

## Supplementary Information

# The Advent of Multilayer Antimonene Nanoribbons with Room Temperature Orange Light Emission

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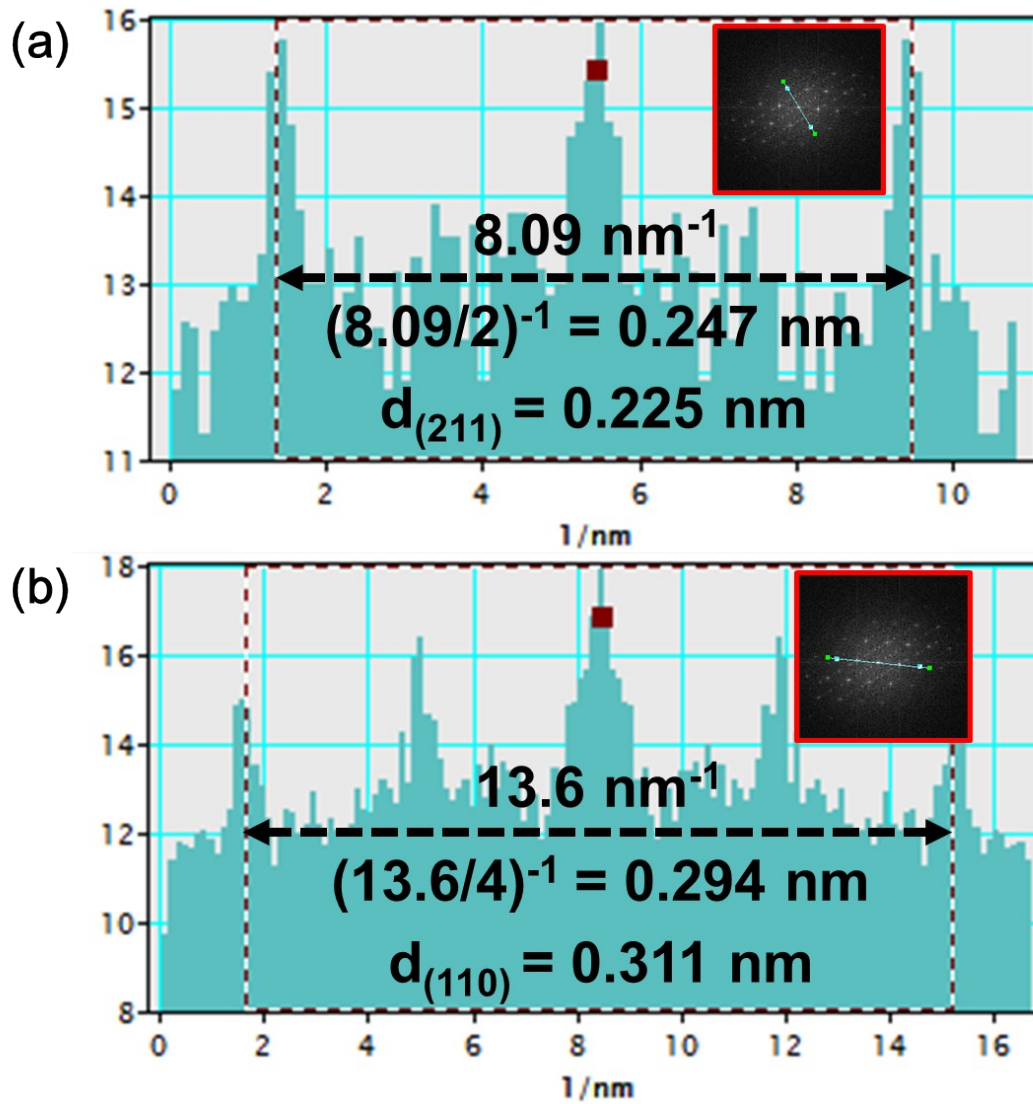
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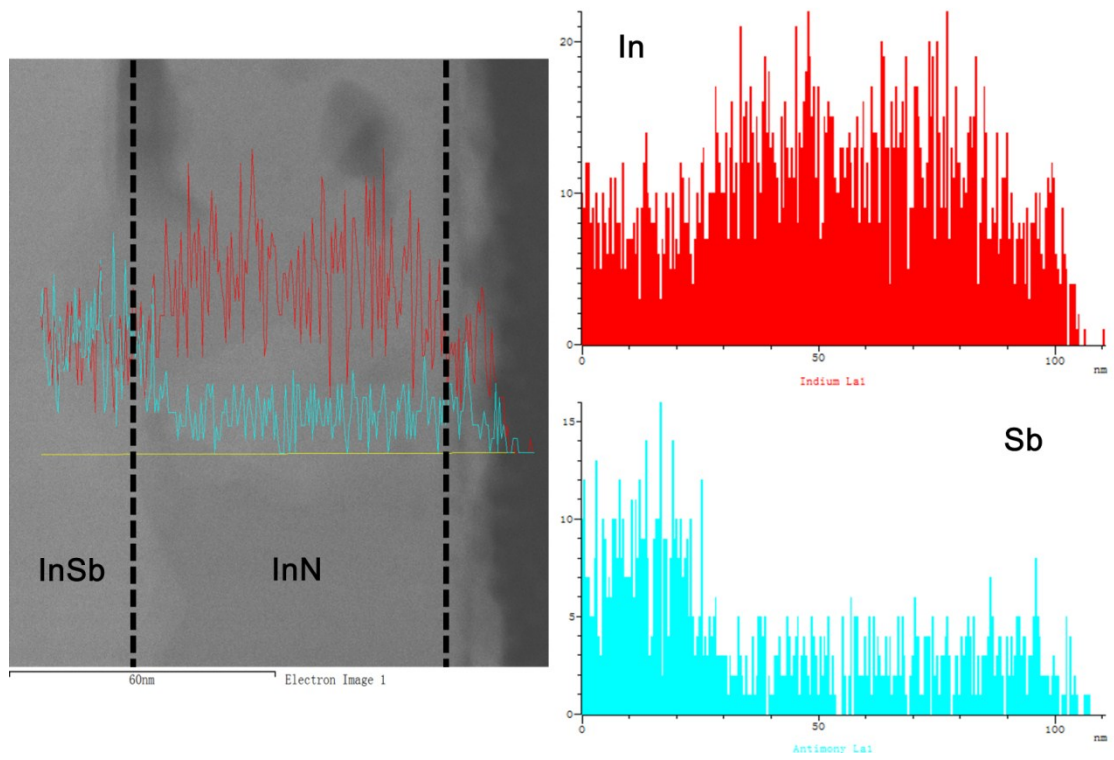
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### Calculations

