antibacterial properties of SrMgAl<sub>10</sub>O<sub>17</sub>: Eu phosphor. J. Alloys Compd. 802, 394–408 (2019)

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