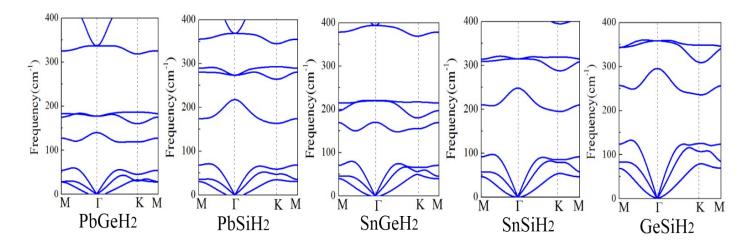
## **Supplementary Information**

## Hydrogenated Group-IV Binary Monolayers: A New Family Inversion-Asymmetric Topological Insulators

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**Fig. S1** The calculated phonon band spectrum for PbGeH<sub>2</sub>, PbSiH<sub>2</sub>, SnGeH<sub>2</sub>, SnSiH<sub>2</sub>, GeSiH<sub>2</sub> films, respectively.