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Supporting Information:

Synthesis and Photocatalytic Activity of Layered LaOInS_2

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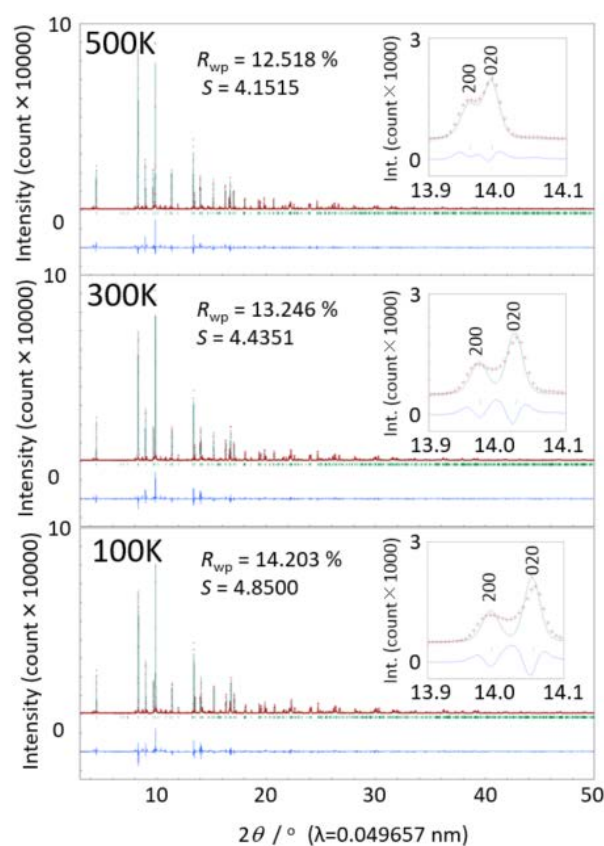


Figure S1 Rietveld refinement profiles of LaOInS_2 at 100, 300 and 500 K.

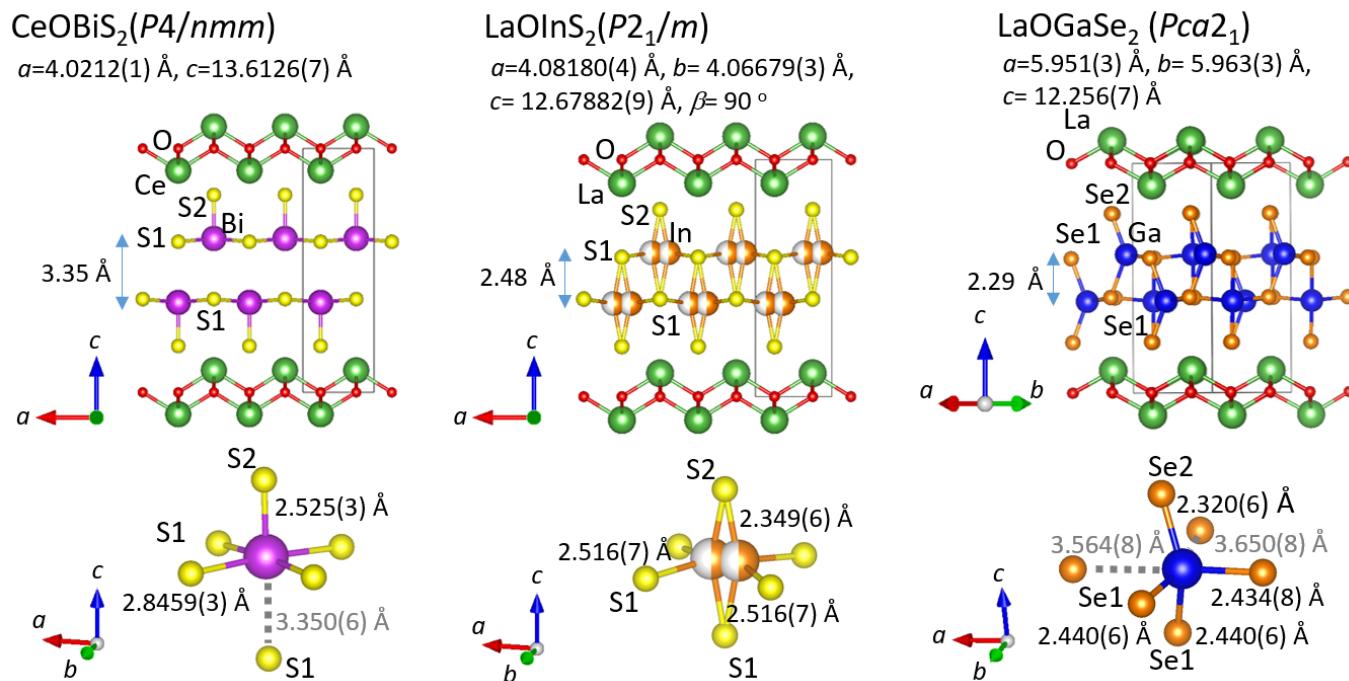


Figure S2 Crystal structures of structurally related layered oxychalcogenides: CeOBiS₂¹, LaOInS₂(this work) and LaOGaSe₂². Grey lines indicate the unit cell.

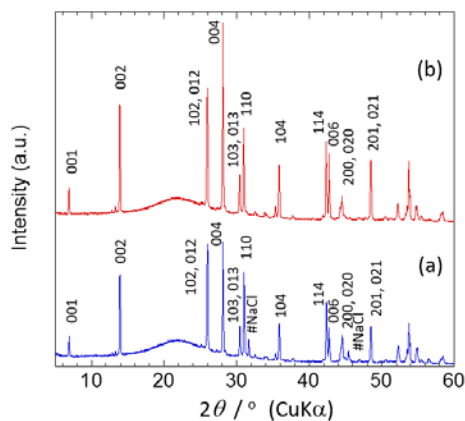


Figure S3 XRD diffraction patterns (a) before and (b) after the photocatalytic measurements.

Reference

1. Sagayama, R.; Sagayama, H.; Kumai, R.; Murakami, Y.; Asano, T.; Kajitani, J.; Higashinaka, R.; Matsuda, T. D.; Aoki, Y., Symmetry Lowering in LaOBiS₂: A Mother Material for BiS₂-Based Layered Superconductors. *J. Phys. Soc. Jpn.* **2015**, *84* (12), 123703.
2. Benazeth, S.; Guittard, M.; Laruelle, P., Structure de l'oxyseleniure de lanthane et de gallium, (LaO)GaSe₂. *Acta Crystallographica Section C* **1984**, *40* (3), 345-347.