

## **Supporting Information**

### Prediction of high-temperature Chern insulator with half-metallic edge states in asymmetry-functionalized stanene

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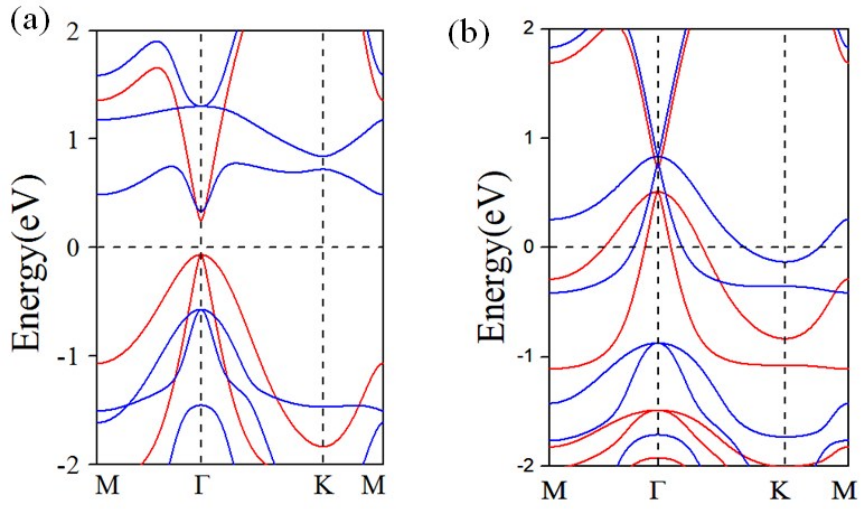


Fig. S1 Calculated Band structures of buckled configurations for (a) SnNH and (b) SnOH lattices without and with SOC, respectively. Also, the edge states for SnNH lattice are shown in (a).

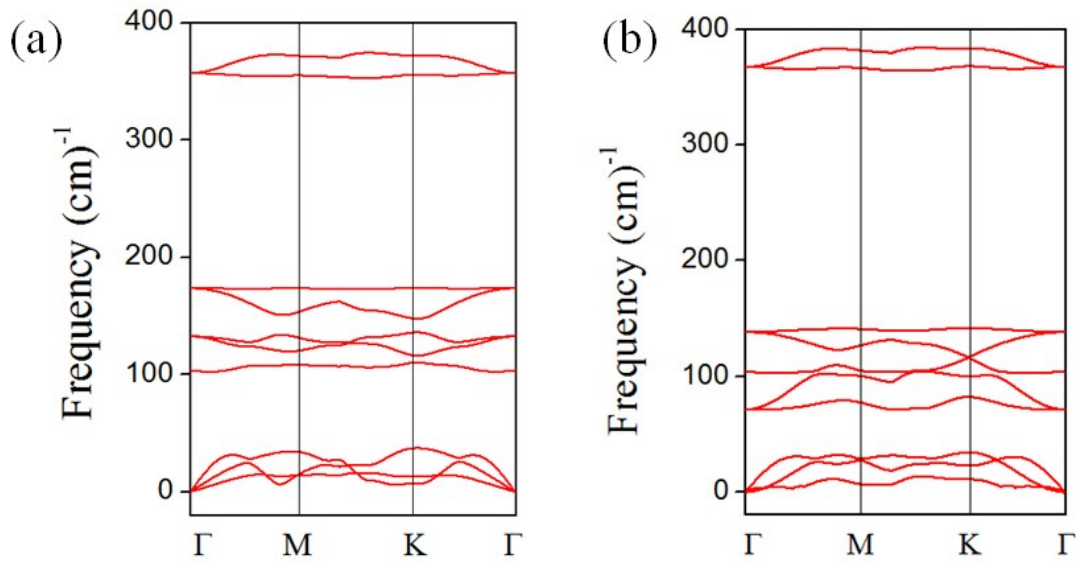


Fig. S2 The calculated phonon spectrum for buckled (a) SnNH and (b) SnOH, respectively.

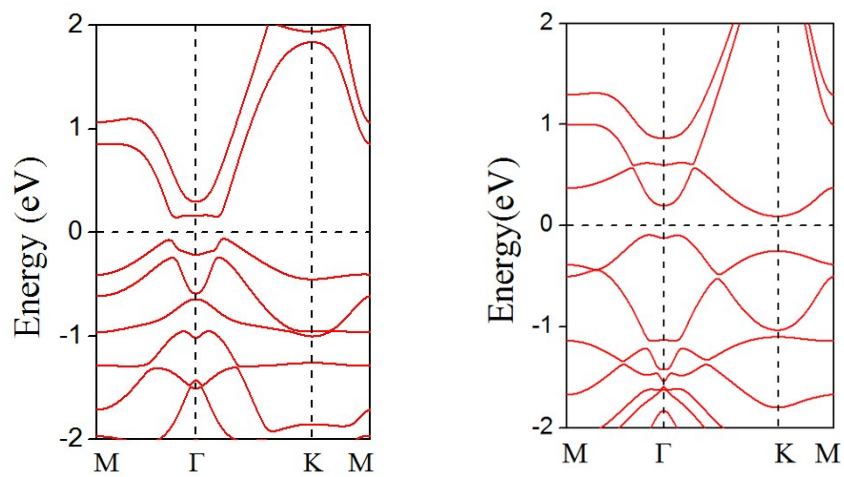


Fig. S3 Calculated HSE Band structures with SOC for (a) SnNH and (b) SnOH lattices, respectively.