

## **Electronic Supplemental Information (ESI): Tuning of Hole Carrier Density in p-type $\alpha$ -SnWO<sub>4</sub> by Exploiting Oxygen Defects**

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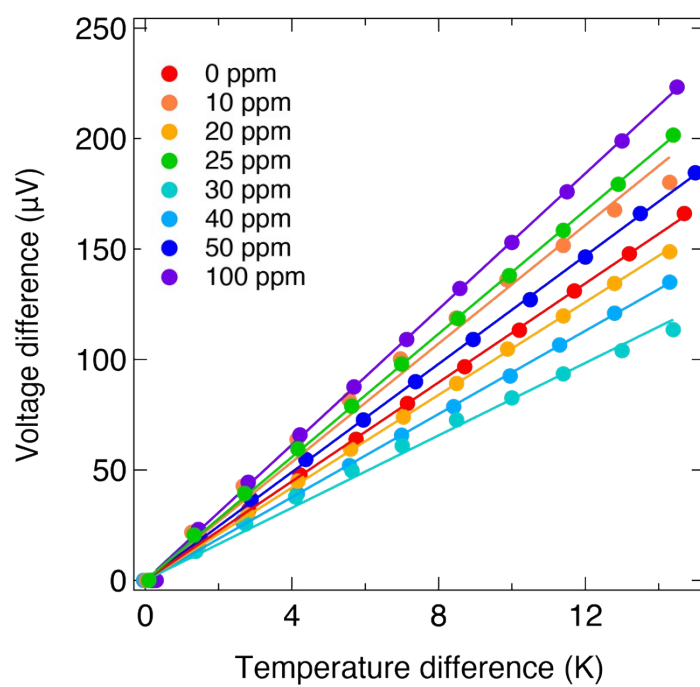
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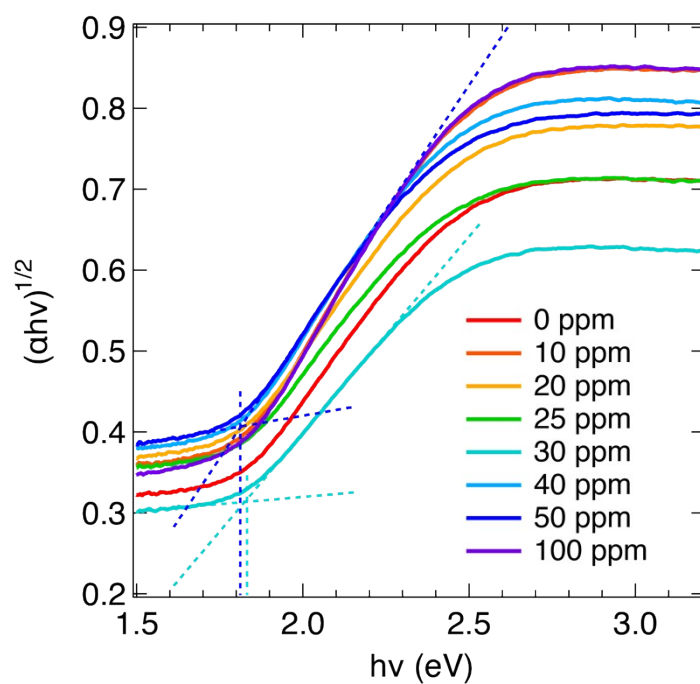
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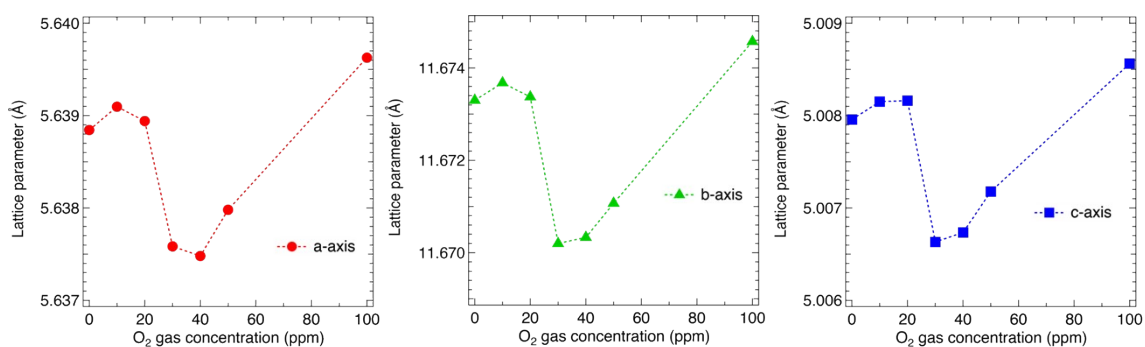
Figures S1 to S6



