

RETRACTION

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5, 9124**Retraction: Eco-friendly repurposing of by-pass waste for optics and radiation protection: addressing hazardous material challenges**Hesham M. H. Zakaly,^{*ab} H. Hashim,^c Shams A. M. Issa,^{bd} Moustafa A. Darwish,^{*c}
Fatma M. Obiedallah,^e M. S. I. Koubisy^a and H. A. Saudi^fDOI: 10.1039/d4ma90118e
rsc.li/materials-advancesRetraction of 'Eco-friendly repurposing of by-pass waste for optics and radiation protection: addressing hazardous material challenges' by Hesham M. H. Zakaly et al., *Mater. Adv.*, 2024, <https://doi.org/10.1039/d3ma01062g>.

We, the named authors, hereby wholly retract this *Materials Advances* article, due to the discovery of significant scientific errors in the originally published version.

During the proofing stage, the authors identified substantial inaccuracies in the bandgap values reported in Table 1, as well as related figures and equations. These inaccuracies were traced back to a calibration error in the UV-visible spectroscopy equipment, which necessitated a comprehensive revision of the data and subsequent recalculations.

Given the extent of the necessary corrections, which included changes to key figures and equations, the editorial team and authors determined that the most appropriate course of action was retraction and republication of the article with revised data.

The Royal Society of Chemistry is happy that republication of the work with the relevant data and conclusions is appropriate, with the article having undergone a full peer review process. The republished article can now be found at <https://doi.org/10.1039/D4MA00519H>.

The authors would like to express their commitment to maintaining the highest standards of scientific integrity. The errors were unintentional, and the authors took immediate steps to rectify them as soon as they were identified.

We would also like to clarify that the original manuscript contained an erroneous refractive index value in Fig. 5, with values incorrectly reported as being below 1. This mistake occurred due to a calibration error in the UV-visible spectroscopy equipment, which led to an incorrect calculation of the refractive index. The error has been thoroughly corrected in the revised manuscript, ensuring that the data now accurately reflects the material properties and adheres to established physical laws.

The authors sincerely apologize for any confusion caused by these errors and are grateful to the journal for their assistance in ensuring that the scientific record is accurate and reliable.

Signed: Hesham M. H. Zakaly, H. Hashim, Shams A. M. Issa, Moustafa A. Darwish, Fatma M. Obiedallah, M. S. I. Koubisy and H. A. Saudi

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Retraction endorsed by Jeremy Allen, Executive Editor, *Materials Advances*

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