## **Electronic Supplementary Information**

## Band engineering in $Mg_3Sb_2$ by alloying with $Mg_3Bi_2$ for enhanced thermoelectric performance

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Lattice parameter shift in the  $Mg_3Sb_2-Mg_3Bi_2$  alloy



Figure S1: Lattice parameters of Mg<sub>3</sub>Sb<sub>2</sub>-Mg<sub>3</sub>Bi<sub>2</sub> extracted from X-ray diffraction using Cu  $K_{\alpha 1}$  radiation on pellet samples. The dashed lines are linear fits, the expected behavior for a solid-solution.