In Fig. S1a, the length of the dashed line, which contains a double reciprocal vector, is equal to  $8.09 \text{ nm}^{-1}$ , so that the length of the reciprocal vector is  $4.045 \text{ nm}^{-1}$ . The inverse of  $4.045 \text{ nm}^{-1}$  is equal to  $0.247 \text{ nm}$  that corresponds to the (211) interplanar distance ( $0.225 \text{ nm}$ ) of multilayer antimonene. On the other hand, the length ( $13.6 \text{ nm}^{-1}$ ) of the dashed line as shown in Fig. S1b contains a quadruple reciprocal vector. Hence, the length of the reciprocal vector is  $3.4 \text{ nm}^{-1}$ . The inverse of  $3.4 \text{ nm}^{-1}$  is equal to  $0.294 \text{ nm}$  that corresponds to the (110) interplanar distance ( $0.311 \text{ nm}$ ) of multilayer antimonene. These calculations, which derived from the experimental results, are in agreement with the theory and the error rate is less than 9%, indicating that the results are believable.



**Fig. S1** (a) The distance between (211) reciprocal points of multilayer antimonene, (b) The distance between (110) reciprocal points of multilayer antimonene.



**Fig. S2** Energy dispersive spectrum (EDS) of the multilayer antimonene/InN/InSb.