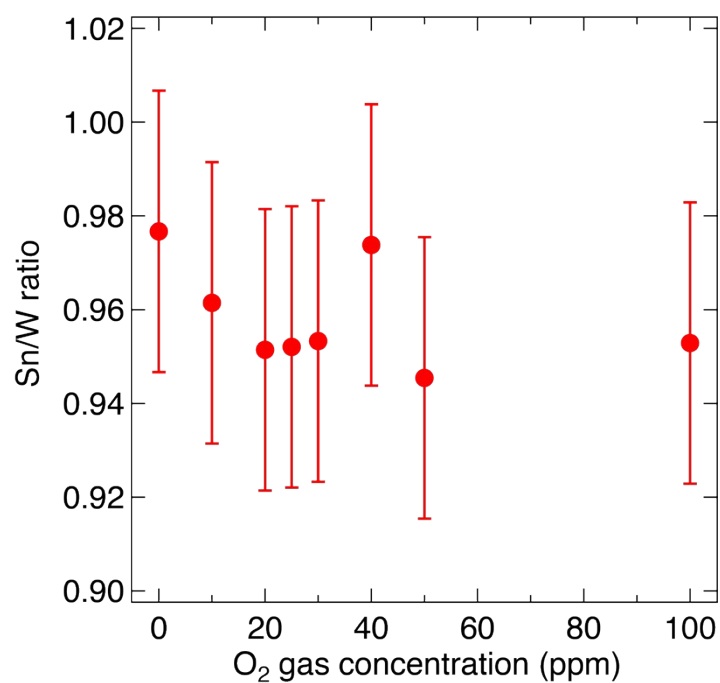
**Figure S1.** Thermopower versus temperature difference for  $\alpha$ -SnWO<sub>4</sub> samples.



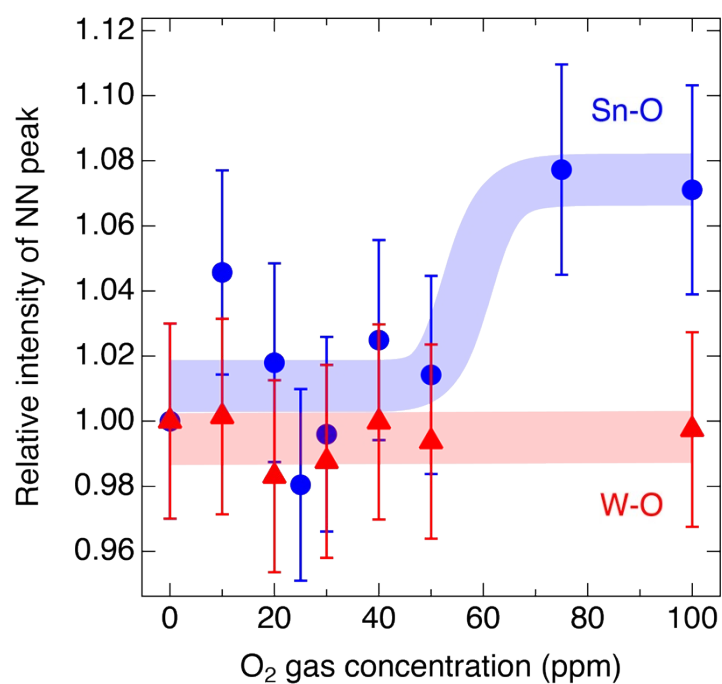
**Figure S2.** Optical band gaps of  $\alpha$ -SnWO<sub>4</sub> samples.



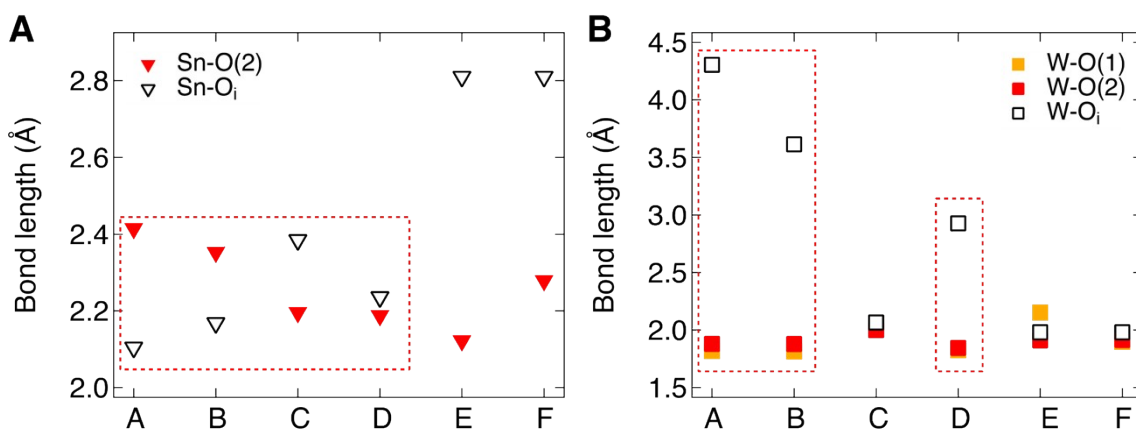
**Figure S3.** Lattice constants of  $\alpha$ -SnWO<sub>4</sub> samples.



**Figure S4.** Sn/W ratios of  $\alpha$ -SnWO<sub>4</sub> samples evaluated using X-ray fluorescence measurements.



**Figure S5.** Plots of intensities of Sn–O and W–O peaks in Sn *K*- and W *L*<sub>3</sub>-edge EXAFS spectra of  $\alpha$ -SnWO<sub>4</sub> samples, respectively.



**Figure S6.** Bond lengths of (A) Sn–O(2) and O<sub>i</sub>, (B) W–O(1), O(2), and O<sub>i</sub> of candidate structures shown in Fig. 4.